

# ***astah\****

## ***Reference Manual***      *Ver. 6.1*

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*astah\* professional*

*astah\* UML*

For Microsoft® Windows®

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# astah\* Reference Manual

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## Introduction

This Manual, “astah\* Reference Manual”, briefly explains the functions of astah\* and how to use them.

**astah\* professional** is a system design tool that supports UML (Unified Modeling Language) 2.0 (partly), UML1.4, Flowchart, Data Flow Diagram, ER diagram, CRUD, Requirement diagram and Mind Map.

**astah\* UML** is a modeling tool that supports UML (Unified Modeling Language) 2.0 (partly), UML1.4 and Mind Map.

## Features of astah\* :

- Free movement in large diagrams using Map View
- Scroll and zoom by dragging
- Unlimited Undo/Redo
- Various Layout Alignment functions (e.g., position, size)
- Diagrams can be pasted to other tools, such as Microsoft Office

## Structure of this Manual

- Chapter 1-3  
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- Chapter 4-6  
Basic astah\*concepts and Main Menu functions
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- Chapter 44 Appendix  
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## Note

- Functions with **[P]** are supported in astah\* professional only. These are not included in astah\* UML.
- Functions with **[UML]** are supported in astah\* UML only. These are not included in astah\* professional.

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### 1. Overview of astah\* Functions

**astah\* professional** is a system design tool that supports UML (Unified Modeling Language) 2.0 (partly), UML1.4 ER diagram, Data Flow Diagram, Flowchart, CRUD, Requirement Diagram and Mind Map.

**astah\* UML** is a modeling tool that supports UML (Unified Modeling Language) 2.0 (partly), UML1.4 and Mind Map.

- Creation of diagrams that conform to UML2.0
  - Sequence Diagram
  - Statemachine Diagram
  - Communication Diagram
  - Activity Diagram
  - Composite Structure Diagram
- Creation of diagrams that conform to UML1.4
  - Class Diagram (Object Diagram, Package Diagram, Robustness Diagram)
  - UseCase Diagram
  - Component Diagram
  - Deployment Diagram
- Creation of other diagrams
  - Flowchart [P]/ Data Flow Diagram (DFD) [P] / ER Diagram[P] / CRUD[P] / Requirement Diagram[P] / Requirement Table[P] / Traceability Map[P]
  - Mind Map
- UseCase Descriptions
- Print to Multi-pages, Print to a Single Page, Print Preview
- Copy diagrams as EMF (Vector format) and paste onto Microsoft Office
- Save diagrams as PNG/JPEG
- Generation of Class Diagrams / Generation of detailed Class Diagrams
- Import Java source code / Generation of Java skeleton code
- Generation of C#, C++ skeleton code
- Document creation in HTML (javadoc) format and RTF format
- SQL Export, Entity Definition Report Export, CRUD Export
- astah\* API
- Alias [P]
- Import (Merge) Function of existing models
- Reference Model Management [P]
- Comparison of Projects [P]
- XMI Input-Output [P]

## 2. Application installation and Start-up

## **2. Application Installation and Start-up**

astah\* is compatible with and can be installed on Windows 7, Vista and XP.

### **2. 1. Installing J2SE (JRE)**

astah\* requires a Java Runtime Environment (JRE) to operate. Please ensure that a recommended version of the Java Runtime Environment is installed.

#### ***About Java Environment***

**OS : Windows 7 / Windows Vista / Windows XP**

Required Environment: Sun Microsystems JDK 6 Update 16(JRE 6 Update 16) or later.

### **2. 2. Installing astah\***

To start installing the astah\*, double-click on the installer.

### **2. 3. astah\*Start-up**

#### **i) Start-up from the Start Menu or the astah\* Short Cut**

Select astah\*in the Start-up Menu or double-click on the astah\* icon on the Desktop.

#### **ii) Start-up by double-clicking on a astah\* file**

Double-click on an astah\* file.

**Note) astah\* automatically checks if there are any software updates through HTTP access when launching astah\*.**

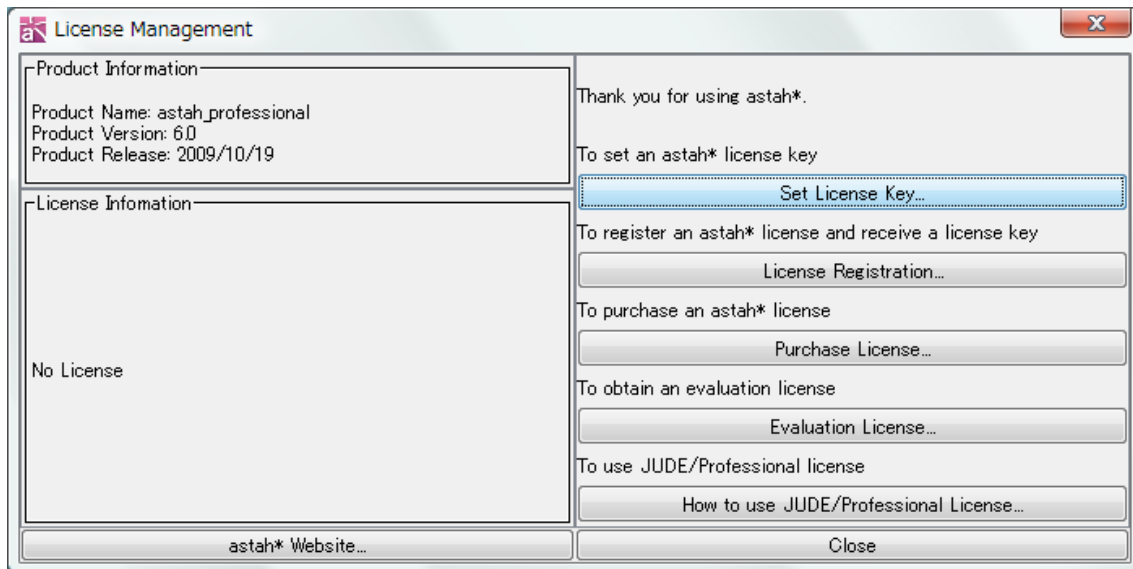
### **2. 4. astah\* Model Version**

astah\* Model version can be referred by [Help]-[Version Information] in Main Menu. .asta files are upward compatible. If the file has been edited with a newer version, it cannot be opened with an older version.

### **2. 5. License**

If the license is not set in astah\*, the “License Management” dialog comes up when starting astah\*.

## 2. Application installation and Start-up



### 2. 5. 1. Setting the License Key

Select “Set License Key” in the “License Management” dialog and specify the license key file (astah\_professional\_license.xml/astah\_uml\_license.xml) and click “Select License File”.

After license is set up, your license will be copied to the directory as below.

**Timed License, Node Count License :**

astah\* install directory

**Other type of License :**

User Home/.astah/professional(uml)directory

### 2. 5. 2. License Registration

To register a license and receive a license key, select “License Registration” in the “License Management” dialog.

### 2. 5. 3. How to get a License

- (1) Select “Purchase License” in the “License Management” dialog.
- (2) Purchase a license from astah\* Web site.
- (3) Both of License Number and Validation Code will be sent to you by e-mail or letter.
- (4) Register the license on the astah\* Web site.

## 2. Application installation and Start-up

### 2.5.4. Evaluation License

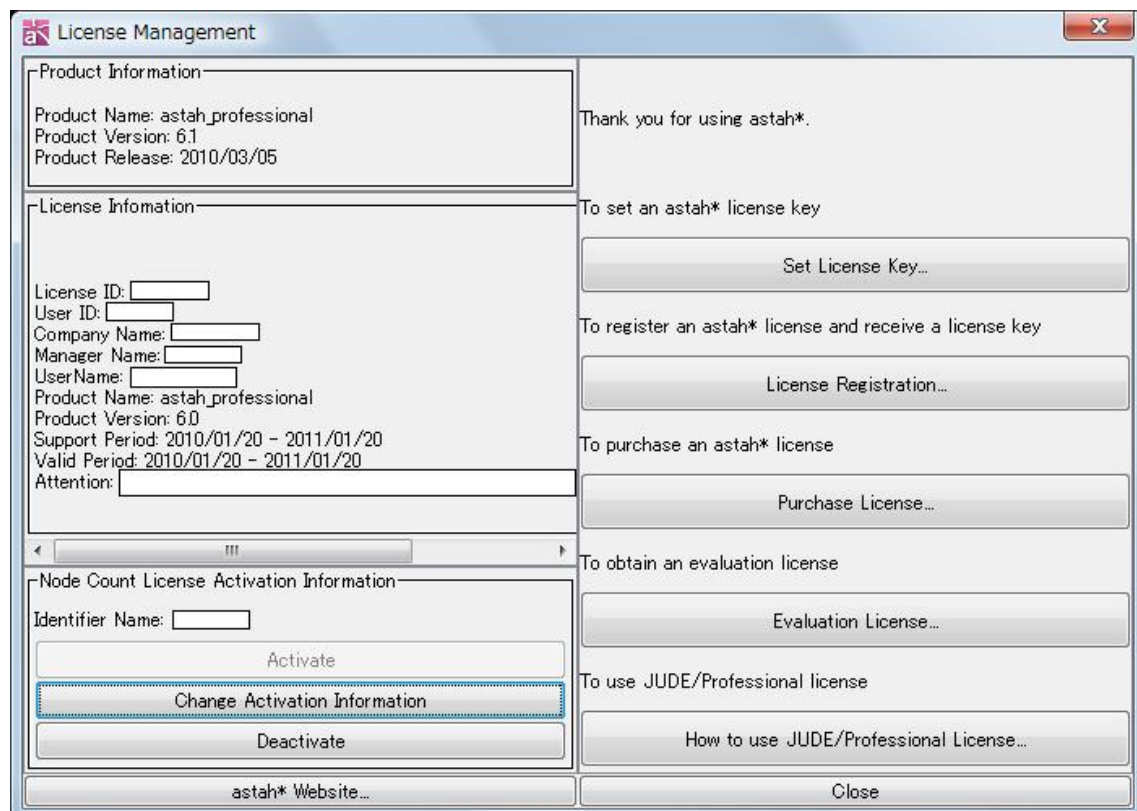
Select “Evaluation License” in the “License Management” dialog. astah\* can be used on a trial basis for a limited period.

### 2.5.5. Using JUDE/Professional License

JUDE/Professional license is valid for astah\* professional if astah\* is released within the license support period. Select “How to use JUDE/Professional License” in the “License Management” dialog for details.

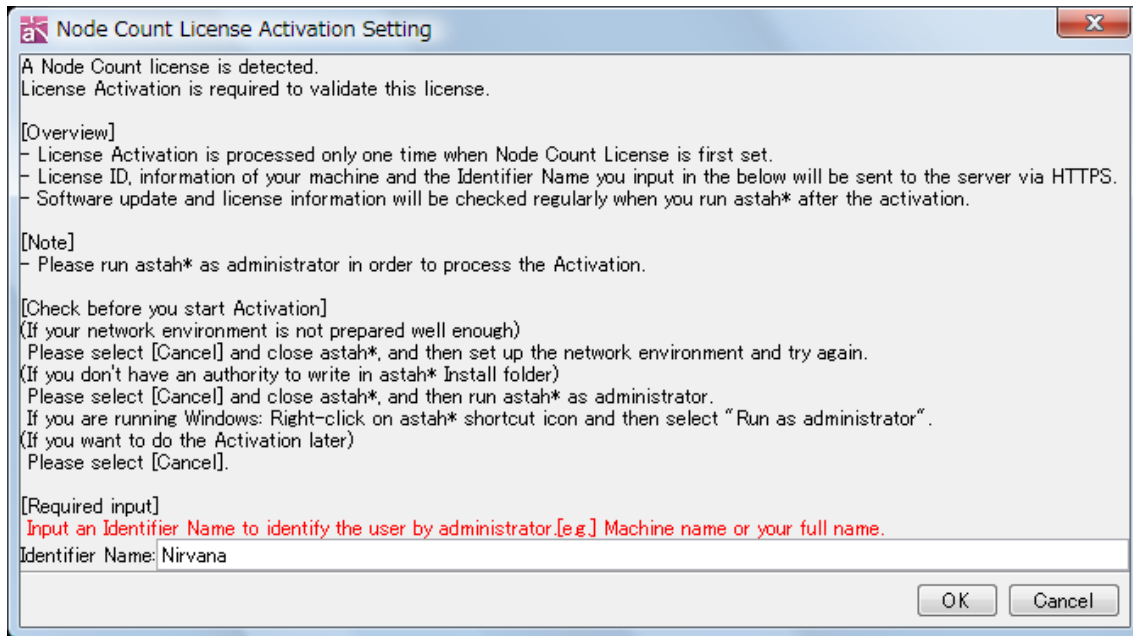
### 2.5.6. Node Count License

If you have a Node Count License set up in astah\*, an activation will be required. You have to set up your network environment and administration before you execute the activation.



## 2. Application installation and Start-up

Modification or deactivation of Node Count License can be done by [Tool] – [License] dialog menu as well.




### 3. Creating and Using Project Files

## **3. Creating and Using Project Files**

### **3.1. .asta File**

astah\* Project files contain an extension as “.asta” in name.

### **3.2. Creating New Project Files**

- a. Using [File]-[New] in the Main Menu
- b. Using  [Create a new file] on the Tool bar

#### **3.2.1. Creating Default Model Project**

Customize the contents of default project file. The following options can be selected in the System Properties.

- a. None
- b. User Template

Save the project file in

USERHOME/.astah/professional(uml)/template/project/.

- c. astah\* Built-in Template

astah\* Built-in Template files exist in astah\* install folder/template/project/.

(Java1.4.asta, Java5.asta, C\_Sharp.asta, C++.asta)


The setting can be done in the [System Properties](#).

### **3.3. Creating Project by Template**

To create a project by using template files, go to [File] - [New By Template] in the Main Menu. The following template files can be selected in the menu.

- a. Select a new template file.
- b. Select a recently used file.
- c. Select an astah\* built-in template in astah\* install folder/template/project/.

### **3.4. Opening Existing Project Files**

- a. Using [File]-[Open] in the Main Menu
- b. Using  [Open a file] on the Tool bar
- c. Select an existing Project from [File] in the Main menu
- d. Drag a \*.asta file to the astah\* icon on the desktop
- e. Drag a \*.asta file to the astah\* window

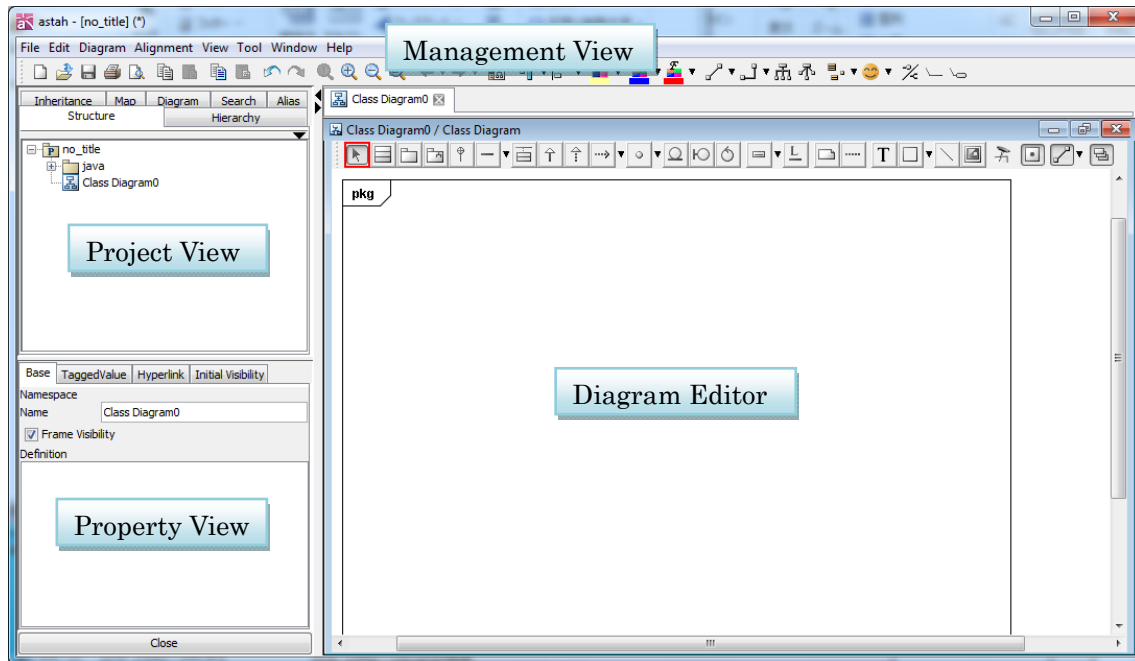
## 4. Basic Concepts

### 4. Basic Concepts

This chapter describes the fundamental components and the features of astah\*.

#### 4.1. Fundamental Components

The window consists of “Management View”, “Project View”, “Property View”, and “Diagram Editor”.



##### 4.1.1. Management View

The Management View is used for the basic operations of astah\*. The Main Menu includes functions related to the whole Project, such as file operation and editing. Frequently used functions can also be found on the Tool Bar.

##### 4.1.2. Project View

The Project View provides an overview of the whole Project. Tabs at the top can be used to switch the Project View between “Structure Tree”, “Hierarchy Tree [P]”, “Inheritance Tree”, “Map”, “Diagram”, “Search”, and “Alias” views [P].

###### (a) Structure Tree

The Structure Tree View displays Models in a tree structure. Various operations can be carried out by using the Pop-up Menu of Model Elements.



## **4. Basic Concepts**

### **(b) Hierarchy Tree [P]**

The Hierarchy Tree View displays the hierarchy of Statemachine, Activity and Data Flow Diagrams.

### **(c) Inheritance Tree**

The Inheritance Tree View displays Models in a tree structure based on the inheritance relationships between Classes.

### **(d) Map**

The Map View provides an overview of the Diagram that is opened in the Diagram Editor. The area displayed in the Diagram Editor can be specified by a right-drag. The Diagram in the Diagram Editor can be scrolled using a left-drag. This function is especially useful for big Diagrams that do not fit in the screen.

### **(e) Diagram**

The Diagram View provides a list of all Diagrams included in the Project.

Diagrams can be opened in the Diagram Editor by selecting them in this view.

### **(f) Search**

This view is used to search for Model Elements in the Project or to replace a string that is included in the names of Model Elements and invalid hyperlinks.

### **(g) Alias [P]**

This view is used to set aliases to Model Elements in the Project.

## **4. 1. 3. Property View**

The Property View is used to display and edit the properties of Model Elements.

Select the target Model in the Structure Tree or in the Diagram Views.

## **4. 1. 4. Diagram Editor**

The Diagram Editor is used to edit Diagrams and Models. Multiple Diagrams can be opened in the Diagram Editor. Use Tabs on the top to switch between Diagrams.

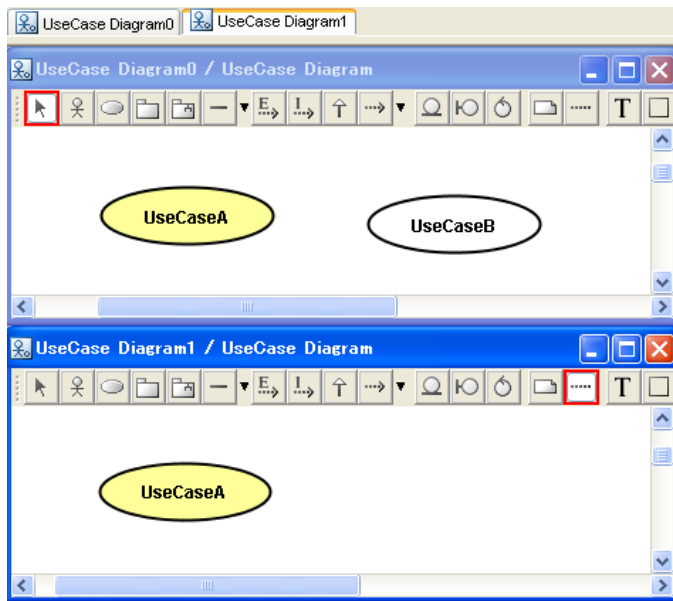
## **4. 2. Basic Concepts**

### **4. 2. 1. Model and Diagram Element**

Elements in Projects, such as Classes or UseCases, are called Model Elements or

## 4. Basic Concepts

Models. In contrast, Models in Diagrams are called Diagram Elements.



A Model can be used in multiple Diagrams as Diagram Elements. The color and size of Diagram Elements can be individually specified.

### 4. 2. 2. “Delete from Diagram” and “Delete from Model”

[Delete from Diagram] deletes a target Diagram Element from the Diagram. [Delete from Model] deletes a target Model and its Model.

### 4. 2. 3. Copying and Pasting

In Class Diagrams UseCase Diagrams, ER Diagrams and Data Flow Diagrams (Data Store, External Entity), Diagram Elements are copied but Models are shared between the original and the copied Diagrams. In other diagrams, both Diagram Elements and Models are cloned.

## 5. Main Menu

### **5. Main Menu**

The Menu items in the Main Menu are [File], [Edit], [Diagram], [Alignment], [View], [Tool], [Window] and [Help]. Each Menu item is briefly explained below.

#### **5. 1. File**

[File] is used for general Input-Output functions.

##### **5. 1. 1. New [Ctrl+N]**

[New] is used for creating a new Project.

##### **5. 1. 2. New By Template**

[New By Template] is used for creating a new Project by using a template file.

##### **5. 1. 3. Open**

[Open] is used for opening a Project that has been already created.

##### **5. 1. 4. Save [Ctrl+S]**

[Save] is used for saving a Project.

When saving a new project at the first time, the project file would be saved as the name of the first diagram shown in the top of the structure tree in the project file.

##### **5. 1. 5. Save As**

[Save As] is used for saving a Project under a different file name.

##### **5. 1. 6. Close**

[Close] is used for closing a Project.

##### **5. 1. 7. Merge Project**

[Merge Project] merges a specified Project file with an open Project.

##### **5. 1. 8. Reference Model Management [P]**

[Reference Model Management] is used to refer another Project.

##### **5. 1. 9. Compare Project [P]**

[Compare Project] is used to compare another Project.

##### **5. 1. 10. Print Setup (Project)**

[Print Setup] is used to set up printing options for the Project.

##### **5. 1. 11. Print Setup (Diagram)**

[Print Setup] is used to set up printing of Diagrams displayed in the Diagram Editor.

## 5. Main Menu

### **5. 1. 12. Print Preview**

[Print Preview] is used to view the print preview of the Diagram displayed in the Diagram Editor.

### **5. 1. 13. Print [Ctrl+P]**

[Print] is used to print the Diagram displayed in the Diagram Editor.

### **5. 1. 14. Preview Multi**

[Preview Multi] is used to view the print preview of multiple Diagrams at the same time.

- a. Print Preview Multi-Diagram
- b. Print Preview Multi-UseCase Description
- c. Print Preview Multi-CRUD
- d. Print Preview Multi-Requirement Table

### **5. 1. 15. Print Multi**

[Print Multi] is used to print multiple Diagrams at the same time.

- a. Print Multi-Diagram
- b. Print Multi-UseCase Description
- c. Print Multi-CRUD
- d. Print Multi-Requirement Table

### **5. 1. 16. Exit [Ctrl+Q]**

[Exit] is used to exit astah\*.

### **5. 1. 17. Recently used Projects**

The 5 most recently used Projects are listed.

## **5. 2. Edit**

[Edit] is used to edit Models.

### **5. 2. 1. Undo [Ctrl+Z]**

[Undo] is used to undo the most recent edit.

### **5. 2. 2. Redo [Ctrl+Y]**

[Redo] is used to redo the most recent [Undo] action.

### **5. 2. 3. Copy [Ctrl+C]**

[Copy] is used to copy Diagram Elements that are selected in the Diagram Editor. This

## 5. Main Menu

action only affects the current Project.

### **5. 2. 4. Copy to Clipboard**

Data can be copied to the clipboard in one of these formats: “Graphics (BMP, PNG)” and “Extended Meta File (EMF)”.

#### **a. BMP, PNG [Ctrl+Alt+C]**

[BMG, PNG] is used to copy the selected Diagram Elements to the Clipboard in a graphic format.

#### **b. EMF [Ctrl+Shift+C]**

[EMF] is used to copy the selected Diagram Elements to the Clipboard in Extended Meta File (EMF) format.

### **5. 2. 5. Paste [Ctrl+V]**

[Paste] pastes copied Diagram Elements to a Diagram. Diagram Elements can only be pasted into Diagrams in which they can be created.

### **5. 2. 6. Copy Style**

[Copy Style] copies the style of Diagram Elements to a Diagram.

### **5. 2. 7. Paste Style**

[Paste style] pastes copied style of Diagram Elements to a Diagram.

### **5. 2. 8. Delete from Model [Ctrl+D]**

[Delete from Model] is used to delete the selected Diagram Elements from the Diagram Editor and the Models.

### **5. 2. 9. Delete from Diagram [Delete]**

[Delete from Diagram] is used to delete the selected Diagram Elements from the Diagram Editor.

### **5. 2. 10. Line Style**

#### **a. Line [Ctrl+W]**

Using [Line], Diagram Elements are connected with straight or polygonal lines.

#### **b. Line (Right Angle) [Ctrl+E]**

Using [Line (Right Angle)], Diagram Elements are connected with right-angle lines.

#### **c. Curve**

Using [Curve], Diagram Elements are connected with curved lines.

## 5. Main Menu

### **d. Curve (Right Angle)**

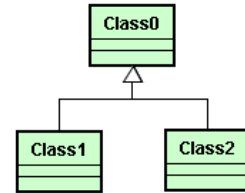
Using [Curve (Right Angle)], Diagram Elements are connected with right-angle curved lines.

### **5. 2. 11. Generalization Style**

When a Class is inherited by multiple Classes, the Line Styles can be selected from [Shared] and [Separated].

#### **a. Shared**

[Shared] depicts multiple Generalization Lines as integrated Lines as shown on the right.



#### **b. Separated**

[Separated] depicts multiple Generalization Lines as separated Lines.

### **5. 2. 12. Stereotype**

Stereotype Notation can be selected from [Normal], [Normal Icon], and [Customized Icon].

#### **a. Normal**

Using [Normal], Stereotypes are displayed with guillemets (“<<”, “>>”).

#### **b. Icon**

Using [Icon], Diagram Elements are displayed with astah\* standard Icons.

#### **c. Customize**

Using [Customize], Diagram Elements are displayed with user-specific Icons.

### **5. 2. 13. Set Color**

[Set Color] is used to set up the colors of selected Diagram Elements in the Diagram Editor.

### **5. 2. 14. Set Line Color**

[Set Line Color] is used to change colors of Lines in the Diagram Editor.

### **5. 2. 15. Set Font Color**

[Set Font Color] is used to change colors of texts.

### **5. 2. 16. Set Color for Stereotype**

[Set Color for Stereotype] is used to set up the colors of Diagram Elements for each

## 5. Main Menu

Stereotype.

### **5. 2. 17. Select All [Ctrl+A]**

[Select All] selects all Diagram Elements in the open Diagram.

## **5. 3. Diagram**

Using the [Diagram] menu, a diagram can be created under the selected Model and opened in the Diagram Editor. The following Diagrams can be created:

- a. Class Diagram
- b. Use Case Diagram
- c. Statemachine Diagram
- d. Activity Diagram (New Activity Diagram, Template Activity Diagram)
- e. Sequence Diagram
- f. Communication Diagram
- g. Component Diagram
- h. Deployment Diagram
- i. Composite Structure Diagram
- j. Flowchart (New Flowchart, Template Flowchart) [P]
- k. Data Flow Diagram (DFD) (New Data Flow Diagram, Template Data Flow Diagram) [P]
- l. ER Diagram [P]
- m. CRUD [P]
- n. Mind Map (New Mind Map, Template Mind Map)
- o. Requirement Diagram [P]
- p. Requirement Table [P]

## **5. 4. Alignment**

### **5. 4. 1. Align Horizontally**

[Align Horizontally] is used to horizontally align multiple Diagram Elements that are selected in the Diagram Editor.

#### **a. Align Top [Ctrl+Alt+Up]**

[Align Top] is used to align selected Diagram Elements with the top end of the highest Diagram Element.

## 5. Main Menu

### **b. Align Horizontal Center [Ctrl+Alt+Minus(-)]**

[Align Horizontal Center] is used to align Diagram Elements along the midpoint between the highest and lowest Diagram Elements.

### **c. Align Bottom [Ctrl+Alt+Down]**

[Align Bottom] is used to align selected Diagram Elements with the bottom end of the lowest Diagram Element.

### **d. Align Horizontal Even**

[Align Horizontal Even] is used to horizontally align Diagram Elements with even spacing.

## **5. 4. 2. Align Vertically**

[Align Vertically] is used to vertically align multiple Diagram Elements that are selected in the Diagram Editor.

### **a. Align Left [Ctrl+Alt+Left]**

[Align Left] is used to align Diagram Elements with the left side of the leftmost Diagram Element.

### **b. Align Vertical Center [Ctrl+Ctrl+I]**

[Align Vertical Center] is used to align Diagram Elements along the midpoint between the leftmost and rightmost Diagram Elements.

### **c. Align Right [Ctrl+Alt+Right]**

[Align Right] is used to align Diagram Elements with the right side of the rightmost Diagram Element.

### **d. Align Vertical Even**

[Align Vertical Even] is used to vertically align Diagram Elements with even spacing between the highest and lowest Diagram Elements.

## **5. 4. 3. Adjust Size**

### **a. Adjust Width**

[Adjust Width] is used to adjust the width of Diagram Elements so that they are the same width as the widest Diagram Element.

### **b. Adjust Height**

[Adjust Height] is used to adjust the height of Diagram Elements so that they are the



## **5. Main Menu**

same height as the highest Diagram Element.

### **c. Adjust Size**

[Adjust Size] is used to adjust the size of Diagram Elements by inputting the size or by selecting a particular Element.

#### **5. 4. 4. Auto Layout**

[Auto Layout] is used to automatically rearrange all Diagram Elements in the Diagram Editor.

#### **5. 4. 5. Partial Auto Layout**

[Partial Auto Layout] is used to automatically rearrange the selected Diagram Elements in the Diagram Editor.

### **5. 5. View**

[View] is used to set up and change the view of the Diagram Editor or the Structure Tree.

#### **5. 5. 1. Zoom [Ctrl+1]**

[Zoom] is used to restore the default Zoom rate (100%) of the Diagram displayed in the Diagram Editor.

#### **5. 5. 2. Zoom In [Ctrl+=]**

[Zoom In] is used to enlarge the Diagram displayed in the Diagram Editor.

#### **5. 5. 3. Zoom Out [Ctrl+-]**

[Zoom Out] is used to shrink the Diagram displayed in the Diagram Editor.

#### **5. 5. 4. Fit in Window [Ctrl+0]**

[Fit in Window] is used to see the Overview of the Diagram displayed in the Diagram Editor.

#### **5. 5. 5. Back to Previous Editor [Alt+Left]**

[Back to Previous Editor] is used to see the previous Diagram Editor.

#### **5. 5. 6. Forward to Next Editor [Alt+Right]**

[Forward to Next Editor] is used to see the next Diagram Editor.

#### **5. 5. 7. Show/Hide Project View**

[Show/Hide Project View] is used to show or hide the Project View.

## 5. Main Menu

### **a. Project View [Ctrl+Shift+P]**

[Project View] is used to show or hide the Project View.

### **b. Structure Tree [Ctrl+Shift+S]**

[Structure Tree] is used to show or hide the Structure Tree tab.

### **c. Inheritance Tree [Ctrl+Shift+G]**

[Inheritance Tree] is used to show or hide the Inheritance Tree.

### **d. Map View [Ctrl+Shift+M]**

[Map View] is used to show or hide the Map View.

### **e. Diagram View [Ctrl+Shift+D]**

[Diagram View] is used to show or hide the Diagram View.

### **f. Search View [Ctrl+Shift+H]**

[Search View] is used to show or hide the Search View.

## **5.5.8. Look & Feel**

[Look& Feel] is used to change the Look & Feel (the appearance and usability). This function only supports Look & Feel Styles that are supported by the running environment.

### **a. Metal**

[Metal] is used to change the Look & Feel to “Metal” Style.

### **b. Nimbus**

[Nimbus] is used to change the Look & Feel to “Nimbus” Style.

### **c. CDE/Motif**

[CDE/Motif] is used to change the Look & Feel to “CDE/Motif” Style.

### **d. Windows**

[Windows] is used to change the Look & Feel to “Windows” Style.

### **e. Windows Classic**

[Windows Classic] is used to change the Look & Feel to “Windows Classic” Style.

## **5.5.9. Alias [P]**

[Alias] is used to select names to display in Diagram Elements on the Diagram Editor.

## 5. Main Menu

### **a. Name**

[Alias] is used to display names in the Diagram Elements.

### **b. Alias1 (or Name)**

[Alias1 (or Name)] is used to display Alias1s in the Diagram Elements. If Alias1 is not set, its name is used.

### **c. Alias2 (or Name)**

[Alias2 (or Name)] is used to display Alias2s in the Diagram Elements. If Alias1 is not set, its name is used.

## **5. 6. Tool**

The Tool Menu is used to perform operations on Diagrams and to set up the System Properties in “System Properties”.

### **5. 6. 1. Export Image**

[Export Image] is used to save the displayed Diagram in the Diagram Editor as a Graphic file.

### **5. 6. 2. Export Html (javadoc) [Ctrl+T]**

[Export Html] is used to generate an API Document of the current Project in HTML (javadoc) format.

### **5. 6. 3. Export CSV**

[Export CSV] is used to export the Class, Attribute, Operation and the UseCase List in CSV (Comma Separated Values) format.

### **5. 6. 4. XMI Input & Output [P]**

[XMI Input & Output] is used to input and output XMI Project files in XMI 1.1 format.

### **5. 6. 5. Export RTF**

[Export RTF] is used to generate an API Document of the current Project in RTF format.

### **5. 6. 6. Mindmap**

#### **a. Export RTF**

[Export RTF] is used to generate an API Document of the current Mindmap in RTF format.

## 5. Main Menu

### **b. Export PowerPoint**

[Export PowerPoint] is used to generate a PowerPoint of the current Mindmap.

### **5. 6. 7. Java**

#### **a. Import Java**

[Import Java] is used to import files with .java extension to generate the Classes (model Elements) and the Parent Packages.

#### **b. Export Java**

[Export Java] is used to generate Java Skeleton Code from the selected items. Class Definitions and Method Definitions are output as Documentation Comments.

### **5. 6. 8. C#**

#### **a. Export C#**

[Export C#] is used to generate C# Skeleton Code from the selected items. Class Definitions and Method Definitions are output as Documentation Comments.

### **5. 6. 9. C++**

#### **a. Export C++**

[Export C++] is used to generate C++ Skeleton Code from the selected items. Class Definitions and Method Definitions are output as Documentation Comments.

### **5. 6. 10. ER Diagram [P]**

#### **a. Export Sql**

[Export SQL] is used to export SQL from the created ER diagrams.

#### **b. Set ER Data Type**

[Set ER Data Type] is used to set the data type of ER diagrams.

#### **c. Export Entity Definition Report**

[Export Entity Definition Report] is used to export Entity Definition Report from the ER diagrams.

#### **d. Convert ER Model to UML Model**

[Convert ER Model to UML Model] is used to convert ER Model to UML Model.

#### **e. Convert UML Model to ER Model**

[Convert UML Model to ER Model] is used to convert UML Model to ER Model.

## 5. Main Menu

### **5. 6. 11.    CRUD [P]**

#### **a. Export CRUD to Excel**

[Export CRUD to Excel] is used to export CRUD to Excel.

#### **b. Export CRUD Statistics to Excel**

[Export CRUD Statistics to Excel] is used to export CRUD Statistics to Excel.

### **5. 6. 12.    Requirement [P]**

#### **a. Import Requirement Table from Excel**

[Import Requirement Table from Excel] is used to import Requirement Table from Excel.

#### **b. Export Requirement Table to Excel**

[Export Requirement Table to Excel] is used to export Requirement Table to Excel.

### **5. 6. 13.    Traceability Map [P]**

#### **a. Open Traceability Map**

[Open Traceability Map] is used to open Traceability Map.

#### **b. Update All Traceability Maps**

[Update All Traceability Maps] is used to update all Traceability Maps.

#### **c. Delete All Traceability Maps**

[Delete All Traceability Maps] is used to delete all Traceability Maps.

#### **d. Export RTF**

[Export RTF] is used to generate an API Document of the current Traceability in RTF format.

### **5. 6. 14.    Set Template**

#### **a. UseCase Description**

[UseCase Description] is used to set up UseCase Description Template.

#### **b. Flow Symbol [P]**

[Flow Symbol] is used to set up Flow Symbol Templates.

#### **c. Mindmap Style**

[Mindmap Style] is used to set up Mindmap Style Templates.

## 5. Main Menu

### **5. 6. 15. Set Icon for Stereotype [P]**

[Set Icon for Stereotype] is used to set up user-specific Images as Icons for Stereotypes.

### **5. 6. 16. Search Invalid Hyperlinks**

[Search Invalid Hyperlinks] is used to search Invalid Hyperlinks in Project File.

### **5. 6. 17. Import User Defined TaggedValues [P]**

[Import User Defined TaggedValues] is used to import the TaggedValues to Models.

### **5. 6. 18. External Tool [P]**

[External Tool] is used to configure to run External Tools on astah\*.

### **5. 6. 19. Correct Model**

#### **a. Correct Invalid Models**

[Correct Invalid Models] is used to delete or restore invalid Models that exist in the Project because of bugs in a previous version. This function is not for to check or correct the consistency of UML.

#### **b. Reset All Models ID**

[Reset All Models ID] is used to reset all the ID of models.

- When a file is cloned, cloned models would have identical IDs as the original model's even after their names have been changed. So when you merge projects (including the merge of Reference Model Management), original models and cloned models are considered as same models as they have the same ID's. This new command will reset the ID's of all the models, so it avoids the problem on merge of two different models with the same IDs.
- This command shouldn't be done more than once toward one project.

Backup is recommended before you execute this command.

### **5. 6. 20. License**

[License] is used to set up astah\* Licenses.

### **5. 6. 21. System Properties**

[System Properties] is used to set up the System Properties of astah\*.

## **5. Main Menu**

### **5. 7. Window**

[Window] is used to organize currently opened windows in Diagram Editor.

#### **5. 7. 1. Close**

[Close] is used to close the window that is currently edited.

#### **5. 7. 2. Close Left Tabs**

[Close Left Tabs] is used to close all windows in the left side of currently edited window.

#### **5. 7. 3. Close Right Tabs**

[Close Right Tabs] is used to close all windows in the right side of currently edited window.

#### **5. 7. 4. Close Others**

[Close Others] is used to close all windows except one that is currently edited.

#### **5. 7. 5. Close All**

[Close All] is used to close all windows.

#### **5. 7. 6. Alignment**

##### **a. Horizontal**

Align all windows horizontally in Diagram Editor.

##### **b. Vertical**

Align all windows vertically in Diagram Editor.

##### **c. Tile**

Align all windows in square shapes horizontally and vertically.


### **5. 8. Help**














[Help] is used to display “astah\* Website”, “astah\* Community Site”, “astah\* Reference Manual”, “Welcome to astah\* professional(UML)”, “Bug Information”, “astah\* Support”, “Software Update Information” and “Version Information”.

## 6. ToolBar

### 6. Tool Bar















Frequently used commands from the Main Menu are listed as buttons on the Tool Bar. These buttons are called “Tool Buttons”.









(1)		[Create a new file] Create a new Project.
(2)		[Open a file] Open an existing Project.
(3)		[Save to a file] Save a Project.
(4)		[Print] Print a Diagram displayed in the Diagram Editor.
(5)		[Print Preview] Print preview of a Diagram displayed in the Diagram Editor.
(6)		[Copy selection to clipboard] Copy the Diagram Elements selected in the Diagram Editor to the Clipboard.
(7)		[Paste clipboard contents] Paste copied Diagram Elements to a target Diagram.
(8)		[Copy Style] Copy the style of the selected Diagram Element.
(9)		[Paste Style] Paste the style of the selected Diagram Element.
(10)		[Undo] Undo the most recent action.
(11)		[Redo] Cancel the most recent [Undo] command.
(12)		[Zoom to Default] Display the Diagram in the Diagram Editor by default (100%).
(13)		[Zoom in current Diagram Editor] Zoom in a Diagram in the Diagram Editor.



## 6. ToolBar

(14)		[Zoom out current Diagram Editor] Zoom out a Diagram in the Diagram Editor.
(15)		[Fit in Window] Scroll/Zoom to fit the whole Diagram in the view of the Diagram Editor.
(16)		[Back to Previous Editor] Display the previous editor.
(17)		[Forward to Next Editor] Display the next editor.
(18)		[Show/Hide Project View] Show/Hide Project View.
(19)		[Align Top/Horizontal Center/Bottom/Horizontal Even/Height] Align Diagram Elements horizontally.
(20)		[Align Left/Vertical Center/Right/Vertical Even/Width] Align Diagram Elements vertically.
(21)		[Set Color] Set color to selected Diagram Elements.
(22)		[Set Line Color] Set Line color to selected lines.
(23)		[Set Font Color] Set Font color to selected texts.
(24)		[Line], [Curve] Connect Diagram Elements with straight, polygonal or curved lines.
(25)		[Line (Right Angle)], [Curve (Right Angle)] Connect Diagram Elements with a right-angle or right-angle curved line.
(26)		[Line Shared Style] Depict multiple Generalization lines as integrated lines.
(27)		[Line Separate Style] Depict multiple Generalization lines as separate lines.
(28)		[Stereotype Normal] Depict Stereotypes with guillemets (“<<”, “>>”) instead of icons.

## 6. ToolBar

(29)		[Stereotype Icon] Depict Stereotypes with astah* standard icons.
(30)		[Stereotype Customize] Depict Stereotypes with user-specific icons.
(31)		[Add Icon] Add Icon in Mind Map.
(32)		[Open or Close Topic] Open or Close Topics in Mind Map.
(33)		[Fork] Change the style of Topic into Fork style in Mind Map.
(34)		[Bubble] Change the style of Topic into Bubble style in Mind Map.

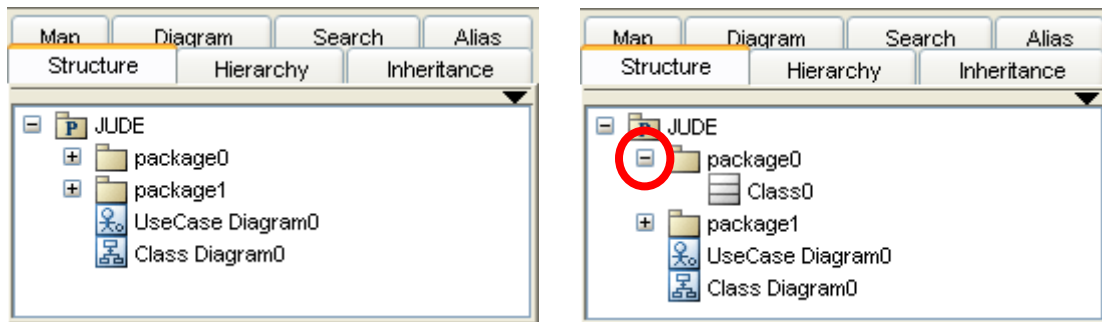
## 7. Structure Tree

### 7. Structure Tree

Diagrams/Models can be created and controlled using the [Structure Tree] in the “Project View”.

#### 7.1. Opening Nodes of the Structure Tree

Model Elements with child elements, such as Packages or Classes, are depicted as Nodes.



#### 7.2. Opening Diagrams

##### 7.2.1. Open a Diagram by selecting it

Double-click on the target Diagram or right-click on the target Diagram and select [Open Diagram].

##### 7.2.2. Open a Diagram by selecting it under Packages

- Right-click on the target Package (or Project) and select [Open Diagram].
- All the Diagrams under the Package are listed.
- Select a Diagram to open from the list.

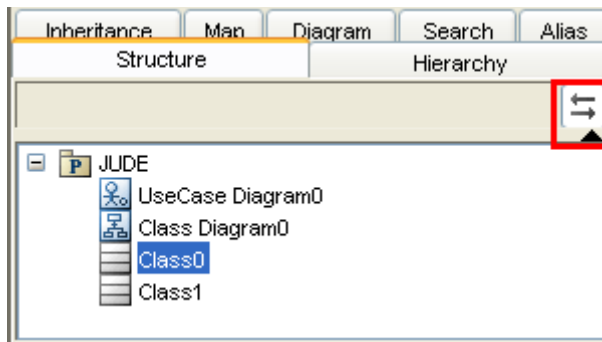
##### 7.2.3. Open all the Diagrams under a Package

Right-click on the target Package (or Project) and select [Open All Diagrams].

#### 7.3. Synchronize with Diagram Editor

Synchronize a selection of a Diagram or Diagram Elements on Diagram Editor with Structure Tree.

## 7. Structure Tree















### 7.4. Creating Diagrams/Models




























a. Right-click on the target node in the Structure Tree and select [Create Diagram] or [Create Model]. And select a Diagram Type or a Model Type.

**Note1) Diagrams and Models are created directly under the selected node. Models with the same name cannot be created under the same parent element.**





























**Note2) UseCase Descriptions are displayed under UseCase in the Structure Tree.**

Parent Node	Possible Child Diagrams/Models
 Project	 Package  Model  Subsystem  Class  Interface  Actor  UseCase  Requirement [P]  TestCase [P]  ExternalEntity [P]  DataStore [P]






























## 7. Structure Tree

	 Class Diagram  UseCase Diagram  Statemachine Diagram  Activity Diagram  Sequence Diagram  Communication Diagram  Component Diagram  Deployment Diagram  Composite Structure Diagram  Flowchart [P]  Data Flow Diagram (DFD) [P]  CRUD [P]  ER Diagram [P]  Mind Map  Requirement Diagram [P]  Requirement Table [P]
 Package	 Package  Subsystem  Class  Interface  Actor  UseCase  Requirement [P]  TestCase [P]  ExternalEntity [P]  DataStore [P]









































## 7. Structure Tree

	 Class Diagram  UseCase Diagram  Statemachine Diagram  Activity Diagram  Sequence Diagram  Communication Diagram  Component Diagram  Deployment Diagram  Composite Structure Diagram  Flowchart [P]  Data Flow Diagram (DFD) [P]  CRUD [P]  Mind Map  Requirement Diagram [P]  Requirement Table [P]  Traceability Map [P]
 Model	 Model  Package  Subsystem  Class  Interface  Actor  UseCase  Requirement [P]  TestCase [P]  ExternalEntity [P]  DataStore [P]

## 7. Structure Tree

	 Class Diagram  UseCase Diagram  Statemachine Diagram  Activity Diagram  Sequence Diagram  Communication Diagram  Component Diagram  Deployment Diagram  Composite Structure Diagram  Flowchart [P]  Data Flow Diagram (DFD) [P]  CRUD [P]  Mind Map  Requirement Diagram [P]  Requirement Table [P]  Traceability Map [P]
 Subsystem	 Subsystem  Package  Model  Class  Interface  Actor  UseCase  Requirement [P]  TestCase [P]  ExternalEntity [P]  DataStore [P]  Operation

## 7. Structure Tree
































	 Class Diagram  UseCase Diagram  Statemachine Diagram  Activity Diagram  Sequence Diagram  Communication Diagram  Component Diagram  Deployment Diagram  Composite Structure Diagram  Flowchart [P]  Data Flow Diagram (DFD) [P]  CRUD [P]  Mindmap  Requirement Diagram [P]  Requirement Table [P]  Traceability Map [P]
 Class  Interface  Actor	 Attribute  Operation  Property  Nested Class
	 Class Diagram  UseCase Diagram  Statemachine Diagram  Activity Diagram  Sequence Diagram  Communication Diagram  Component Diagram  Deployment Diagram  Composite Structure Diagram  Flowchart [P]  CRUD [P]  Mind Map  Traceability Map [P]
 Operation	 Statemachine Diagram  Activity Diagram  Sequence Diagram



## 7. Structure Tree

	Communication Diagram Flowchart [P]
UseCase	Class Diagram UseCase Diagram Statemachine Diagram Activity Diagram Sequence Diagram Communication Diagram Component Diagram Deployment Diagram Composite Structure Diagram Flowchart [P] CRUD [P] Mind Map Traceability Map [P]
ER Model (Note 1) [P]	Entity
	ER Diagram CRUD
Domain Model (Note 1)	Domain [P]
Component	Traceability Map [P]
Artifact	Traceability Map [P]
Node	Traceability Map [P]
ExternalEntity	Traceability Map [P]
DataStore	Traceability Map [P]
Entity [P]	Attribute (Primary Key) Attribute
	Traceability Map
Requirement [P]	Requirement

















































## 7. Structure Tree

	 Class Diagram  UseCase Diagram  Statemachine Diagram  Activity Diagram  Sequence Diagram  Communication Diagram  Component Diagram  Deployment Diagram  Composite Structure Diagram  Flowchart [P]  Data Flow Diagram(DFD) [P]  CRUD  Mind Map  Requirement Table [P]  Requirement Table [P]  Traceability Map [P]
 TestCase [P]	 TestCase  Class Diagram  UseCase Diagram  Statemachine Diagram  Activity Diagram  Sequence Diagram  Communication Diagram  Component Diagram  Deployment Diagram  Composite Structure Diagram  Flowchart [P]  CRUD [P]  Mind Map  Traceability Map [P]










































### 7.5. Moving Diagrams/Models

Model can be transferred by dragging & dropping them in the Structure Tree or from the Structure Tree into the Diagram Editor. Models can only be moved to Nodes where the target Model can be created. Models cannot be moved to a destination that already contains another Model with the same name.

## 7. Structure Tree

Diagrams/Models to move	Possible Destination
 Class Diagram  UseCase Diagram  Component Diagram  Deployment Diagram  Composite Structure Diagram  Mind Map	 Project  Package  Model  Subsystem  Class  Interface  Actor  UseCase  Requirement [P]  TestCase [P]
 Statemachine Diagram  Activity Diagram  Flowchart  Sequence Diagram  Communication Diagram	 Project  Package  Model  Subsystem  Class  Interface  Actor  UseCase  Requirement [P]  TestCase [P]  Operation
 ER Diagram [P]	 ER Model
 CRUD [P]	 Project  Package  Model  Subsystem  Class  Interface  Actor  UseCase  Requirement [P]  TestCase [P]  ER Model [P]
 Package	 Project

## 7. Structure Tree

 Subsystem  UseCase  Component  Node  Requirement [P]  TestCase [P]  ExternalEntity [P]  DataStore [P]  Data Flow Diagram (DFD) [P]	 Package  Model  Subsystem
 Requirement Diagram [P]	 Project  Package  Model  Subsystem  Requirement [P]
 Model	 Project  Model  Subsystem
 Class  Interface  Actor	 Project  Package  Model  Subsystem  Class  Interface  Actor
 Attribute	 Class  Interface  Actor
 Operation	 Class  Interface  Actor  Subsystem

## 7. Structure Tree

### 7.6. Editing the Names of Diagrams/Models

Right-click on the target Element and select [Modify Name].

### 7.7. Deleting Diagrams/Models

Right-click on the target Element and select [Delete].

### 7.8. Cloning Models

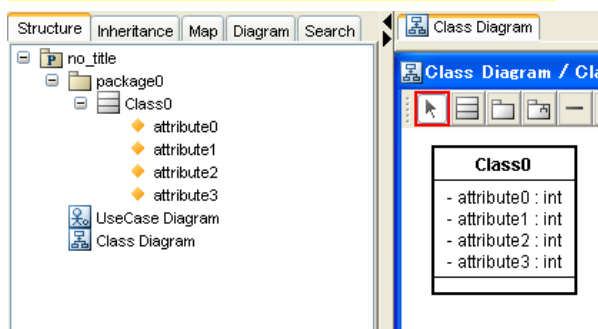
Right-click on the target model and select [Clone]. The clone will be created with the name “Original Name\_(number)”. The “(number)” part is incremented automatically.

### 7.9. Rearranging Operations/Attributes

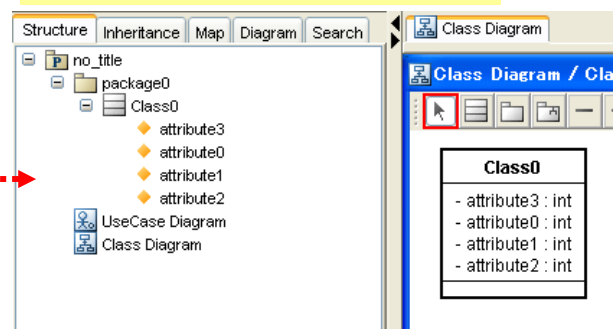
Attributes and Operations can be rearranged by doing Drag & Drop them in the Structure Tree.

*For example, a Class with 4 Attributes*

Drag Attribute 3 and drop it on attribute0



Attribute3 was moved to the top



### 7.10. Creating Setters/Getters of Attributes

- (1) Right-click on the target Attribute in the [Structure Tree].
- (2) Select [Setter/Getter] and click an Operation (Setter/Getter).

### 7.11. Jumping to Diagram Elements

- (1) Right-click on the target Model in the Structure Tree.
- (2) Select [All Related Diagrams] and click the target diagram.

## 7. Structure Tree

### 7. 12. Mind Map and the Structure Tree

#### (1) Selecting Topics

Double-click on a topic in the Structure Tree to open the Diagram Editor.

#### (2) Adding Topics by Drag & Drop from the Structure Tree to the Diagram Editor

A new topic can be added by doing Drag & Drop elements from the Structure Tree to the Mind Map Diagram Editor.

### 7. 13. Setting Mind Map Style

#### (1) Right-click on Mindmap in the [Structure Tree] and select [Set Mindmap Style].

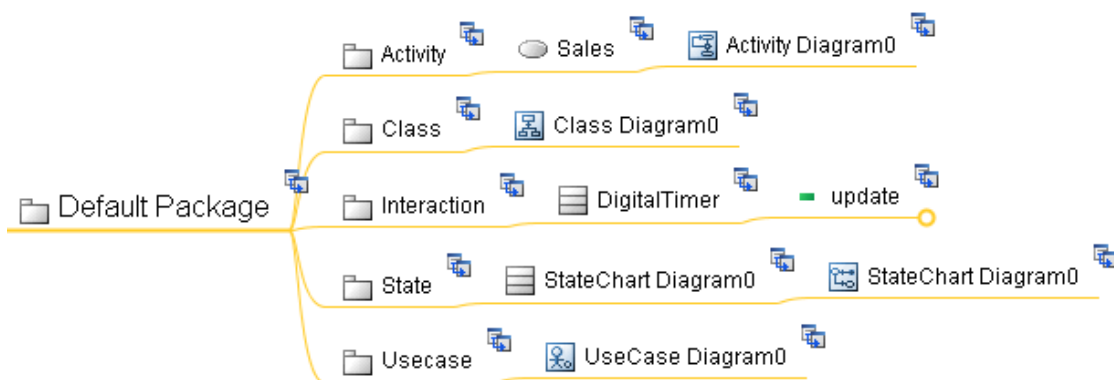
#### (2) Set the Mindmap style in the [Set Mindmap Style] dialog.

### 7. 14. Creating Artifact Map

#### (1) Right-click on the project in the [Structure Tree] and select [Create Artifact Map].

#### (3) An artifact map is displayed in the Diagram Editor and hyperlinks are set to each element.

*(e.g.) Artifact Map*



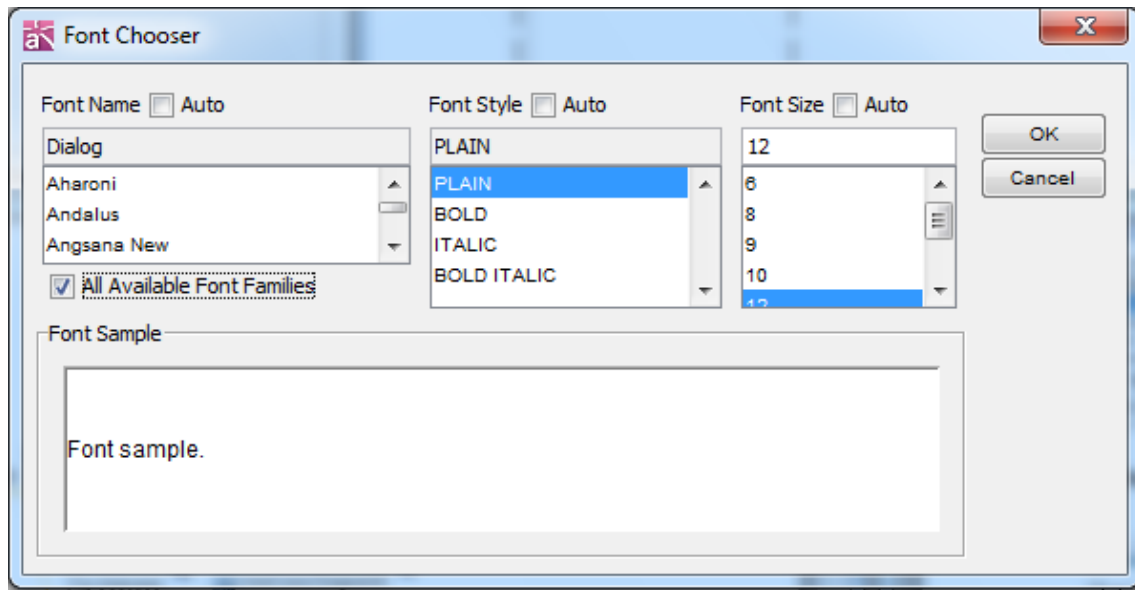
### 7. 15. Setting Font

#### (1) Right-click on the project in the Structure Tree and select [Set Font].

#### (3) Set the font in [Font Chooser] dialog.

All elements will be changed and updated with the font. When font is changed, all the size of model elements will be adjusted automatically.

## 7. Structure Tree

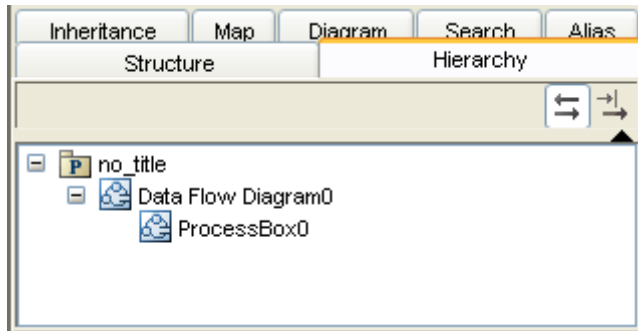


- Available font size is from 6 to 18.
- *Font can be set in the Property view of the Project.*
- *Once the large size font is set, it may no longer be adjusted by the [Auto Resize] option.*
- *The setting of font works for all diagrams except Mind Map.*  
*To change the font for Mind Maps, use the [Mindmap Style Template](#)*

## 8. Hierarchy Tree

### 8. Hierarchy Tree [P]

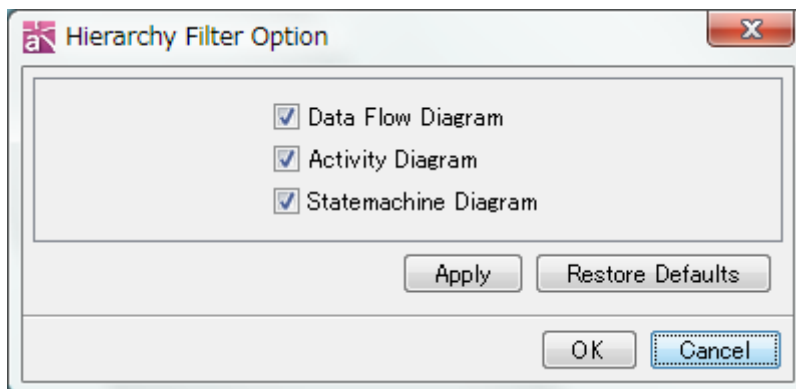
Hierarchy Tree displays the hierarchy of Statemachine, Activity and Data Flow Diagrams.



#### 8. 1. Hierarchy Tree Functions

##### 8. 1. 1. Filtering Aliases

To set the Hierarchy Tree options, click [Filter] button in the Hierarchy Tree tab.



The Hierarchy Filter Option dialog is used to set diagrams.

- (1) Data Flow Diagram
- (2) Activity Diagram
- (3) Statemachine Diagram

##### 8. 1. 2. Selecting Hierarchy Tree

[Synchronize with Diagram Editor Selection] option in the Hierarchy tab can be used to select models in the Hierarchy Tree when the Diagram Elements are selected.



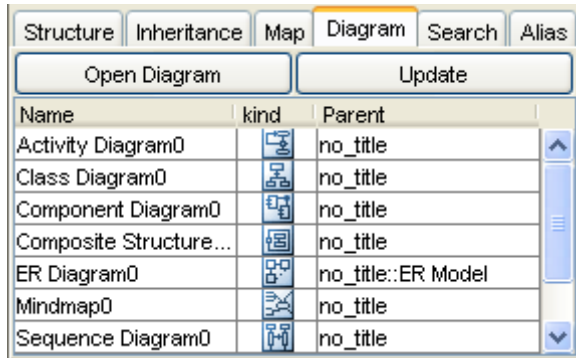
## 9. Diagram (List)

### 9. Diagram (List)

In [Diagram], all existing Diagrams in the Project are listed.

#### 9.1. Opening Diagrams

To open a Diagram, double-click on the target Diagram or select the target diagram and click [Open Diagram].

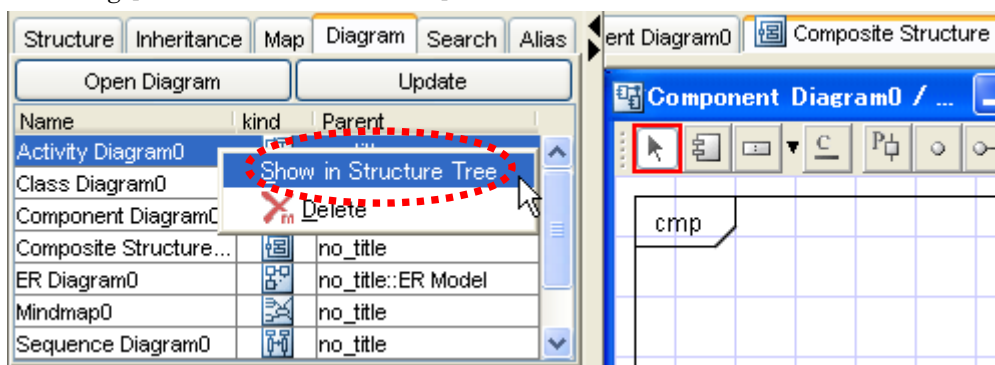


#### 9.2. Updating the List

The list is not automatically updated while it is displayed even if a new Diagram is created. To update the list, click [Update].

#### 9.3. Jumping to Models on the Structure Tree

Jump to a Model in the Structure Tree by right-clicking on the target Model and selecting [Show in Structure Tree].



#### 9.4. Deleting Diagrams

Diagrams can be deleted using the Pop-up Menu. Right-click on the target Diagram and select [Delete].

## 10. Search and Replace

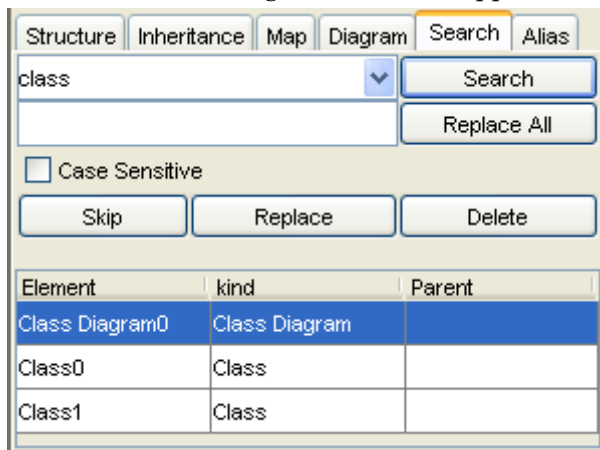
### 10. Search and Replace

Search for Model Elements, invalid hyperlinks in the Project and replace strings contained in the names of Model Elements by using [Search] in the “Project View”.

#### 10.1. Search

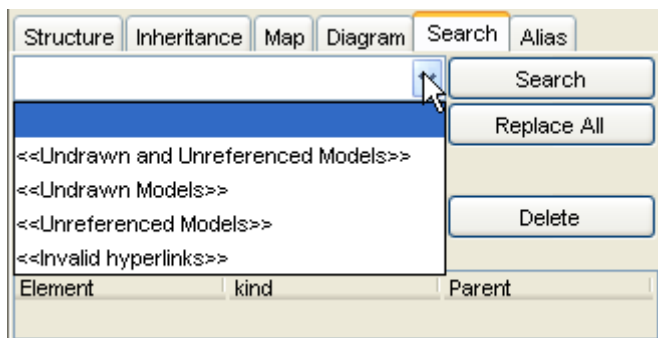
##### 10.1.1. Search by Strings

Enter key strings that are included in the name of the target Model Element and click [Search]. To distinguish between upper/lower cases, check [Case Sensitive].



##### 10.1.2. Additional Search Options

The following search options can be selected from the combobox.



##### (1) <<Undrawn and Unreferenced Models>>

Search for the Models that are not drawn in Diagrams and that are not referred to by other Diagram Elements.

##### (2) <<Undrawn Models>>

Search for the Models that are not drawn in Diagrams.

##### (3) <<Unreferenced Models>>

Search for the Models that are referred to by other Diagram Elements.

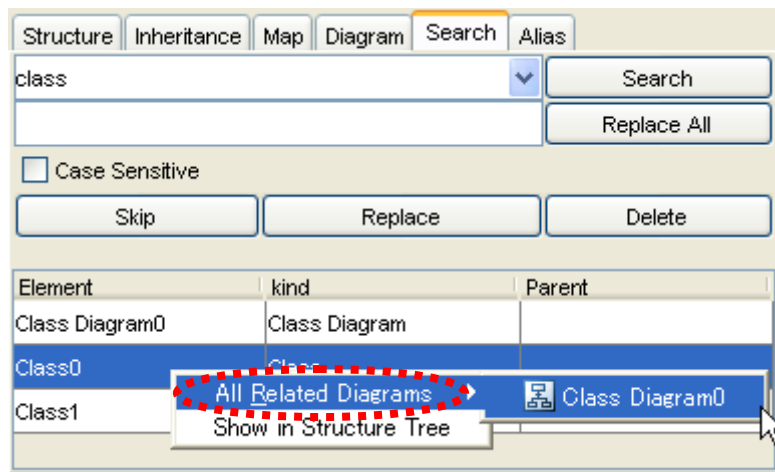
## 10. Search and Replace

### (4) <<Invalid Hyperlinks>>

Search for the disabled hyperlinks.

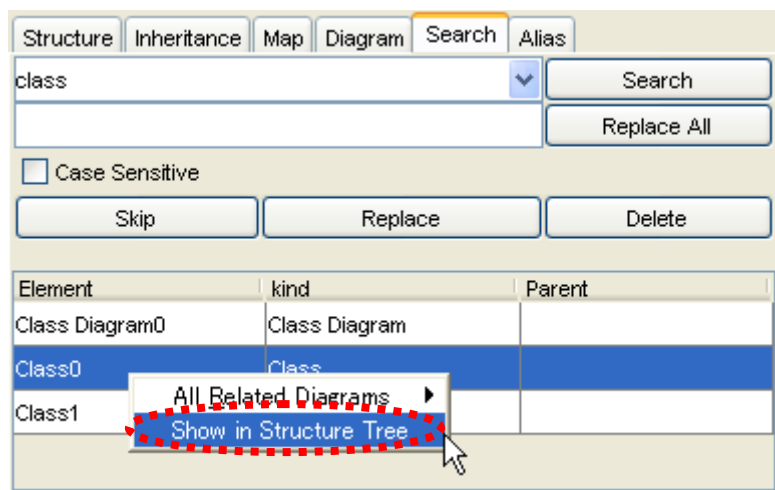
#### 10.1.3. Jumping to Diagram Elements

Right-click on the search results and select [All Related Diagrams]. And, select a Diagram from the list.



#### 10.1.4. Jumping to Models on the Structure Tree

Right-click on the target search result and selecting [Show in Structure Tree].



## 10.2. Replace

Strings that are included in the names of Model Elements can be replaced as follows:

(1) Search Model Elements.

## 10. Search and Replace

- (2) From the search result, select a target Model Element.
- (3) Enter a string in the replace text box and click [Replace].

The screenshot shows the 'Search' tab of a dialog box. At the top, there are tabs for 'Structure', 'Inheritance', 'Map', 'Diagram', 'Search', and 'Alias'. The 'Search' tab is selected. Below the tabs, there is a text input field containing 'class' and a dropdown arrow. To the right of this field are two buttons: 'Search' and 'Replace All'. Below these buttons is a checkbox labeled 'Case Sensitive'. At the bottom of the dialog, there are three buttons: 'Skip', 'Replace', and 'Delete'. Below the buttons is a table with three columns: 'Element', 'kind', and 'Parent'.

Element	kind	Parent
Class Diagram0	Class Diagram	
Class0	Class	
Class1	Class	

### ***Replace All***

To replace the names of all the Model Elements displayed in the search result at the same time, click [Replace All].

## 11. Alias Function

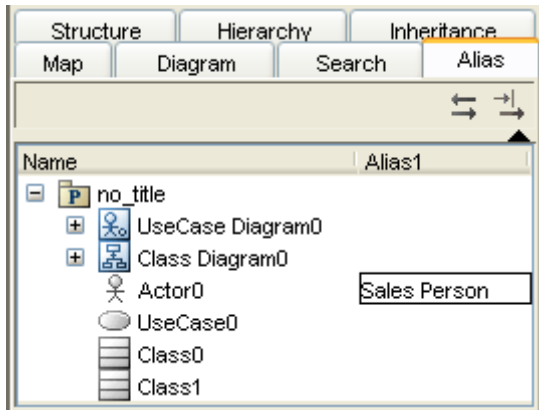
### 11. Alias Function [P]

Aliases can be set to Model Elements by using [Alias] in the “Project View”.

#### 11.1. Editing Aliases

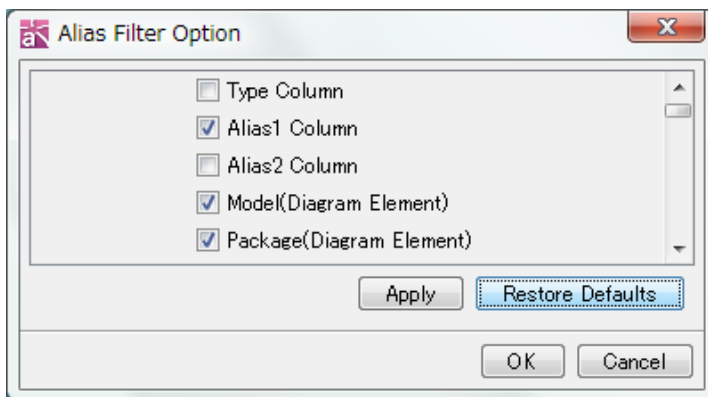
##### 11.1.1. Inputting Aliases

To set Aliases, double-click on the list of the Alias.



##### 11.1.2. Filtering Aliases

To set the Alias options, click [Filter] button in the right top of the Alias tab.



The Alias Filter Option dialog is used to set columns and models.

- 1) Type Column
- 2) Alias1 Column
- 3) Alias2 Column
- 4) Model (Diagram Element)
- 5) Package (Diagram Element)
- 6) SubSystem (Diagram Element)
- 7) Diagram

## 11. Alias Function

- 8) Class
- 9) Attribute
- 10) Operation
- 11) Parameter
- 12) Association
- 13) Association End
- 14) Qualifier
- 15) Generalization
- 16) Usage
- 17) Realization
- 18) Dependency
- 19) InstanceSpecification
- 20) Link
- 21) Link End
- 22) UseCase
- 23) Extend
- 24) Include
- 25) Extension Point
- 26) Entity
- 27) Domain
- 28) Primary Key
- 29) Other Key
- 30) External Entity
- 31) Data Store
- 32) Requirement
- 33) TestCase
- 34) Note
- 35) Text

### **11.1.3. Selecting Alias Tree**

[Synchronize with Diagram Editor Selection] option in the Alias tab can be used to select models in the Alias Tree when the Diagram Elements are selected.

### **11.2. Displaying Aliases**

To display Aliases, select the following menu on the Main Menu in [View] - [Alias].

- 1) Name      2) Alias1 (or Name)      3) Alias2 (or Name)

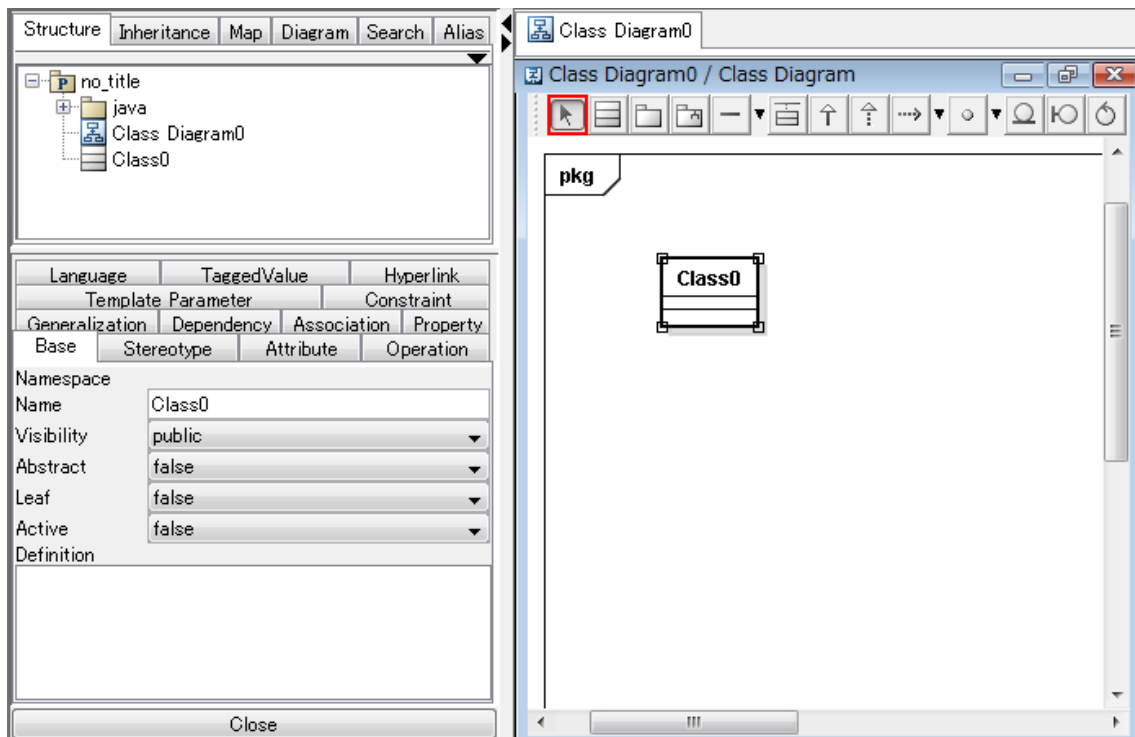
## 12. Property View

## 12. Property View

The Property View displays properties of the selected Model Element or Diagram. Model information can be edited in the Property View.

### 12. 1. Displaying Properties

To display the properties of a Model Element or a Diagram, select the target Model Element or the Diagram Element in the Project View or the Diagram Editor.



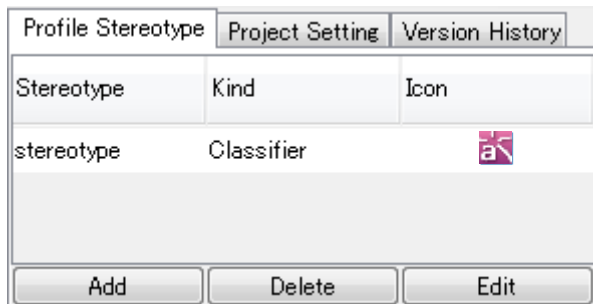
### 12. 2. Structure of Properties

Several Tabs are displayed in the Property View. The structure depends on each Model Element or Diagram. For example, the Property View for a Class contains the following 10 Tabs: [Base], [Stereotype], [Attribute], [Operation], [Generalization], [Dependency], [Association], [Property], [Template Parameter], [Constraint], [Language], [TaggedValue] and [Hyperlink].

## 12. Property View

### 12.3. Project File Properties

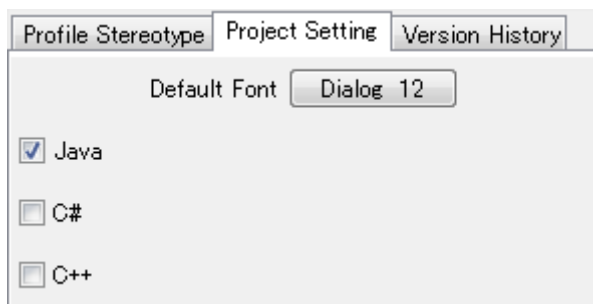
#### 12.3.1. [Profile Stereotype] Tab [P]



Element	Function
Stereotype	Display Stereotype
Kind	Specify the kind whether it is a Classifier or an Action.
Icon	Display customized Icon.
Add	Add a new Stereotype.
Delete	Delete the selected Stereotype.
Up/Down	Rearrange the order of Stereotypes.

-> Please refer to the [Customized Icons](#) for how to set customized Icons.

#### 12.3.2. [Project Setting] Tab



Element	Function
Default Font	Display the default font setting. Pressing the [Dialog xx] button opens a dialog to set the font. Available font size is from 6 to 18.
Java	By checking on the checkbox of Java, Class and its Attributes and Operations can be created in Java language. By taking the check off the box, the specific attributes that are defined by Java language will be cleared.
C#	By checking on the checkbox of C#, Class and its Attributes and



## 12. Property View

Operations can be created in C# Language.

By taking the check off the box, the specific attributes that are defined by C# language will be cleared.

By checking on the checkbox of C++, Class and its Attributes and Operations can be created in C++ Language.

C++

By taking the check off the box, the specific attributes that are defined by C# language will be cleared.

### 12.3.3. [Version History] Tab

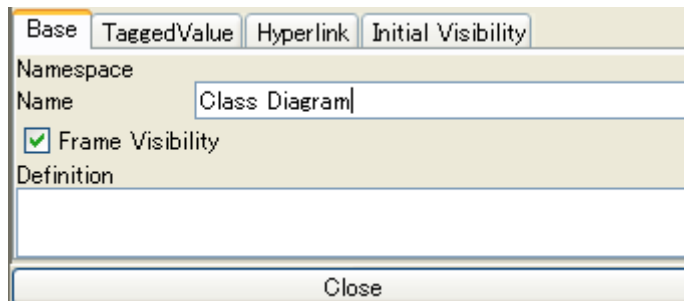
Version History	
Model Time Stamp : 2008-10-14 16:52:31	
Product Model Version : 29	
Project Model Version : 29	
Product Version	Model Version
Professional 5.4	29
<a href="#">About Model Version</a>	

Element	Function
Model Time Stamp	Display the model time stamp.
Product Model Version	Display the model version of astah*.
Project Model Version	Display the model version of the project.
Product Version	Display the all product versions that the current file have been edited with.
Model Version	Display Model Versions related to listed Product Versions
About Model Version	Access to astah* Webpage about Model Version

## 12. Property View

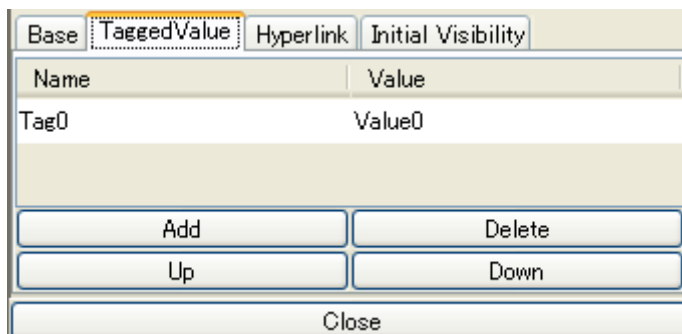
### 12. 4. Class Diagram Properties

#### 12. 4. 1. [Base] Tab



Element	Function
Namespace	Display the Namespace.
Name	Edit the Class Diagram Name.
Frame Visibility	Specify whether the Frame is displayed.
Definition	Edit the Definition.

#### 12. 4. 2. [TaggedValue] Tab [P]



Element	Function
Name	Edit the Name.
Value	Display the Tagged Value.
Add	Add a new Tagged Value.
Delete	Delete the selected Tagged Value.
Up/Down	Rearrange the order of Tagged Value.

## 12. Property View

### 12. 4. 3. [Hyperlink] Tab

Name	Path	Comment
package0		

Add FileAdd URLAdd Model & Element

DeleteOpen HyperlinkEdit

UpDown

Element	Function
Name	Edit the Hyperlink name.
Path	Display the Path of the Hyperlink.
Comment	Edit the comment.
Add File	Add Hyperlink file.
Add URL	Add Hyperlink URLs.
Add Model & Element	Add Hyperlink Models or Elements.
Delete	Delete the selected Hyperlink.
Open Hyperlink	Open the Hyperlink.
Edit	Edit the Hyperlink.

-> Please refer to the [Hyperlinks](#) for more detail.

### 12. 4. 4. [Initial visibility] Tab

☒ Attribute Compartment Visibility

☒ Operation Compartment Visibility

☒ Visibility Kind Visibility

☒ Attribute Type Visibility

☒ Attribute Initial Value Visibility

☒ Attribute Stereotype Visibility

Close

The visibility of some models in this Tab can be set. Check off the box of models to make invisible. When creating a new Class Diagram, the setting of [System Properties - Visibility 1 \(Initial\)](#) shows in this tab.

## 12. Property View

### 12. 5. Class Properties

#### 12. 5. 1. [Base] Tab

Property	Template Parameter	Constraint	Language	TaggedValue	Hyperlink	
Base	Stereotype	Attribute	Operation	Generalization	Dependency	Association
Namespace						
Name	Class0					
Visibility	public ▼					
Abstract	false ▼					
Leaf	false ▼					
Active	false ▼					
Definition						

Element	Function
Name Space	Display the Name of the package to which the Class belongs.
Name	Edit the Class Name.
Visibility	Specify the visibility. “public”, “protected”, “package”, “private”
Abstract	Specify whether the target is an abstract Class.
Leaf	Specify whether the target is a leaf Class.
Active	Specify whether the target is active.
Definition	Edit the Definition. The Definition is output as a comment when a Java source code template is generated by [Export Java].

#### 12. 5. 2. [Stereotype] Tab

Property	Template Parameter	Constraint	Language	TaggedValue	Hyperlink	
Base	Stereotype	Attribute	Operation	Generalization	Dependency	Association
Name						
stereotype						
Add			Delete			
Up			Down			

Element	Function
Name	Edit the Stereotype Name.

## 12. Property View

Add	Add a new Stereotype.
Delete	Delete the selected Stereotype.
Up/Down	Rearrange the order of Stereotypes.

### 12.5.3. [Attribute] Tab

Property	Template	Parameter	Constraint	Language	TaggedValue	Hyperlink
Base	Stereotype	Attribute	Operation	Generalization	Dependency	Association
Name	Type	Type Modifier	Visibility	Initial Value		
attribute0	int		private			
Add		Delete		Edit		
Up			Down			

Element	Function
Name	Edit the Attribute Name. Edit the type.
Type	Select a type in the combobox or input a type name. If a new type is entered, the Class is automatically created under the same Package.
Type Modifier	Edit Type Modifier. (*, **, &)
Visibility	Specify the visibility. “public”, “protected”, “package”, “private”
Initial Value	Specify the initial value for the Attribute.
Add	Add a new Attribute.
Edit	Open properties of the selected Attribute.
Up/Down	Rearrange the order of Attributes.

## 12. Property View

### 12.5.4. [Operation] Tab

Property	Template Parameter	Constraint	Language	TaggedValue	Hyperlink
Base	Stereotype	Attribute	Operation	Generalization	Dependency
Name		Return Value	Type Modifier	Visibility	
operation0		void		public	
Add		Delete		Edit	
Up			Down		

Element	Function
Name	Edit the Operation Name.
Return Value	Edit the return value type.
Type Modifier	Edit Type Modifier. (*, **, &)
Visibility	Specify the visibility. “public”, “protected”, “package”, “private”
Add	Add a new Operation.
Delete	Delete the selected Operation.
Edit	Open properties of the selected Operation.
Up/Down	Rearrange the order of Operations.

### 12.5.5. [Generalization] Tab

Property	Template Parameter	Constraint	Language	TaggedValue	Hyperlink
Base	Stereotype	Attribute	Operation	Generalization	Dependency
Name		To End Target	Class Type		
		Class1	SubClass		
		Class2	SuperClass		
Delete					

Element	Function
Name	Edit the Generalization Name.
To End Target	Display the target Class Name of the Generalization.
Class Type	Indicate whether it is a Superclass or a Subclass.
Delete	Delete the Generalization.

## 12. Property View

### 12.5.6. [Dependency] Tab

Property	Template	Parameter	Constraint	Language	TaggedValue	Hyperlink
Base	Stereotype	Attribute	Operation	Generalization	Dependency	Association
Name		To End Target		Depend Type		Type
		Interface0		Supplier		Dependency
		Class2		Client		Dependency
<div>Delete</div>						

Element	Function
Name	Edit the Dependency Name.
To End Target	Display the target Class Name of the Dependency.
Depend Type	Display the type whether it is a Supplier or a Client.
Type	Display the dependency type.

### 12.5.7. [Association] Tab

Property	Template	Parameter	Constraint	Language	TaggedValue	Hyperlink
Base	Stereotype	Attribute	Operation	Generalization	Dependency	Association
Name			To End Target			
			Class1			
			Class3			
<div>Delete</div>						

Element	Function
Name	Edit the Association Name.
To End Class	Display the target Class Name of the Association.
Delete	Delete the Association.

## 12. Property View

### 12.5.8. [Property] Tab

Base	Stereotype	Attribute	Operation	Generalization	Dependency	Association
Property	Template Parameter	Constraint	Language	TaggedValue	Hyperlink	
Name	Target	Relation Name	Depend Type			
	Class1		—			
	Class3		◆			
<div>Delete</div>						

Element	Function
Name	Edit the Name.
Target	Display the target Class Name.
Relation Name	Display the Relation Name.
Depend Type	Display the Type of Association.
Delete	Delete.

### 12.5.9. [Template Parameter] Tab

Base	Stereotype	Attribute	Operation	Generalization	Dependency	Association
Property	Template Parameter	Constraint	Language	TaggedValue	Hyperlink	
Name	Type	Default Value	Type Modifier(Default Value)			
parameter0	<<Unspecified>>					
<div>Add</div>				<div>Delete</div>		
<div>Up</div>				<div>Down</div>		

Element	Function
Name	Edit the Template Parameter Name.
Type	Edit the type. Select a type in the combobox or input a type name. If a new type is entered, the Class is automatically created under the same Package.
Default value	Specify the default value for Template Parameter.
Type Modifier	Edit Type Modifier of Default Value. (*, **, &)



## 12. Property View

(Default Value)

Add	Add a new Template Parameter.
Delete	Delete the selected Template Parameter.
Up/Down	Rearrange the order of Template Parameter.

### 12. 5. 10. [Constraint] Tab

Base	Stereotype	Attribute	Operation	Generalization	Dependency	Association
Property	Template Parameter	Constraint	Language	TaggedValue	Hyperlink	
Name						
constraint						
Edit Constraint						
Add			Delete			
Up			Down			

Element	Function
Name	Display the Constraint Name.
Edit Constraint	Edit the Constraint.
	Select the target Constraint in [Name] and edit in this column.
Add	Add a Constraint.
Delete	Delete a Constraint.
Up/Down	Rearrange the order of Constraints.

### 12. 5. 11. [Language] Tab

Element	Function
Java	Specify whether Java setting is set to the Class. To use this function, check on Java option in the project property.
<<enum>>	Specify whether the target is an <<enum>> Class.
annotations	Add annotations.
@interface	Specify whether @interface is added to the target Class.
strictfp	Specify whether the target is a strictfp Class.
final	Specify whether the target is a final Class.
C#	Specify whether C# setting is set to the Class. To use this function, check on C# option in the project property.
<<delegate>>	Specify whether the target is a <<delegate>> Class.

## 12. Property View

<<struct>>	Specify whether the target is a <<struct>> Class.
<<enum>>	Specify whether the target is an <<enum>> Class.
attributes	Add attributes.
sealed	Specify whether the target is a sealed Class.
static	Specify whether the target is a static Class.
internal	Specify whether the target is an internal Class.
C++	Specify whether C++ setting is set to the Class. To use this function, C++ on Java option in the project property.
<<enum>>	Specify whether the target is a <<enum>> Class.
<<struct>>	Specify whether the target is a <<struct>> Class.
<<union>>	Specify whether the target is a <<union>> Class.
-> Please refer to Class Diagram Properties for [TaggedValue] tab and [Hyperlink] tab.	

### 12. 6. Attribute Properties (Class Diagram)

#### 12. 6. 1. [Base] Tab

Base	Stereotype	Constraint	Language	TaggedValue	Hyperlink
Name	attribute0				
Type	int				
Type Modifier					
Aggregation	composite				
Initial Value					
Visibility	private				
Static	false				
ReadOnly	false				
Multiplicity					
Derived	false				
Definition					

Element	Function
Name	Edit the Attribute Name.
Type	Edit the type.
Type Modifier	Select a type from the combobox or input a type name. If a new type is entered, the Class is created under the same Package.
Aggregation	Edit Type Modifier. (*, **, &)
	Edit the Aggregation.
	Select an aggregation from [None], [Aggregate], or [Composite]

## 12. Property View

	from the combobox.
Initial Value	Specify the initial value.
Visibility	Specify the visibility. “public”, “protected”, “package”, “private”
Static	Specify whether the Attribute is static.
ReadOnly	Specify whether the Attribute is read-only.
Multiplicity	Specify the Multiplicity. [1], [0..1], [0.*], [*, [1..*]. Alternatively, input the value.
Derived	Specify whether the Attribute is derived.
-> Please refer to <i>Class Properties</i> for <i>[Stereotype]</i> tab.	

### 12. 6. 2. [Language] Tab

Element	Function
Java	Specify whether Java setting is set to the Attribute. To use this function, check on Java option in the project property.
<<enum constant>>	Add an enum constant.
annotations	Add annotations.
Transient	Specify whether the Attribute is transient.
Volatile	Specify whether the Attribute is volatile.
Final	Specify whether the Attribute is final.
C#	Specify whether C# setting is set to the Attribute. To use this function, check on C# option in the project property.
<<property>>	Add a property.
<<property>>get	Add a get property.
<<property>>set	Add a set property.
<<enum constant>>	Add an enum constant.
attributes	Add attributes.
const	Specify whether the Attribute is const.
override	Specify whether the Attribute is override
volatile	Specify whether the Attribute is volatile.
Internal	Specify whether the Attribute is internal.
Readonly	Specify whether the Attribute is read-only.
C++	Specify whether C++ setting is set to the Attribute. To use this function, check on C++ option in the project property.

## 12. Property View

<<enum  
constant>>

Add an enum constant.

Const Specify whether the Attribute is const.

mutable Specify whether the Attribute is Mutable.

Volatile Specify whether the Attribute is volatile.

-> Please refer to *Class Diagram Properties* for [TaggedValue] and [Hyperlink] tab, and *Class Properties* for [Stereotype] and [Constraint] tab.

## 12. 7. Operation Properties

### 12. 7. 1. [Base] Tab

Base	Parameters	Stereotype	Precondition	Post Condition	Body Condition	Constraint	Language	TaggedValue	Hyperlink
Name	operation0								
Return Value	void								
Type Modifier									
Visibility	public								
Static	false								
Abstract	false								
Leaf	false								
Definition									

#### Element

#### Function

Name	Edit the Operation Name. Edit the return value.
Return Value	Select a type from the combobox or input a type name. If a new type is entered, the Class is automatically created under the same Package.
Type Modifier	Edit Type Modifier. (*, **, &)
Visibility	Specify the visibility. “public”, “protected”, “package”, “private”
Static	Specify whether the Operation is static.
Abstract	Specify whether the Operation is abstract.
Leaf	Specify whether the Operation is leaf.
Definition	Specify the Definition

## 12. Property View

### 12.7.2. [Parameter] Tab

Base	Parameters	Stereotype	Precondition	Post Condition	Body Condition	Constraint	Language	TaggedValue	Hyperlink
Name		Type		Type Modifier		Direction Kind			
param0		int				in			
		Add				Delete			
		Up				Down			

Element	Function
Name	Edit the Parameter Name. Edit the parameter type.
Type	Select a type from the combobox or input a type name. If a new type is entered, the Class is automatically created under the same Package.
Type Modifier	Edit Type Modifier. (*, **, &)
Direction Kind	Specify Direction Kind from in, out or inout.
Add	Add a new Parameter.
Delete	Delete the selected Parameter.
Up/Down	Rearrange the order of Parameters.

### 12.7.3. [Precondition] Tab

Base	Parameters	Stereotype	Precondition	Post Condition	Body Condition	Constraint	Language	TaggedValue	Hyperlink
Name									
precondition									
Edit Precondition									
Add					Delete				
Up					Down				

Element	Function
Name	Edit the Precondition Name.
Edit Precondition	Edit the Precondition. Select the target Precondition in [Name] and edit in this column.
Add	Add a new Precondition.

## 12. Property View

Delete	Delete the selected Precondition.
Up/Down	Rearrange the order of Precondition.

### 12. 7. 4. [Post Condition] Tab

Base	Parameters	Stereotype	Precondition	Post Condition	Body Condition	Constraint	Language	TaggedValue	Hyperlink
Name									
postcondition									
Edit Post Condition									
Add					Delete				
Up					Down				

Element	Function
Name	Edit the Post Condition Name.
Edit Post	Edit the Post Condition.
Condition	Select the target Post Condition in [Name] and edit in this column.
Add	Add a new Post Condition.
Delete	Delete the selected Post Condition.
Up/Down	Rearrange the order of Post Condition.

### 12. 7. 5. [Body Condition] Tab

Base	Parameters	Stereotype	Precondition	Post Condition	Body Condition	Constraint	Language	TaggedValue	Hyperlink
Name									
bodycondition									
Edit Body Condition									
Add					Delete				
Up					Down				

Element	Function
Name	Edit the Body Condition Name.

## 12. Property View

Edit Body	Edit the Body Condition.
Condition	Select the target Body Condition in [Name] and edit in this column.
Add	Add a new Body Condition.
Delete	Delete the selected Body Condition.
Up/Down	Rearrange the order of Body Condition.

### 12. 7. 6. [Language] Tab

Element	Function
Java	Specify whether Java setting is set to the Operation. To use this function, check on Java option in the project property.
Annotations	Add annotations.
Synchronized	Specify the Operation is synchronized.
Native	Specify the Operation is native.
Strictfp	Specify the Operation is strictfp.
Final	Specify the Operation is final.
C#	Specify whether C++ setting is set to the Operation. To use this function, check on Java option in the project property.
<<event>>	Add an event.
<<event>>add	Add an add event.
<<event>>remove	Add a remove event.
<<indexer>>	Add an indexer.
<<indexer>>get	Add a get indexer.
<<indexer>>set	Add a set indexer.
Attributes	Add attributes.
Extern	Specify whether the Operation is extern.
Override	Specify whether the Operation is override.
Sealed	Specify whether the Operation is sealed.
Unsafe	Specify whether the Operation is unsafe.
Virtual	Specify whether the Operation is virtual.
Internal	Specify whether the Operation is internal.
Extension Method	Specify whether the Operation is an extension method.
C++	Specify whether C++ setting is set to the Operation. To use this function, check on C++ option in the project property.
Friend	Specify whether the Operation is friend.
Const	Specify whether the Operation is const.
explicit	Specify whether the Operation is explicit.

## 12. Property View

Inline                      Specify whether the Operation is inline.

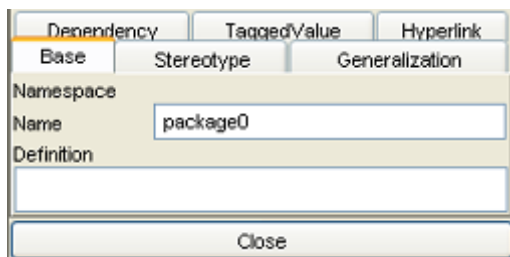
Virtual                     Specify whether the Operation is virtual.

-> Please refer to *Class Properties* for *[Stereotype]* and *[Constraint]* tab.

-> Please refer to *Class Diagram Properties* for *[TaggedValue]* and *[Hyperlink]* tab.

### 12. 8. Package Properties

#### 12. 8. 1. [Base] Tab



Element	Function
Name Space	Display the Name of the Package to which the Package belongs.
Name	Edit the Package Name.
Definition	Edit the Definition.

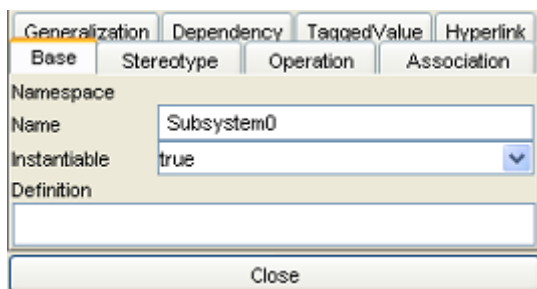
-> Please refer to *Class Properties* for *[Stereotype]*, *[Generalization]*, *[Dependency]*, *[TaggedValue]* and *[Hyperlink]* tab.

### 12. 9. Model Properties

The editable contents are the same as they are for Packages. -> See the [Package Properties](#).

### 12. 10. Subsystem Properties

#### 12. 10. 1. [Base] Tab



Element	Function
Name Space	Display the Name of the Package to which the Subsystem belongs.



## 12. Property View

Name	Edit the Subsystem Name.
Instantiable	Specify whether an Instance of the Subsystem can be created.
Definition	Edit the Definition.

-> Please refer to Class Properties for [Stereotype], [Operation], [Association], [Generalization] and [Dependency] tab, and refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

### 12. 11. Association Properties

#### 12. 11. 1. [Base] Tab

Constraint A	Association End B	Constraint B	TaggedValue
Base	Stereotype	Constraint	Association End A
Name			
Definition			

Element	Function
Name	Edit the Association Name.
Definition	Edit the Definition.

-> Please refer to Class Properties for [Stereotype] and [Constraint] tab.

#### 12. 11. 2. [Association End] Tab

Constraint A	Association End B	Constraint B	TaggedValue
Base	Stereotype	Constraint	Association End A
Target	Class0 ▼		
Type Modifier			
Name			
Navigation	unspecified navigable ▼		
Aggregation	none ▼		
Initial Value			
Visibility	private ▼		
Static	false ▼		
Leaf	false ▼		
Multiplicity	▼		
Derived	false ▼		
Definition			

Element	Function
Target	Display the target Model Element Name.

## 12. Property View

Type Modifier	Edit Type Modifier. (*, **, &)
Name	Edit the Association End Name.
Navigation	Specify whether the direction of Navigation is “Navigable” or “Non Navigable” or “Unspecified Navigable”.
Aggregation	Specify the Aggregation. “none”, “aggregate”, “composite”
Initial Value	Edit the initial value.
Visibility	Specify the visibility. “public”, “protected”, “package”, “private”
Static	Specify whether the Association is static.
Final	Specify whether the Association is final.
Multiplicity	Specify the Multiplicity. [1], [0..1], [0.*], [0..*], [1..*]. Alternatively, input the value.
Derived	Specify whether the Association is derived.
Definition	Edit the Definition.

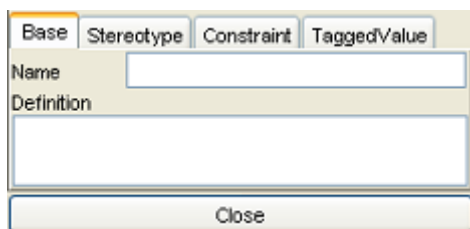
-> Please refer to *Class Diagram Properties* for [TaggedValue] tab.

### 12.11.3. [Association End Constraint] Tab

Please refer to *Class Properties* for [Constraint] tab.

## 12.12. Generalization Properties

### 12.12.1. [Base] Tab



Element	Function
Name	Edit the Generalization Name.
Definition	Edit the Definition.

-> Please refer to *Class Properties* for [Stereotype] and [Constraint] tab, and refer to *Class Diagram Properties* for [TaggedValue] tab.

## 12. Property View

### 12. 13. Realization Properties

The editable contents are the same as they are for Generalizations.

-> See to the [Generalization Properties](#) section.

### 12. 14. Dependency Properties

The editable contents are the same as they are for Generalizations.

-> See the [Generalization Properties](#) section.

### 12. 15. TemplateBinding Properties

#### 12. 15. 1. [Base] Tab

Template Parameter		TaggedValue			
Name	Type	Default Value	Type Modifier(Default Value)	Actual Parameter	Type Modifier(Actual Parameter)
parameter0	char	a			

#### Element

#### Function

Name

Display the Name of Template Parameter.

Type

Display the Type of Template Parameter.

Default Value

Display the Default Value of Template Parameter.

Type Modifier

(Default Value)

Edit Type Modifier (\*, \*\*, &) for Default Value.

Edit the Actual Parameter.

Actual Parameter

Select a type in the combobox or input a type name if the type is unspecified to the Template Parameter. Or, input a type name if the type is already specified. If a new type is entered, the Class is automatically created under the same Package.

Type Modifier

(Actual Parameter)

Edit Type Modifier (\*, \*\*, &) for Actual Parameter.

-> Please refer to *Class Diagram Properties* for [TaggedValue] tab.

## 12. Property View

### 12.16. Instance Specification Properties (Class Diagram)

#### 12.16.1. [Base] Tab

Name	Type	Value
attribute0	int	

Element	Function
Name	Edit the Instance Specification Name.
Base Class	Specify the Base Class. Select a Base Class using the combobox.
Property	Open properties of the Base Class.
New	Create a new Class to be used as the Base Class.
Slots	Display Slots (Attributes of the Base Class).

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

### 12.17. Link Properties (Class Diagram)

#### 12.17.1. [Base] Tab

Name	Definition

Element	Function
Name	Edit the Link Name.
Definition	Edit the Definition.

-> Please refer to Class Diagram Properties for [TaggedValue] tab.

#### 12.17.2. [Link End] Tab

Two [Link End] Tabs are displayed at each end of a Link, at the starting point and at the end point.

## 12. Property View

Base	Link End A	Link End B	TaggedValue
Target	InstanceSpecification0		
Name	<input type="text"/>		
Navigation	unspecified navigable ▼		
Aggregation	none ▼		
Definition	<input type="text"/>		

Element	Function
Target	Display the target Instance Specification Name.
Name	Edit the Link End Name.
Navigation	Specify whether the direction of Navigation is “Navigable” or “Non Navigable” or “Unspecified Navigable”.
Aggregation	Specify the Aggregation. “none”, “aggregate”, “composite”
Definition	Edit the Definition.

-> Please refer to *Class Diagram Properties* for [TaggedValue] tab.

### 12.18. UseCase Properties

#### 12.18.1. [Base] Tab

Extend	TaggedValue	Hyperlink
Dependency	Association	Include
Base	Stereotype	Extension Point
Generalization		
Namespace	<input type="text"/>	
Name	UseCase0	
Definition	<input type="text"/>	
Close		

Element	Function
Namespace	Display the Namespace of the UseCase.
Name	Edit the UseCase Name.
Definition	Edit the Definition.

-> Please refer to *Class Properties* for [Stereotype] tab.

## 12. Property View

### 12.18.2. [Extension Point] Tab

Extend	TaggedValue	Hyperlink
Dependency	Association	Include
Base	Stereotype	Extension Point
Generalization		
Name		
ExtensionPoint0		
Add		Delete
Close		

Element	Function
---------	----------

Name	Edit the Extension Point Name.
------	--------------------------------

Add	Add a new Extension Point.
-----	----------------------------

Delete	Delete the selected Extension Point.
--------	--------------------------------------

-> Please refer to Class Properties for [Generalization], [Dependency], and [Association] tab.

### 12.18.3. [Include] Tab / [Extend] Tab

Base	Stereotype	Extension Point	Generalization
Extend	TaggedValue	Hyperlink	
Dependency	Association	Include	
Name	To End Target	IncludeType	
	UseCase1	Base	
Delete			
Close			

Dependency	Association	Include
Base	Stereotype	Extension Point
Extend	TaggedValue	Hyperlink
Name	To End Target	Extend Type
	UseCase2	Addition
Delete		
Close		

Element	Function
---------	----------

Name	Edit the Include / Extend Name.
------	---------------------------------

To End Class	Display the target Class Name of the Include / Extend.
--------------	--

Include Type	Specify whether the Include / Extend is an “Addition” or a “Base”.
--------------	--

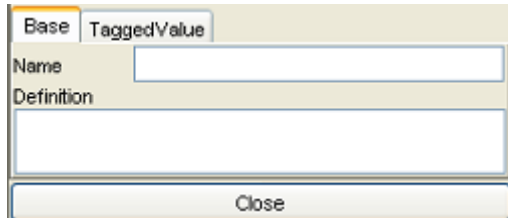
Delete	Delete the Include / Extend.
--------	------------------------------

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

## 12. Property View

### 12. 19. Include Properties

#### 12. 19. 1. [Base] Tab



The screenshot shows a dialog box titled 'Include Properties'. It has two tabs: 'Base' (selected) and 'TaggedValue'. The 'Base' tab contains a 'Name' text field, a 'Definition' text area, and a 'Close' button at the bottom.

Element	Function
Name	Edit the Include Name.
Definition	Edit the Definition.

-> Please refer to *Class Diagram Properties for [TaggedValue] tab.*

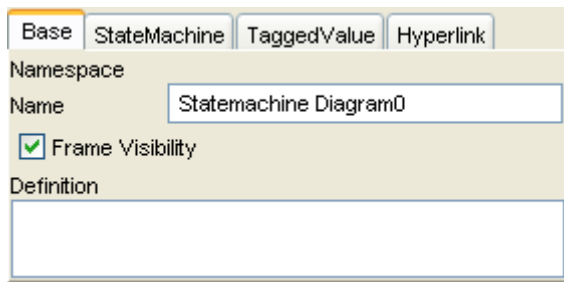
### 12. 20. Extend Properties

The editable contents are the same as they are for Includes.

-> Please refer to the [Include Properties](#) section for more details.

### 12. 21. Statemachine Diagram Properties

#### 12. 21. 1. [Base] Tab

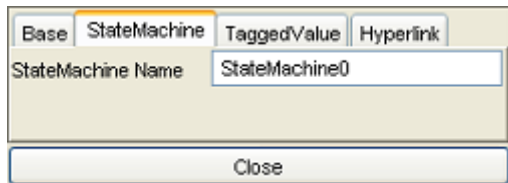


The screenshot shows a dialog box titled 'Statemachine Diagram Properties'. It has four tabs: 'Base' (selected), 'StateMachine', 'TaggedValue', and 'Hyperlink'. The 'Base' tab contains a 'Namespace' label, a 'Name' text field with the value 'Statemachine Diagram0', a checked 'Frame Visibility' checkbox, and a 'Definition' text area.

Element	Function
Namespace	Display the Namespace.
Name	Edit the Statemachine Diagram Name.
Frame Visibility	Specify whether the Frame is displayed.
Definition	Edit the Definition

## 12. Property View

### 12.21.2. [StateMachine] Tab

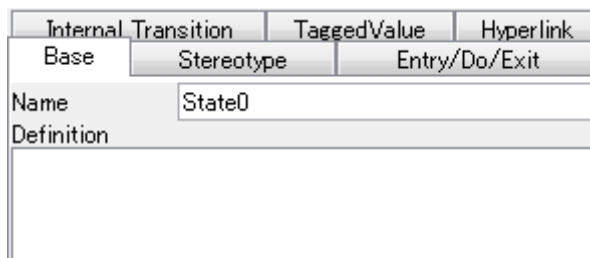


Element	Function
StateMachine Name	Edit the StateMachine Name.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

## 12.22. State Properties

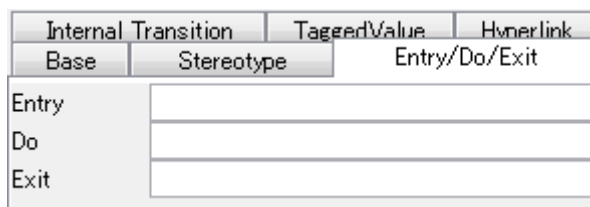
### 12.22.1. [Base] Tab



Element	Function
Name	Edit the State Name.
Definition	Edit the Definition.

-> Please refer to Class Properties for [Stereotype] tab.

### 12.22.2. [Entry/Do/Exit] Tab



Element	Function
Entry	Edit the Entry action.
Do	Edit the Do activity.
Exit	Edit the Exit action.



## 12. Property View

### 12.22.3. [Internal Transition] Tab

Base	Stereotype	Entry/Do/Exit
Internal Transition	TaggedValue	Hyperlink
Event	Guard	Action
Add		Delete
Up		Down

Element	Function
Event	Edit the Event.
Guard	Edit the Guard condition.
Action	Edit the Action.
Add	Add an Internal Event.
Delete	Delete the selected Internal Event.
Up/Down	Rearrange the order of Internal Events.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

## 12.23. Transition (Control Flow/Object Flow) Properties

### 12.23.1. [Base] Tab

Base	TaggedValue
Source	State0
Target	State1
Event	
Guard	
Action	
Close	

Element	Function
Source	Display the Source.
Target	Display the target to Transit.
Event	Edit the Event.
Guard	Edit the Guard condition.
Action	Edit the Action.

-> Please refer to Class Diagram Properties for [TaggedValue] tab.

## 12. Property View

### 12.24. Submachine State Properties

#### 12.24.1. [Base] Tab

Internal Transition	TaggedValue	Hyperlink
Base	Submachine	Entry/Do/Exit
Name	SubmachineState	
Definition		

Element	Function
Name	Edit the Submachine State Name.
Definition	Edit the Definition.

#### 12.24.2. [Submachine] Tab

Internal Transition	TaggedValue	Hyperlink
Base	Submachine	Entry/Do/Exit
Submachine Name		
StateMachine	<<Unspecified>>	
	Property	New

Element	Function
Submachine Name	Edit the Submachine Name.
StateMachine	Specify the Statemachine Diagram to refer to.
Property	Open properties of the Statemachine Diagram.
New	Create a new Statemachine Diagram to be referred.

-> Please refer to Sate Properties for [Entry/Do/Exit], [Internal Event] tab, and Class Diagram Properties for [TaggedValue] tab and [Hyperlink] tab.

### 12.25. StubState Properties

#### 12.25.1. [Base] Tab

Base	TaggedValue
Name	StubState0
Close	

## 12. Property View

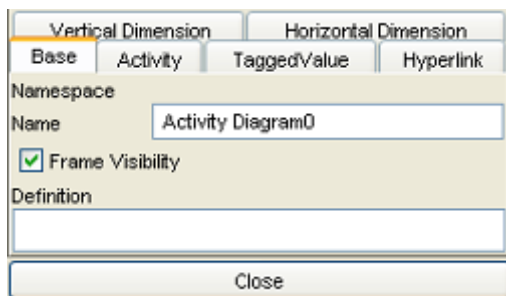
Element	Function
---------	----------

Name	Edit the StubState Name.
------	--------------------------

-> Please refer to *Class Diagram Properties* for [TaggedValue] tab.

### 12. 26. Activity Diagram Properties

#### 12. 26. 1. [Base] Tab



Element	Function
---------	----------

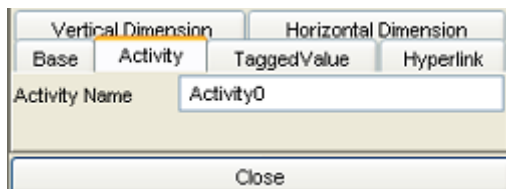
Namespace	Display the Namespace.
-----------	------------------------

Name	Edit the Activity Diagram Name.
------	---------------------------------

Frame Visibility	Specify whether the Frame is displayed.
------------------	---

Definition	Edit the Definition.
------------	----------------------

#### 12. 26. 2. [Activity] Tab



Element	Function
---------	----------

Activity Name	Edit the Activity Name.
---------------	-------------------------

## 12. Property View

### 12. 26. 3. [Vertical Dimension] Tab / [Horizontal Dimension] Tab

The image shows two side-by-side screenshots of the 'Property View' dialog box. The left dialog is for the 'Vertical Dimension' tab, showing the 'Name' field with 'Dimension0' and the 'Dimension Visibility' dropdown set to 'false'. The right dialog is for the 'Horizontal Dimension' tab, showing the 'Name' field with 'Dimension1' and the 'Dimension Visibility' dropdown set to 'false'. Both dialogs have a 'Close' button at the bottom.

Element	Function
Name	Edit the Dimension Name.
Dimension	
Visibility	Select the Dimension Visibility.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

### 12. 27. Partition Properties

#### 12. 27. 1. [Base] Tab

The image shows a screenshot of the 'Property View' dialog box for the 'Base' tab. The 'Name' field contains 'Partition0'. The 'Definition' field is empty. There is a 'Close' button at the bottom.

Element	Function
Name	Edit the Partition Name.
Definition	Edit the Definition.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

## 12. Property View

### 12. 28. Action Properties

#### 12. 28. 1. [Entry] Tab

The screenshot shows the 'Entry' tab selected in a tabbed interface. Below the tabs, there are two main sections: 'Entry' and 'Definition'. The 'Entry' section contains a text field with the value 'Action'. The 'Definition' section is currently empty.

Element	Function
Entry	Edit the Action Name.
Definition	Edit the Definition.

-> Please refer to Class Properties for [Stereotype] tab and Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

### 12. 29. CallBehaviorAction Properties

#### 12. 29. 1. [Base] Tab

The screenshot shows the 'Base' tab selected in a tabbed interface. Below the tabs, there are two main sections: 'Name' and 'Definition'. The 'Name' section contains a text field with the value 'CallBehaviorAction0'. The 'Definition' section is currently empty. At the bottom of the dialog, there is a 'Close' button.

Element	Function
Name	Edit the CallBehaviorAction Name.
Definition	Edit the Definition.

#### 12. 29. 2. [Activity] Tab

The screenshot shows the 'Activity' tab selected in a tabbed interface. Below the tabs, there are two main sections: 'Activity Name' and 'Activity Graph'. The 'Activity Name' section contains a text field. The 'Activity Graph' section contains a dropdown menu with the value '<<Unspecified>>'. Below these sections, there are two buttons: 'Property' and 'New'. At the bottom of the dialog, there is a 'Close' button.

Element	Function
---------	----------

## 12. Property View

Activity Name	Edit the Activity Name.
Activity Graph	Edit the Activity Graph.
Property	Open properties of the Activity Graph.
New	Create a new Activity Diagram to be used as an Activity Graph.
-> Please refer to <i>Class Properties</i> for [Stereotype] tab, <i>Class Diagram Properties</i> for [TaggedValue] and [Hyperlink] tab.	

### **12. 30. Flow Final Node Properties**

The editable contents are the same as they are for Actions. -> See the [Action Properties](#).

### **12. 31. SendSignalAction Properties**

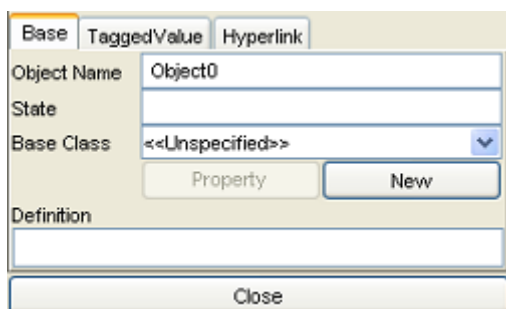
The editable contents are the same as they are for Actions. -> See the [Action Properties](#).

### **12. 32. AcceptEventAction Properties**

The editable contents are the same as they are for Actions. -> See the [Action Properties](#).

### **12. 33. Object Node Properties**

#### **12. 33. 1. [Base] Tab**



Element	Function
Object Name	Edit the Object Name.
State	Edit the State.
Base Class	Edit the Base Class.
Property	Open properties of the Base Class.
New	Create a new Class to be used as the Base Class.
Definition	Edit the Definition.

-> Please refer to *Class Diagram Properties* for [TaggedValue] and [Hyperlink] tab.

## 12. Property View

### 12. 34. Process Properties

The editable contents are the same as they are for Actions. -> See the [Action Properties](#).

### 12. 35. Connector Properties

The editable contents are the same as they are for Actions. -> See the [Action Properties](#).

### 12. 36. Sequence Diagram Properties

#### 12. 36. 1. [Base] Tab

Base TaggedValue Hyperlink

Namespace

Name Sequence Diagram 1

Argument

☒ Message Index Visibility

☐ Flat Message Index

☒ Message Parameter Visibility (Initial)

☒ Message Parameter Type Visibility (Initial)

☐ Message Parameter Direction Kind Visibility (Initial)

☒ Message Return Value Variable Visibility (Initial)

☒ Message Return Value Visibility (Initial)

☒ Frame Visibility

Definition

Element	Function
Namespace	Display the Namespace.
Name	Edit the Sequence Diagram Name.
Argument	Edit the Sequence Argument.
Message Index Visibility	Specify whether the Message Index is displayed.
Flat Message Index	Specify whether the hierarchy is created in the Message Index.
Message Parameter Visibility (Initial)	Specify whether the Message Parameters are displayed.
Message Parameter Type Visibility (Initial)	Specify whether the Message Parameter Types are displayed.
Message Parameter	Specify whether the Message Parameter Direction Kinds

## 12. Property View

Direction Kind Visibility (Initial)	are displayed.
Message Return Value Variable Visibility (Initial)	Specify whether the Message Return Value Variable is displayed.
Message Return Value Visibility (Initial)	Specify whether the Message Return Value is displayed.
Frame Visibility	Specify whether the frame is displayed.
Definition	Edit the Definition.

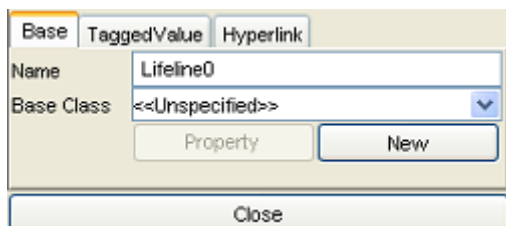
-> Please refer to *Class Diagram Properties* for [TaggedValue] and [Hyperlink] tab.

**Note)** For the [Message Parameter Initial Visibility] setting to take effect, it must be activated before creating a Message.

Check off the box of models to make them invisible. When creating a new Sequence diagram, the setting of [System Properties - Visibility 2 \(Initial\)](#) shows in this tab.

### 12. 37. Lifeline Properties (Sequence Diagram/Communication Diagram)

#### 12. 37. 1. [Base] Tab



Element	Function
Name	Edit the Lifeline Name.
Base Class	Specify the Base Class.
Property	Open properties of the Base Class.
New	Create a new Class to be used as the Base Class.

-> Please refer to *Class Diagram Properties* for [TaggedValue] and [Hyperlink] tab.



## 12. Property View

### 12.38. Message Properties (Sequence Diagram)

#### 12.38.1. [Base] Tab

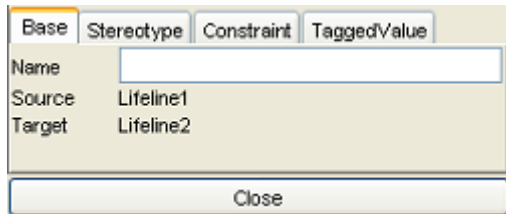
Constraint	TaggedValue	Hyperlink
Base	Stereotype	
Name	Message0	
Argument		
Guard		
Return Value Variable		
Return Value		
Operation	<<Unspecified>>	
	Property	New
Source	Lifeline0	
Target	Lifeline1	
<input type="checkbox"/> Asynchronous		

Element	Function
Name	Edit the Message Name.
Argument	Edit the Message Arguments.
Guard	Edit the Guard condition.
Return Value Variable	Edit the Return Value Variable.
Return Value	Edit the Return Value.
Operation	Specify an Operation.
Property	Open properties of the selected Operation.
New	Create a new Class to be used as the Base Class.
Source	Display the Source Lifeline.
Target	Display the Target Lifeline.
Asynchronous	Specify whether the Message is synchronous or asynchronous.
-> Please refer to Class Properties for [Stereotype] and [Constraint] tab, and Class Diagram Properties for [TaggedValue] and [Hyperlink] tab	

## 12. Property View

### 12. 39. Reply Message Properties

#### 12. 39. 1. [Base] Tab

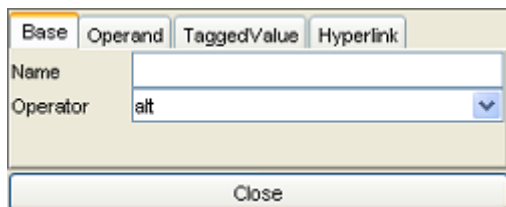


Element	Function
Name	Edit the Reply Message Name.
Source	Display the Source Lifeline.
Target	Display the Target Lifeline.

-> Please refer to Class Properties for [Stereotype] and [Constraint] tab, and Class Diagram Properties for [TaggedValue] tab.

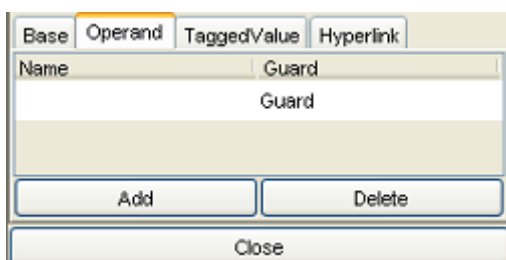
### 12. 40. CombinedFragment Properties (Sequence Diagram)

#### 12. 40. 1. [Base] Tab



Element	Function
Name	Edit the Combined Fragment Name.
Operator	Select the Operator.

#### 12. 40. 2. [Operand] Tab



Element	Function
---------	----------

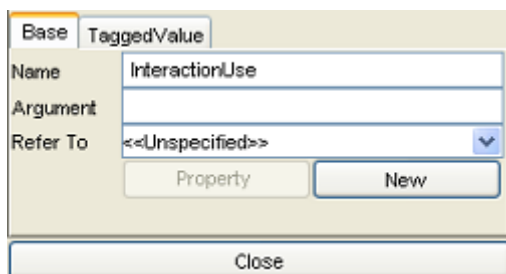
## 12. Property View

Name	Edit the Operand Name.
Guard	Edit the Guard.
Add	Add new Operands.
Delete	Delete selected Operands.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

### 12. 41. InteractionUse Properties (Sequence Diagram)

#### 12. 41. 1. [Base] Tab

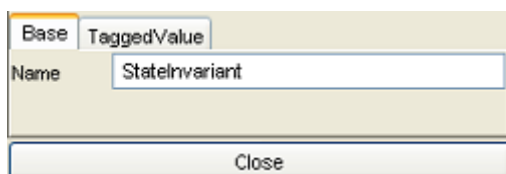


Element	Function
Name	Edit the InteractionUse Name.
Argument	Edit the InteractionUse Argument.
Refer to	Select Sequence Diagrams to refer to.
Property	Edit the Sequence Diagram to refer to.
New	Create a new Sequence Diagram to be referred to.

-> Please refer to Class Diagram Properties for [TaggedValue] tab.

### 12. 42. State Invariant Properties (Sequence Diagram)

#### 12. 42. 1. [Base] Tab



Element	Function
Name	Edit the StateInvariant Name.

-> Please refer to Class Diagram Properties for [TaggedValue] tab.

## 12. Property View

### 12. 43. Communication Diagram Properties

#### 12. 43. 1. [Base] Tab

Base TaggedValue Hyperlink

Namespace

Name Communication Diagram0

Argument

☒ Message Index Visibility

☐ Flat Message Index

☒ Message Parameter Visibility (Initial)

☒ Message Parameter Type Visibility (Initial)

☐ Message Parameter Direction Kind Visibility (Initial)

☒ Message Return Value Variable Visibility (Initial)

☒ Message Return Value Visibility (Initial)

☒ Frame Visibility

Definition

Element	Function
Namespace	Display the Namespace.
Name	Edit the Communication Diagram Name.
Argument	Edit the Argument.
Message Index Visibility	Specify whether the Message Index is displayed.
Flat Message Index	Specify whether the hierarchy is created in the Message Index.
Message Parameter Visibility (Initial)	Specify whether the Message parameter is displayed.
Message Parameter Type Visibility (Initial)	Specify whether the Message parameter Type is displayed.
Message Parameter Direction Kind Visibility (Initial)	Specify whether the Message Parameter Direction Kind is displayed.
Message Return	Specify whether the Message Return Value Variable is displayed.

## 12. Property View

Value Variable

Visibility (Initial)

Message Return

Value Visibility (Initial) Specify whether the Message Return Value is displayed.

Frame Visibility Specify whether the Frame is displayed.

Definition Edit the Definition.

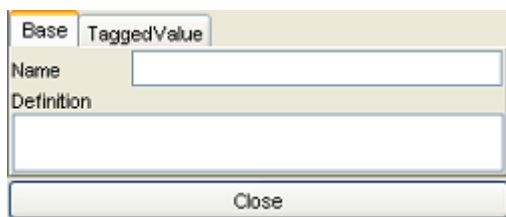
-> Please refer to *Class Diagram Properties* for *[TaggedValue]* and *[Hyperlink]* tab.

**Note)** For the **[Message Parameter Initial Visibility]** setting to take effect, it must be activated before creating a Message.

Check off the box of models to make invisible. When creating a new Communication Diagram, the setting of [System Properties - Visibility 2 \(Initial\)](#) shows in this Tab.

### **12. 44. Link Properties (Communication Diagram)**

#### **12. 44. 1. [Base] Tab**



Element	Function
Name	Edit the Link Name.
Definition	Edit the Definition of the Link.

-> Please refer to *Class Diagram Properties* for *[TaggedValue]* tab.

## 12. Property View

### 12. 45. Message Properties (Communication Diagram)

#### 12. 45. 1. [Base] Tab

Element	Value
Name	Message1
Argument	
Guard	
Return Value Variable	
Return Value	
Operation	<<Unspecified>>
Source	Lifeline2
Target	Lifeline3
Index	1
Activator	<<Unspecified>>
Predecessor	<<Unspecified>>
Asynchronous	<input type="checkbox"/>

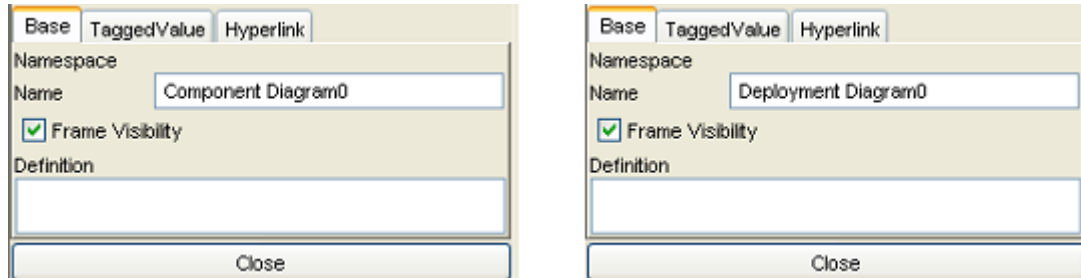
Element	Function
Name	Edit the Message Name.
Argument	Edit the Message Arguments.
Guard	Edit the Guard condition.
Return Value Variable	Edit the Return Value Variable.
Return Value	Edit the Return Value.
Operation	Specify the Operation.
Property	Open properties of the selected Operation.
New	Create a new Operation in the Base Class of the Target Lifeline.
Source	Display the Source Lifeline.
Target	Display the Target Lifeline.
Index	Edit the sequence number.
Activator	Specify the Activator.
Predecessor	Specify the Predecessor.
Asynchronous	Specify whether the Message is synchronous or asynchronous.

-> Please refer to Class Properties for [Stereotype] tab, and Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

## 12. Property View

### 12. 46. Component Diagram / Deployment Diagram Properties

#### 12. 46. 1. [Base] Tab

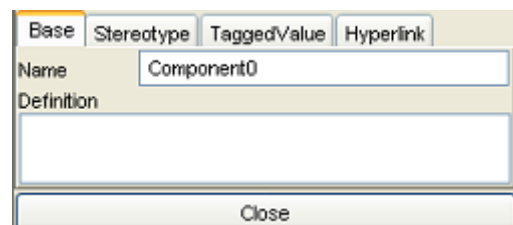


Element	Function
Namespace	Show the Namespace.
Name	
Frame Visibility	Specify whether the Frame is displayed.
Definition	Edit the Definition.

-> Please refer to *Class Diagram Properties* for [TaggedValue] and [Hyperlink] tab.

### 12. 47. Component Properties

#### 12. 47. 1. [Base] Tab



Element	Function
Name	Edit the Component Name.
Definition	Edit the Definition.

-> Please refer to *Class Properties* for [Stereotype] tab and *Class Diagram Properties* for [TaggedValue] and [Hyperlink] tab.

### 12. 48. Part Properties

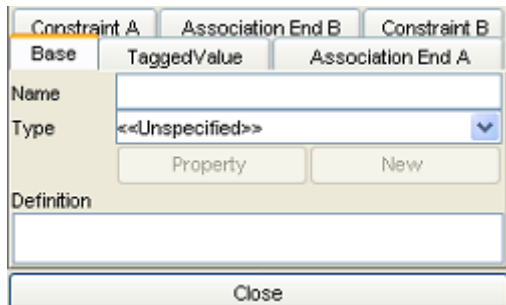
The editable contents are the same as they are for Associations.

-> Please refer to the [Association Properties](#) section for more details.

## 12. Property View

### 12. 49. Connector Properties

#### 12. 49. 1. [Base] Tab



Element	Function
Name	Edit the Connector Name.
Type	Specify the Connector Type.
Property	Open the Property of Connector Type.
New	Create New Association. [Association Property] dialog comes up when clicking [New] button.
Definition	Edit the definition.

-> Please refer to *Class Diagram Properties* for [TaggedValue] tab.

#### 12. 49. 2. [Association End] Tab

-> Please refer to the [\[Association End\]](#) section.

#### 12. 49. 3. [Association End Constraint] Tab

-> Please refer to the [\[Association End Constraint\]](#) section.



## 12. Property View

### 12. 50. Port Properties

#### 12. 50. 1. [Base] Tab

Base	Provided Interface	Required Interface	Stereotype	Constraint	TaggedValue
Name					
Visibility	public				
Service	true				
Behavior	false				
Multiplicity					
Type	<<Unspecified>>				
	Property		New		
Type Modifier					

Element	Function
Name	Edit the Port Name.
Visibility	Indicate the visibility.
Service	Specify the Service whether it is true or false.
Behavior	Specify the Behavior whether it is true or false.
Multiplicity	Specify the Multiplicity. [1], [0.1], [0.*], [0..*], [1..*]. Alternatively, input the value.
Type	Edit the type. Select a type in the combobox or input a type name. If a new type is entered, the Class is automatically created under the same Package.
Property	Open properties of the Base Class.
New	Create a new Class to be used as the Base Class
Type Modifier	Edit Type Modifier. (*, **, &)

#### 12. 50. 2. [Provided Interface] Tab / [Required Interface] Tab

Stereotype	Constraint	TaggedValue
Base	Provided Interface	Required Interface
Name	Interface0	
<div>AddDelete</div>		
Close		

Stereotype	Constraint	TaggedValue
Base	Provided Interface	Required Interface
Name	Interface1	
<div>AddDelete</div>		
Close		

Element	Function
---------	----------

## 12. Property View

Name	Edit the Provided / Required Interface Name.
Add	Add a new Provided / Required Interface.
Delete	Delete the selected Provided / Required Interface.

-> Please refer to *Class Properties* for [Stereotype] and [Constraint] tab, and *Class Diagram Properties* for [TaggedValue] tab.

### 12. 51. Classifier Properties

In Component Diagrams, Classifiers are treated as Classes.

-> Please refer to the [Class Properties](#) section for more details.

### 12. 52. Artifact Properties

#### 12. 52. 1. [Base] Tab

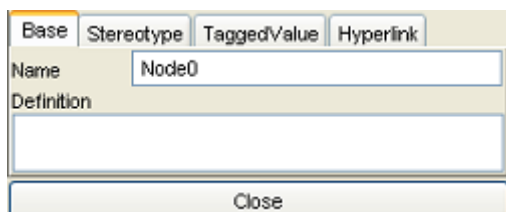


Element	Function
Name	Edit the Artifact Name.
Definition	Edit the Definition.

-> Please refer to *Class Properties* for [Stereotype] tab, and *Class Diagram Properties* for [TaggedValue] and [Hyperlink] tab.

### 12. 53. Node Properties

#### 12. 53. 1. [Base] Tab



Element	Function
Name	Edit the Node Name.
Definition	Edit the Definition.

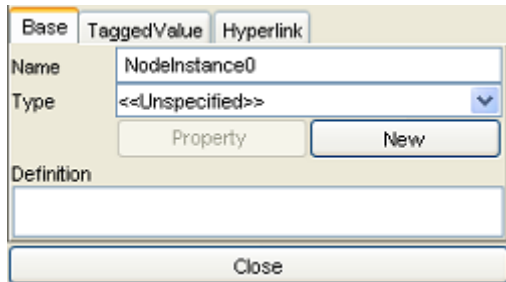
-> Please refer to *Class Properties* for [Stereotype] tab, and *Class Diagram Properties*

## 12. Property View

for *[TaggedValue]* and *[Hyperlink]* tab.

### 12. 54. NodeInstance Properties

#### 12. 54. 1. [Base] Tab

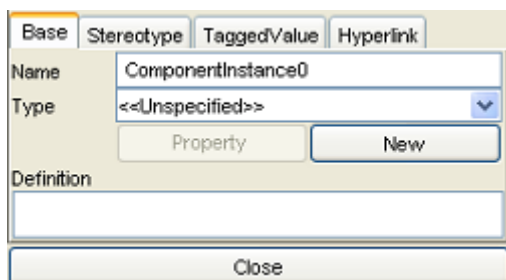


Element	Function
Name	Edit the NodeInstance Name.
Node Type	Specify the Node Type.
Property	Open properties of the Node that is specified as a Node Type.
New	Create a new Node to be used as a Node Type.
Definition	Edit the Definition.

-> Please refer to *Class Diagram Properties* for *[TaggedValue]* and *[Hyperlink]* tab.

### 12. 55. ComponentInstance Properties

#### 12. 55. 1. [Base] Tab



Element	Function
Name	Edit the ComponentInstance Name.
Type	Specify the Component Type.
Property	Open properties of the Component that is specified as the Component Type.
New	Create a new Component to be used as a Component Type.
Definition	Edit the Definition.

-> Please refer to *Class Properties* for *[Stereotype]* tab, and *Class Diagram Properties*

## 12. Property View

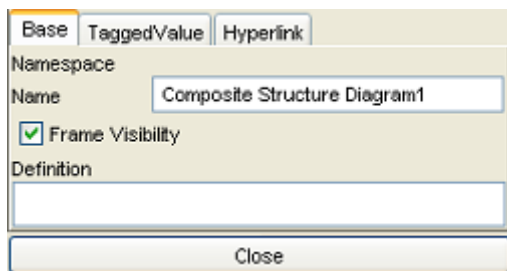
for *[TaggedValue]* and *[Hyperlink]* tab.

### 12. 56. Link Properties (Deployment Diagram)

-> Please refer to the [Link Properties](#) section for more details.

### 12. 57. Composite Structure Diagram Properties

#### 12. 57. 1. [Base] Tab

The screenshot shows a dialog box titled 'Composite Structure Diagram Properties'. It has three tabs: 'Base' (selected), 'TaggedValue', and 'Hyperlink'. The 'Base' tab contains the following fields: 'Namespace' (empty), 'Name' (containing 'Composite Structure Diagram1'), 'Frame Visibility' (checked), and 'Definition' (empty). A 'Close' button is at the bottom.

Element	Function
Namespace	Show the Namespace.
Name	Edit the Composite Structure Diagram Name.
Frame Visibility	Specify whether the Frame is displayed.
Definition	Edit the Definition.

-> Please refer to *Class Diagram Properties* for *[TaggedValue]* and *[Hyperlink]* tab.

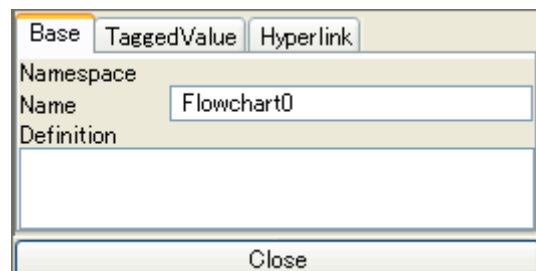
### 12. 58. Structured Class Properties

The editable contents are the same as they are for Classes.

-> Please refer to the [Class Properties](#) section for more details.

### 12. 59. Flowchart Properties [P]

#### 12. 59. 1. [Base] Tab

The screenshot shows a dialog box titled 'Flowchart Properties'. It has three tabs: 'Base' (selected), 'TaggedValue', and 'Hyperlink'. The 'Base' tab contains the following fields: 'Namespace' (empty), 'Name' (containing 'Flowchart0'), and 'Definition' (empty). A 'Close' button is at the bottom.

Element	Function
---------	----------

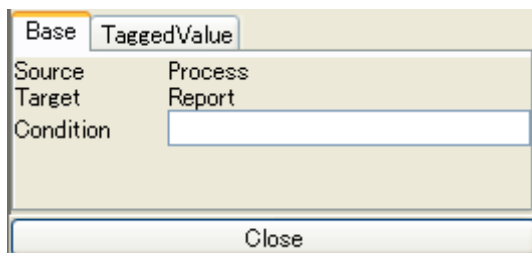
## 12. Property View

Namespace	Show the Namespace.
Name	Edit the Flowchart Name.
Definition	Edit the Definition.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

### 12. 60. Transition Properties [P]

#### 12. 60. 1. [Base] Tab

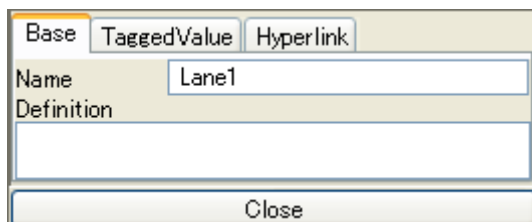


Element	Function
Source	Display the Source.
Target	Display the target to Transit.
Condition	Modify the condition of Transition. The contents of this Condition will display on the Diagram Editor.

-> Please refer to Class Diagram Properties for [TaggedValue] tab.

### 12. 61. Lane Properties [P]

#### 12. 61. 1. [Base] Tab



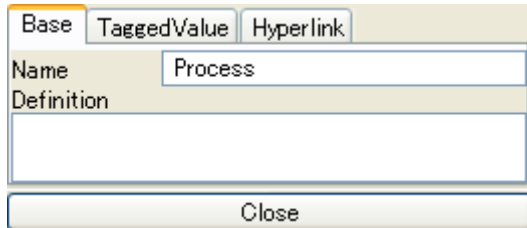
Element	Function
Name	Edit the Lane Name.
Definition	Edit the Definition.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

## 12. Property View

### 12. 62. Flow Symbol Properties [P]

#### 12. 62. 1. [Base] Tab

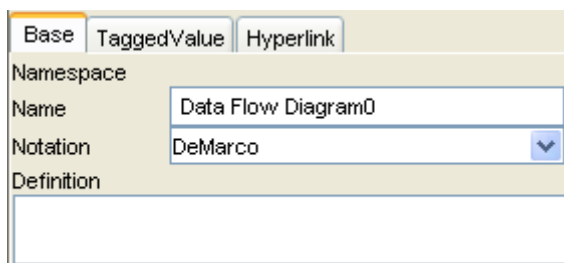


Element	Function
Name	Edit the Name
Definition	Edit the Definition.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

### 12. 63. Data Flow Diagram (DFD) Properties [P]

#### 12. 63. 1. [Base] Tab



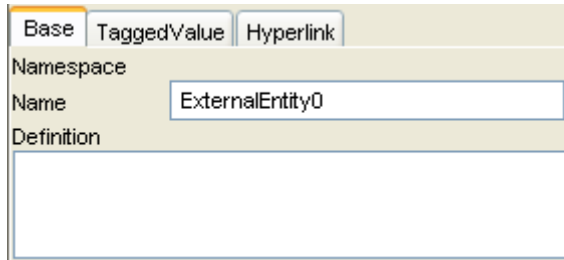
Element	Function
Namespace	Display the Namespace of the Data Flow Diagram.
Name	Edit the Data Flow Diagram Name.
Notation	Switch the Notation of Data Flow Diagram between DeMarco and Gane/Sarson.
Definition	Edit the definition.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

## 12. Property View

### 12. 64. External Entity Properties [P]

#### 12. 64. 1. [Base] Tab



Base TaggedValue Hyperlink

Namespace

Name ExternalEntity0

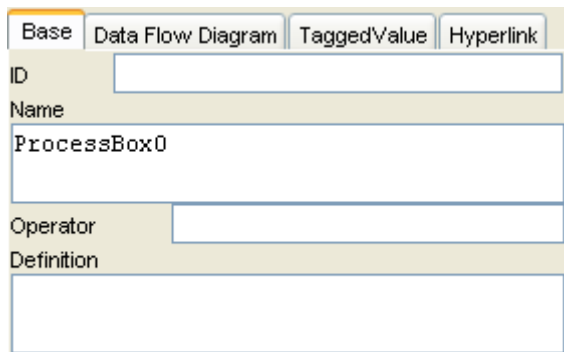
Definition

Element	Function
Namespace	Display the Namespace of the External Entity.
Name	Edit the External Entity Name.
Definition	Edit the Definition.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

### 12. 65. Process Box Properties [P]

#### 12. 65. 1. [Base] Tab



Base Data Flow Diagram TaggedValue Hyperlink

ID

Name ProcessBox0

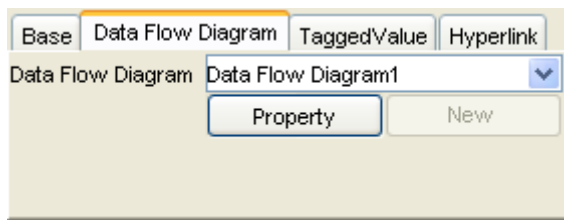
Operator

Definition

Element	Function
ID	Edit the Process Box ID.
Name	Edit the Process Box Name.
Operator	Edit the Operator.
Definition	Edit the Definition.

## 12. Property View

### 12. 65. 2. [Data Flow Diagram] Tab

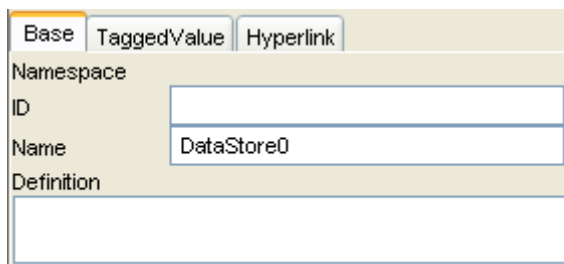


Element	Function
Data Flow Diagram	Specify the Data Flow Diagram to refer to.
Property	Open properties of the Data Flow Diagram.
New	Create a new Data Flow Diagram to be referred.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

### 12. 66. Data Store Properties [P]

#### 12. 66. 1. [Base] Tab



Element	Function
Namespace	Display the Namespace of the Data Store.
ID	Edit the Data Store ID.
Name	Edit the Data Store Name.
Definition	Edit the Definition.

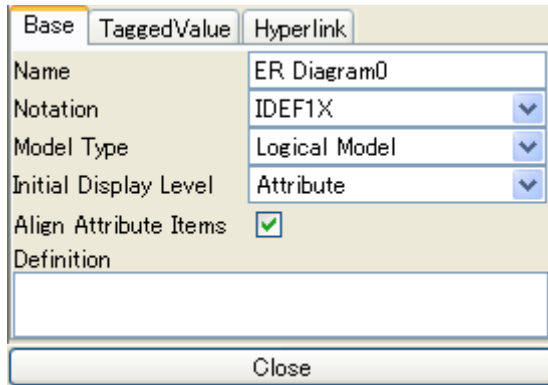
-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.



## 12. Property View

### 12. 67. ER Diagram Properties [P]

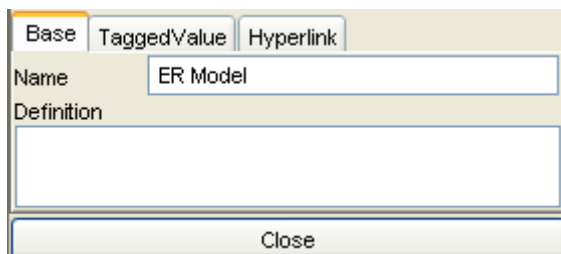
#### 12. 67. 1. [Base] Tab



Element	Function
Name	Edit the ER Diagram Name.
Notation	Switch the Notation of ER Diagram between IDEF1X and IE.
Model Type	Switch the Model type of ER Diagram between Logical Model and Physical Model.
Initial Display Level	Configure the display level of Entity from combobox: Entity, Primary Key, Attribute. -> Please refer to the <a href="#">ER Diagram - Display Level</a> for more details.
Align Attribute Items	Check on to align the display of Attribute Items in line.
Definition	Edit the definition. -> Please refer to <i>Class Diagram Properties</i> for [TaggedValue] and [Hyperlink] tab.

### 12. 68. ER Model Properties [P]

#### 12. 68. 1. [Base] Tab



Element	Function
---------	----------

## 12. Property View

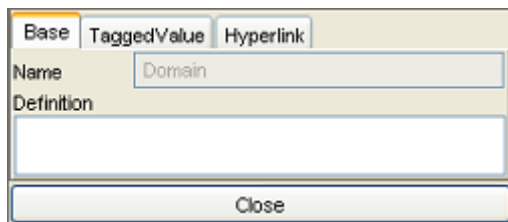
Name Edit the ER Diagram Name.

Definition Edit the Definition.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

### 12. 69. Domain Model Properties [P]

#### 12. 69. 1. [Base] Tab



Element	Function
---------	----------

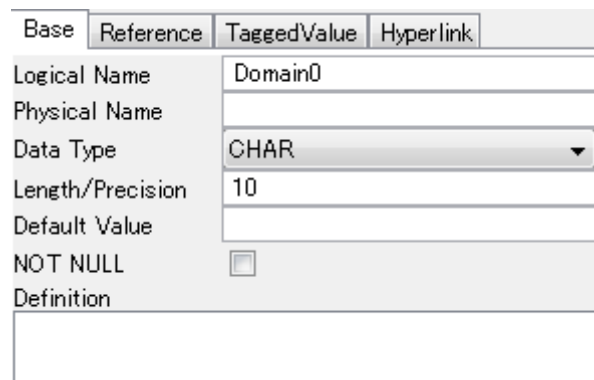
Name	Display the Domain Model Name.
------	--------------------------------

Definition	Edit the Definition.
------------	----------------------

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

### 12. 70. Domain Properties [P]

#### 12. 70. 1. [Base] Tab



Element	Function
---------	----------

Logical Name	Edit the Logical Name.
--------------	------------------------

Physical Name	Edit the Physical Name.
---------------	-------------------------

Data Type	Specify the Data Type from Combo box.
-----------	---------------------------------------

Length/ Precision	Input the Length and Precision.
----------------------	---------------------------------

## 12. Property View

Default Value	Edit the Default Value.
NOT NULL	Specify it if it is NOT NULL or not.
Definition	Edit the Definition.

### 12. 70. 2. [Reference] Tab

Base	Reference	TaggedValue	Hyperlink
Parent EREntity		ERAttribute	
Entity0		Domain0	

Element	Function
Parent EREntity	Display the name of the parent ER Entity.
ERAttribute	Display the name of the ER Attribute.
-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.	

## 12. 71. Entity Properties [P]

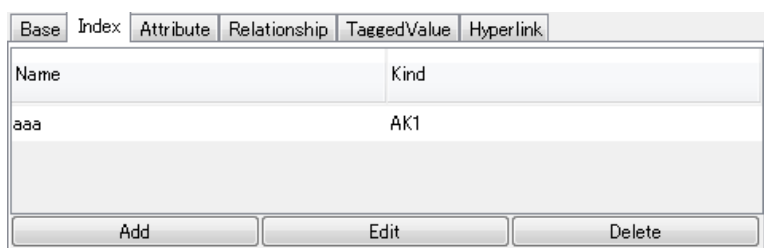
### 12. 71. 1. [Base] Tab

Relationship	TaggedValue	Hyperlink
Base	Index	Attribute
Logical Name	Entity0	
Physical Name		
Type		
Definition		

Element	Function
Logical Name	Edit the Logical Name.
Physical Name	Edit the Physical Name.
Type	Specify the Type from the combo box, [] (Unspecified), [Resource], [Event], or [Summary].
Definition	Edit the definition.

## 12. Property View

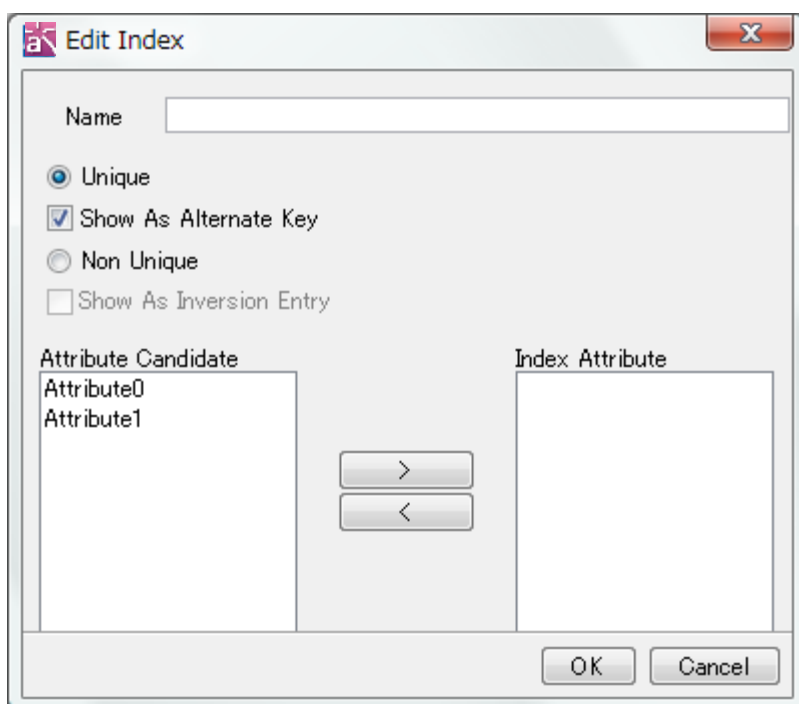
### 12.71.2. [Index] Tab



Name	Kind
aaa	AK1

Add Edit Delete

Element	Function
Name	Edit the Index Name.
Kind	Edit the Index Kind.
Add	Add the Index.
Edit	Edit the Index.
Delete	Delete the Index



Name

☒ Unique  
☒ Show As Alternate Key  
☐ Non Unique  
☐ Show As Inversion Entry

Attribute Candidate: Attribute0, Attribute1  
Index Attribute:

> <

OK Cancel

Element	Function
Name	Edit the Index Name.
Unique	Set unique.
Show As Alternate Key	Specify if it is shown as an alternate key.
Non Unique	Set non-unique.

## 12. Property View

Show As

Specify if it is shown as an inversion entry.

Inversion Entry

### 12. 71. 3. [Attribute] Tab

Base	Index	Attribute	Relationship	TaggedValue	Hyperlink
Primary Key	Logical Name	Physical Name	Domain	Type	Length/Precision
<input type="checkbox"/>	Attribute0		<<Unspecified>>	CHAR	10
Add		Delete		Edit	
Up			Down		

#### Element

#### Function

Primary Key	Select if it is a Primary Key or not.
Logical Name	Edit the Logical Name.
Physical Name	Edit the Physical Name.
Domain	Specify the Domain from the Combo box.
Type	Specify the Type from the Combo box.
Length/Precision	Input the Length and Precision.
Add	Add a new Attribute.
Delete	Delete the selected Attribute.
Edit	Open properties of the selected Attribute.
Up/Down	Rearrange the order of Attributes.

### 12. 71. 4. [Relationship] Tab

Base	Index	Attribute	Relationship	TaggedValue	Hyperlink
Name	Child Entity	Type	Key		
Identifying Relatio...	Entity1	Identifying	Attribute0		
Name	Parent Entity	Type	Key		
Delete					

#### Element

#### Function

Name	Display the name of Relationship.
Child Entity/ Parent Entity	Display the name of Child Entity/Parent Entity of the relationship.

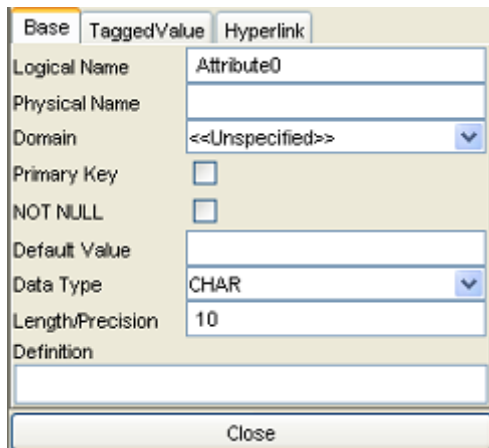
## 12. Property View

Type	Display the relation Type.
Key	Display the key that related Entity has.
Delete	Delete the selected Relationship.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

### 12. 72. Attribute Properties (ER Diagram) [P]

#### 12. 72. 1. [Base] Tab



Element	Function
Logical Name	Edit the Logical Name.
Physical Name	Edit the Physical Name.
Domain	Specify the Domain from the Combo box.
Primary Key	Specify if it is a Primary Key or not.
NOT NULL	Specify if it is NOT Null or not.
Default Value	Edit the Default Value.
Data Type	Specify the Data type from the combo box.
Length/Precision	Input the Length and Precision.
Definition	Edit the Definition.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

## 12. Property View

### 12. 73. Relationship Properties (ER Diagram) [P]

#### 12. 73. 1. [Base] Tab

Base Key TaggedValue Hyperlink

Logical Name Identifying Relationship0

Physical Name

Parent Entity Entity0

Child Entity Entity1

Verb Phrase(Parent to Child)

Verb Phrase(Child to Parent)

Type Identifying ▼

Parent is required ☒

Cardinality 0 or More ▼

Definition

Close

Element	Function
Logical Name	Edit the Logical Name.
Physical Name	Edit the Physical Name.
Parent Entity	Display the Parent Entity in the relationship.
Child Entity	Display the Child Entity in the relationship.
Verb Phrase (Parent to Child)	Edit the verb phrase from Parent to Child.
Verb Phrase (Child to Parent)	Edit the verb phrase from Child to Parent.
Type	Specify the Type from the combo box to [Identifying] or [Non-Identifying].
Parent is required	Check if the parent is required or not. (* Non-Identifying Relationship only)
Cardinality	Specify the Cardinality from the combo box. (0 or more), [1 or more], [0 or 1].)
Definition	Edit the Definition.

## 12. Property View

### 12.73.2. [Key] Tab

Base	Key	TaggedValue	Hyperlink
Kind	PK		
Parent Key	Child Key		
Attribute0	Attribute0		
Delete			
Close			

Element	Function
Kind	Select PK or Unique Index.
Parent Key	Edit the Parent Key.
Child Key	Select the Child Key.
Delete	Delete the selected Key.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

### 12.74. Subtype Properties [P]

#### 12.74.1. [Base] Tab

Base	TaggedValue	Hyperlink
Logical Name	Subtype0	
Physical Name		
Parent Entity	Entity0	
Child Entity	Entity1	
Discriminator Attribute	<<Unspecified>>	
Complete	<input checked="" type="checkbox"/>	
Definition		
Close		

Element	Function
Logical Name/Physical Name	Edit the Logical Name/Physical Name
Parent Entity / Child Entity	Display the Parent/Child Entity in the relationship.
Discriminator Attribute	Specify the Discriminator Attribute from the Combo box.
Complete	Specify it is complete or not.



## 12. Property View

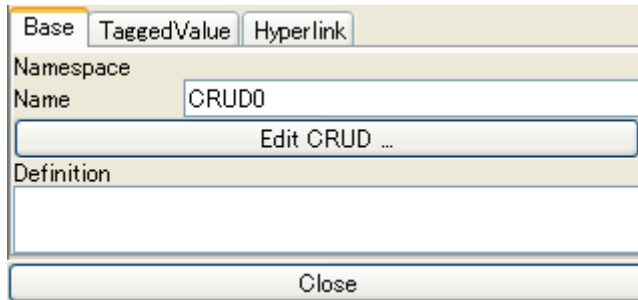
Definition

Edit the definition.

-> Please refer to *Class Diagram Properties* for *[TaggedValue]* and *[Hyperlink]* tab.

### 12. 75. CRUD Properties [P]

#### 12. 75. 1. [Base] Tab

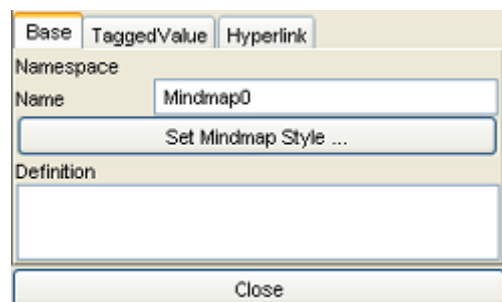


Element	Function
Namespace	Display the Namespace.
Name	Edit the CRUD Name.
Edit CRUD	Open the dialog to configure CRUD.
Definition	Edit the definition.

-> Please refer to *Class Diagram Properties* for *[TaggedValue]* and *[Hyperlink]* tab.

### 12. 76. Mindmap Properties

#### 12. 76. 1. [Base] Tab



Element	Function
Namespace	Display the Namespace.
Name	Edit the Mindmap Name.
Set Mindmap Style	Open the dialog to configure Mindmap style.
Definition	Edit the definition.

-> Please refer to *Class Diagram Properties* for *[TaggedValue]* and *[Hyperlink]* tab.

## 12. Property View

### 12.77. Traceability Map Properties [P]

#### 12.77.1. [Base] Tab

The screenshot shows the 'Base' tab of the 'Traceability Map Properties' dialog. It features three tabs at the top: 'Base', 'TaggedValue', and 'Hyperlink'. The 'Base' tab is active. Below the tabs, there are several fields and checkboxes. The 'Namespace' field contains 'ER Model::Entity0'. The 'Name' field contains 'Traceability Map0'. There are five checkboxes: 'Show Target Elements' (checked), 'Show Source Elements' (checked), 'Show Related Diagrams' (checked), 'Show Target Hyperlinks' (unchecked), and 'Show Source Hyperlinks' (unchecked). Below these is a 'Hierarchy' field containing the number '2'. At the bottom, there is a 'Definition' field which is currently empty.

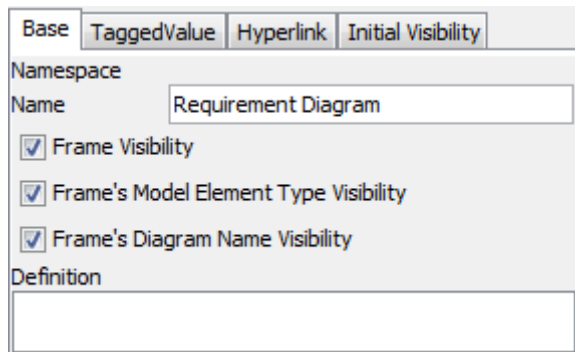
Element	Function
Namespace	Display the Namespace.
Name	Edit the Traceability Map Name.
Show Target Elements	Specify whether the target elements are displayed.
Show Source Elements	Specify whether the source elements are displayed.
Show Related Diagrams	Specify whether the related diagrams are displayed.
Show Target Hyperlinks	Specify whether the target Hyperlinks are displayed.
Show Source Hyperlinks	Specify whether the source Hyperlinks are displayed.
Hierarchy	Show the Hierarchy.
Definition	Edit the definition.

-> Please refer to *Class Diagram Properties* for [TaggedValue] and [Hyperlink] tab.

## 12. Property View

### 12. 78. Requirement Diagram Properties [P]

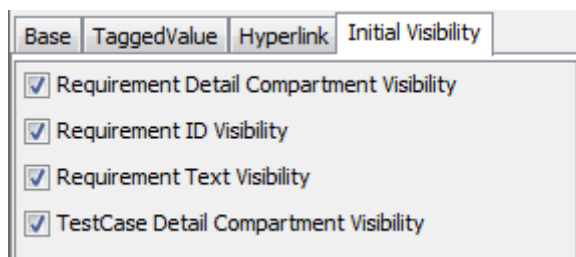
#### 12. 78. 1. [Base] Tab



Element	Function
Namespace	Display the Namespace.
Name	Edit the Requirement Diagram Name.
Frame Visibility	Specify whether the Frame is displayed.
Frames Model Element Type Visibility	Specify whether the Frame Model Element Types are displayed.
Frames Diagram Name Visibility	Specify whether the Frames Diagram Names are displayed.
Definition	Edit the definition.

-> Please refer to Class Diagram Properties for [TaggedValue] and [Hyperlink] tab.

#### 12. 78. 2. [Initial visibility] Tab



The visibility of some models in this Tab can be set. Check off the box of models to make them invisible. When creating a new Requirement Diagram, the setting of [System Properties - Visibility 3 \(Initial\)](#) shows in this tab.

## 12. Property View

### 12. 79. Requirement Table Properties [P]

#### 12. 79. 1. [Base] Tab

Base TaggedValue Hyperlink

Namespace

Name Requirement Table0

Edit Requirement Table ...

Definition

Element	Function
Namespace	Display the Namespace.
Name	Edit the Requirement Table Name.
Edit Requirement Table	Open the dialog to configure Requirement Table
Definition	Edit the definition.

-> Please refer to *Class Diagram Properties* for [TaggedValue] and [Hyperlink] tab.

### 12. 80. Requirement Properties [P]

#### 12. 80. 1. [Base] Tab

Base Client Supplier TaggedValue Hyperlink

Namespace

Name Requirement0

ID

Text

Element	Function
Namespace	Display the Namespace.
Name	Edit the Requirement Name.
ID	Edit the Requirement ID
Text	Edit the Requirement Text.

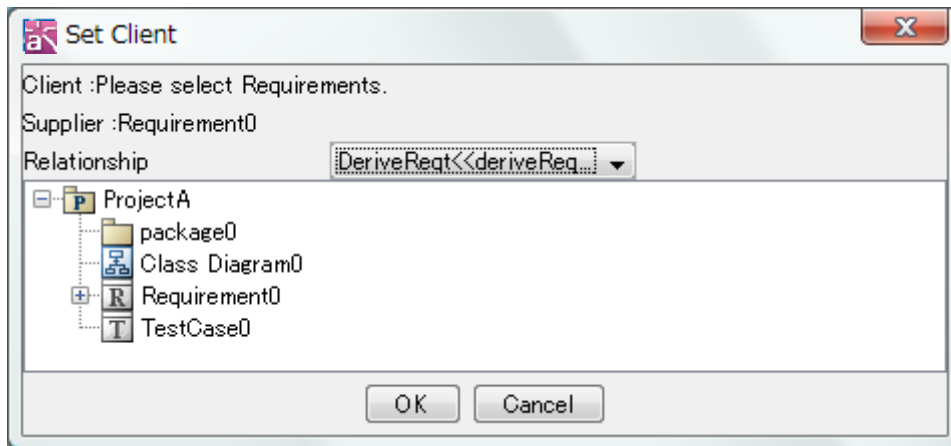
## 12. Property View

### 12.80.2. [Client] Tab

Base	Client	Supplier	TaggedValue	Hyperlink
Model Name	Model Kind	Relationship		
Requirement0	Requirement	DeriveDependency		
<div>Add Edit Delete</div>				

Element	Function
Model Name	Show the Model Name of Client.
Model Kind	Show the Model Kind of Client.
Relationship	Show the Relationship of Client.
Add	Add the Client.
Edit	Edit the Client.
Delete	Delete the Client.

Add or Edit Client in the Set Client dialog.

The 'Set Client' dialog box has a title bar with a close button. The main area contains the text 'Client :Please select Requirements.' followed by 'Supplier :Requirement0'. Below this is a 'Relationship' label and a dropdown menu showing 'DeriveReq<<deriveReq...'. A tree view below shows a hierarchy: 'ProjectA' (package icon) containing 'package0' (package icon), which contains 'Class Diagram0' (class diagram icon), 'Requirement0' (requirement icon), and 'TestCase0' (test case icon). At the bottom are 'OK' and 'Cancel' buttons.

Relationship	Model
DeriveReq<<deriveReq>>	Requirement
Copy<<copy>>	Requirement
Satisfy<<satisfy>>	Package, Model, Subsystem, Class (Entity, Boundary, Control), AssociationClass, Interface, Actor, UseCase, Component, Artifact, Node, Requirement, TestCase
Verify<<verify>>	TestCase

## 12. Property View

Refine<<refine>>	Package, Model, Subsystem, Class (Entity, Boundary, Control), AssociationClass, Interface, Actor, UseCase, Component, Artifact, Node, Requirement, TestCase
Trace<<trace>>	Requirement

### 12.80.3. [Supplier] Tab

Model Name	Model Kind	Relationship
Requirement1	Requirement	SatisfyDependency

Buttons: Add, Edit, Delete

Element	Function
Model Name	Show the Model Name of Supplier.
Model Kind	Show the Model Kind of Supplier.
Relationship	Show the Relationship of Supplier.
Add	Add the Supplier.
Edit	Edit the Supplier.
Delete	Delete the Supplier.

Add or Edit Supplier in the Set Supplier dialog.

Client : Requirement0

Supplier : Please select Requirements.

Relationship: DeriveReq<<deriveReq...>>

- ProjectA
  - package0
  - Class Diagram0
  - Requirement0
  - TestCase0

Buttons: OK, Cancel

Relationship	Model
DeriveReq<<deriveReq>>	Requirement
Copy<<copy>>	Requirement

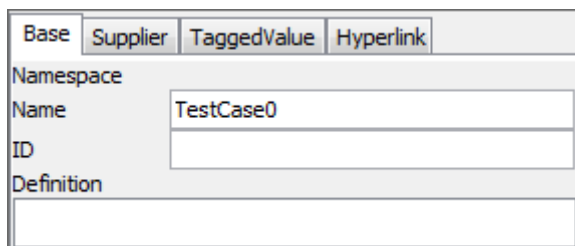
## 12. Property View

Satisfy<<satisfy>>	Requirement
Refine<<refine>>	Requirement
Trace<<trace>>	Requirement

-> Please refer to *Class Diagram Properties* for [TaggedValue] and [Hyperlink] tab.

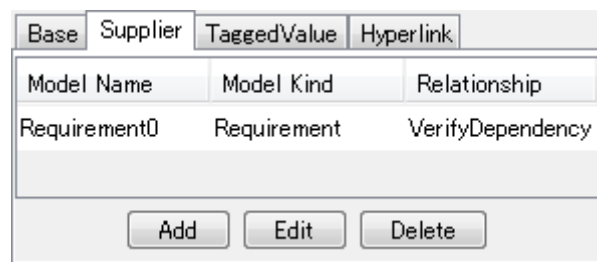
### 12. 81. TestCase Properties [P]

#### 12. 81. 1. [Base] Tab



Element	Function
Namespace	Display the Namespace.
Name	Edit the TestCase Name
ID	Edit the TestCase ID
Definition	Edit the definition.

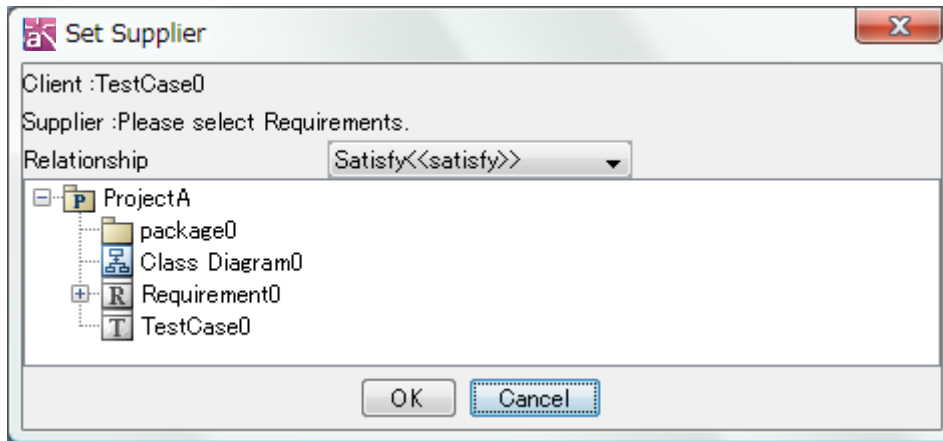
#### 12. 81. 2. [Supplier] Tab



Element	Function
Model Name	Show the Model Name of Supplier.
Model Kind	Show the Model Kind of Supplier.
Relationship	Show the Relationship of Supplier.
Add	Add the Supplier.
Edit	Edit the Supplier.
Delete	Delete the Supplier.

## 12. Property View

Add or Edit Supplier in the Set Supplier dialog.

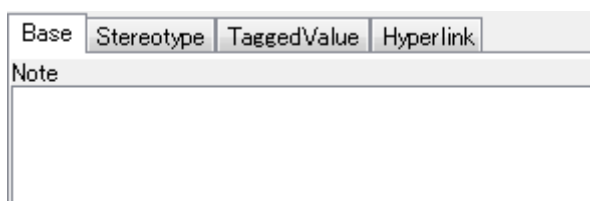


Relationship	Model
Satisfy<<satisfy>>	Requirement
Verify<<verify>>	TestCase
Refine<<refine>>	Requirement

-> Please refer to *Class Diagram Properties* for [TaggedValue] and [Hyperlink] tab

### 12. 82. Note Properties

#### 12. 82. 1. [Base] Tab



Element	Function
Note	Edit Note.

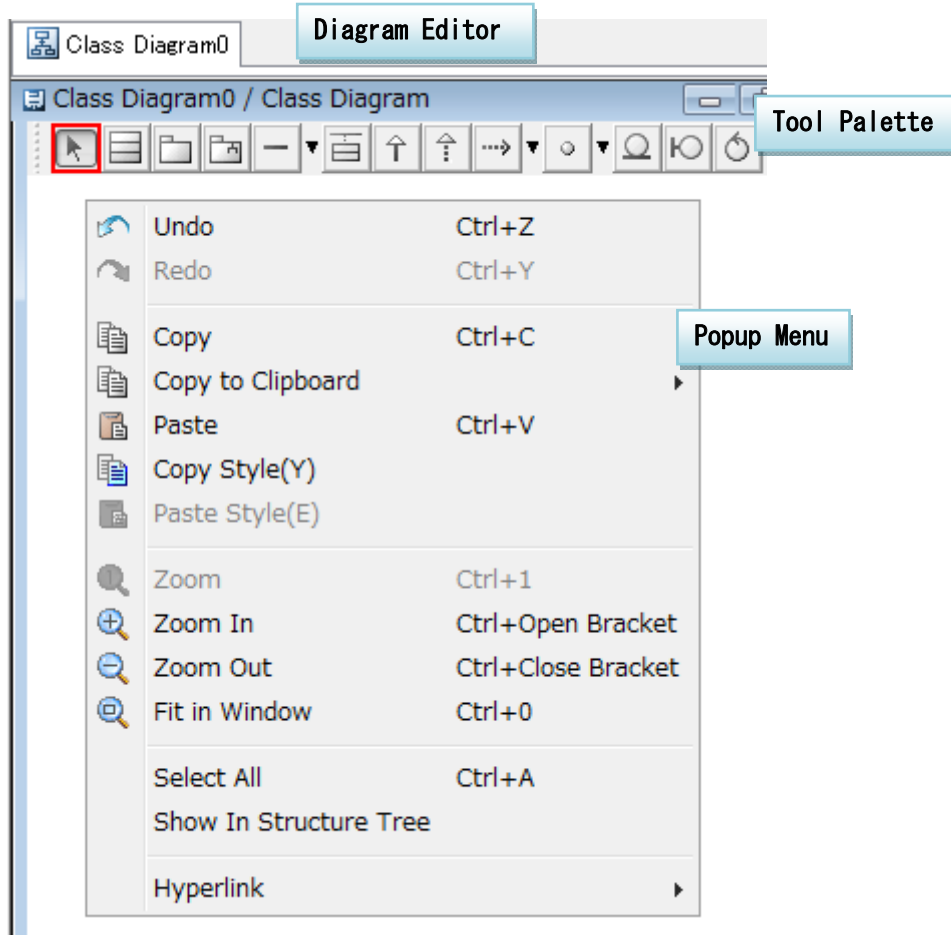
-> Please refer to *Class Diagram Properties* for [Stereotype], [TaggedValue] and [Hyperlink] tab



## 13. Editing Diagrams

### 13. Editing Diagrams

This chapter describes the Diagram Editor that is used to edit Diagrams.



#### 13. 1. Diagram Editor Popup Menu

Diagram Editor Popup Menu is available when astah\* is running by Java 5.0 or higher.

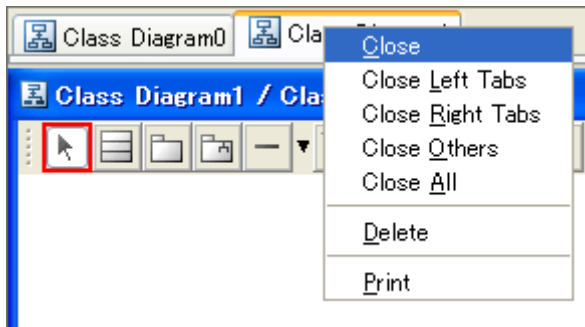
- a. Close  
Close the selected Diagram Editor.
- b. Close Left Tabs  
Close the Diagram Editors in the left side of the selected Diagram Editor.
- c. Close Right Tabs  
Close the Diagram Editors in the right of the selected Diagram Editor.
- d. Close Others  
Close the Diagram Editors except the selected Diagram Editor.
- e. Close All  
Close all Diagram Editors.
- f. Delete

## 13. Editing Diagrams

Delete the selected Diagram Editor.

g. Print

Print the selected Diagram Editor.

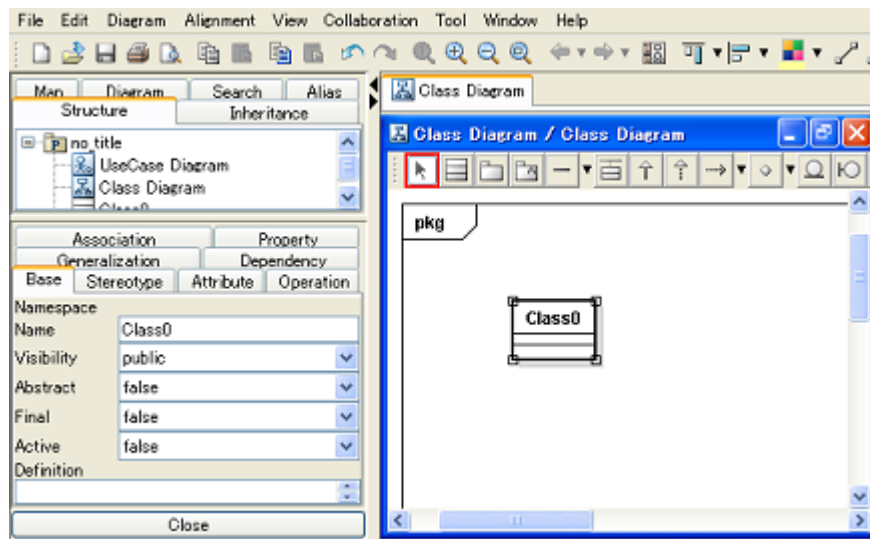


## 13.2. Creating Diagram Elements

### 13.2.1. Using the Tool Palette

- Select the target Diagram Element on the Tool Palette in the Diagram Editor.
- Click on the Diagram to create the Diagram Element.
- The new Diagram Element is added to the Structure Tree.

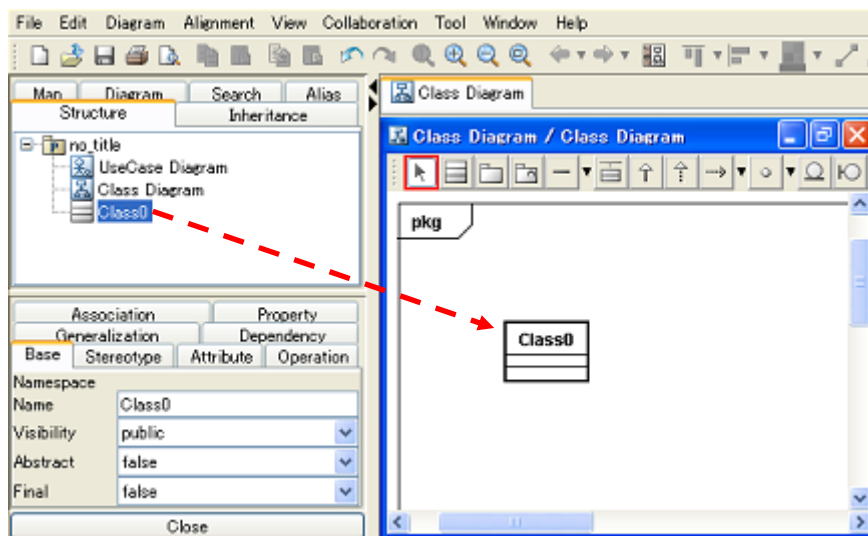
Note) Some elements (e.g. Instance Specification, Generalization) won't be added to the Structure Tree.



### 13.2.2. By dragging and dropping from the [Structure Tree] onto a Diagram

- Drag a Diagram Element from the [Structure Tree] in the Project View.
- Drop it onto a Diagram in the Diagram Editor to create a Diagram Element.

## 13. Editing Diagrams



### 13.2.3. By double-clicking on the Diagram Editor

Double-click on the Diagram Editor creates a main model element in the diagram.

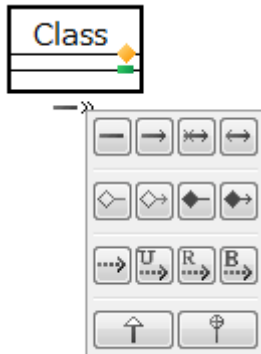
Diagram	Model element you can create by double-click
Class Diagram	Class
UseCase Diagram	UseCase
Statemachine Diagram	State
Activity Diagram	Action
Sequence Diagram	Lifeline
Communication Diagram	Lifeline
Component Diagram	Component
Deployment Diagram	Node
Composite Structure Diagram	Structured Class
Flowchart	Process
Data Flow Diagram (DFD)	Process
ER Diagram	ER Entity
Requirement Diagram	Requirement

### 13.2.4. By using the suggest feature

Double-click on the Diagram Editor creates a main model element in the diagram.

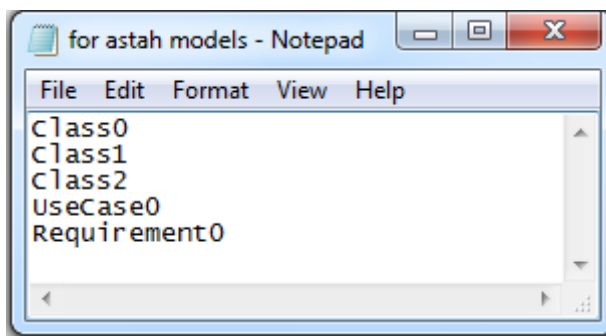
## 13. Editing Diagrams

- a. Mouse-over a target model element
- b. Models you can create from the model element will show up on it
- c. Choose a model you would like to create

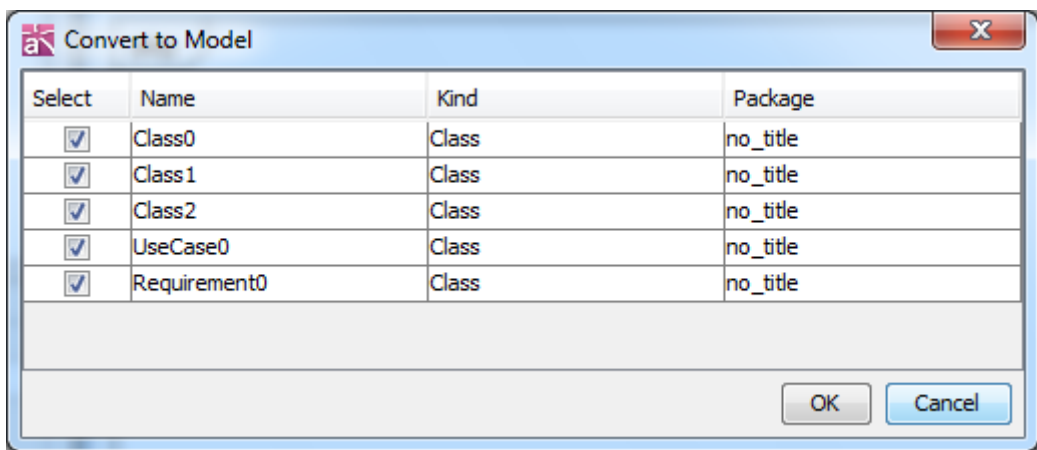


### 13.2.5. By pasting Text on Clipboard

- a. Copy Text on Clipboard




- b. Paste Text from Clipboard in the Diagram Editor, [Convert to Model] dialog appears



- c. Specify the Kind and packages and then click [OK]

## 13.3. Creating Diagram Elements in Succession

### 13.3.1. Using the [Lock Selected Mode] of the Tool Palette

- a. Click on the  [Lock Selected Mode] of the Tool Palette in the Diagram Editor to

## 13. Editing Diagrams

activate [Lock Selected Mode].

- b. Select the target Diagram Element button.
- c. Click on the Diagram repeatedly to create Diagram Elements in succession.

### 13.3.2. Using the [Shift] Key

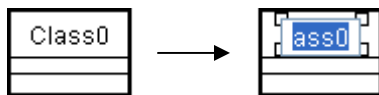
- a. Select the target Diagram Element button on the Tool Palette in the Diagram Editor.
- b. While holding down the [Shift] Key, click on the Diagram repeatedly to create Diagram Elements in succession.

## 13.4. Editing Diagram Elements

### 13.4.1. Editing Names

Place the cursor over the Name of a Diagram Element in the Diagram Editor.

Double-click and then edit the Name.



Note) Elements with no default name, such as Associations or Inheritance relationships, can be given a Name from the Property View or the popup menu of the elements.

Note) Names can be edited in the [Structure Tree] or in the [Property View] also.

### 13.4.2. Resizing

#### a. Using the Auto-Resize Function

If the Auto-Resize function is ON, a Diagram Element is automatically adjusted when actions are performed on it, for example when its Name is edited.

#### b. Resizing Manually

- a. Select the target Diagram Element
- b. Drag a corner to resize.

Note) Auto-Resize Function can be turned ON/OFF using the Pop-up Menu.

### 13.4.3. Stereotype Notation

There are three types of notation for Stereotypes: [Normal], [Icon], and [Customize [P]].

When [Normal] is used, Stereotype Names are displayed enclosed with guillemets (“<<”, “>>”). When [Icon] is used, Stereotypes are displayed with a default Icon.

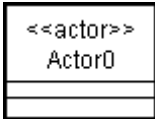

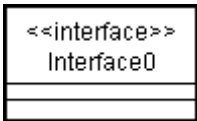

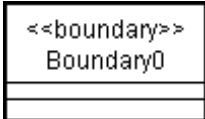

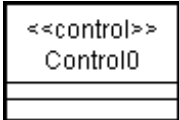
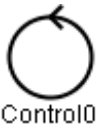


When [Customize [P]] is used, Stereotypes are displayed with Icons defined by the user.

## 13. Editing Diagrams

### a. Standard Icons

#### (a) Standard Icon Types

By default, astah\* defines the following standard Stereotypes: Actor, Interface, Boundary, Control, and Entity. New Stereotypes can also be defined.

<i>&lt;Stereotype&gt;</i>	<i>&lt;Normal Notation&gt;</i>	<i>&lt;Standard Icon Notation&gt;</i>
<i>Actor</i>		
<i>Interface</i>		
<i>Boundary</i>		
<i>Control</i>		
<i>Entity</i>		

#### (b) Switching between Normal and Standard Icons

To switch icons between Normal and Standard Icons, right-click on the target model element, and select [Change Icon] in the Popup menu. Then select [Normal] or [Icon].

### b. Customized Icons [P]

A user-defined Image can be used for Stereotype Icons.

**Note)** Customized Icons can be specified for Classifiers, Actions and Object Nodes only.

(To do so, its Base Class must have the Stereotype has the customized Icon.)

## 13. Editing Diagrams

### (a) Creating Customized Icons

#### i) Clicking on the Project in the [Structure Tree]

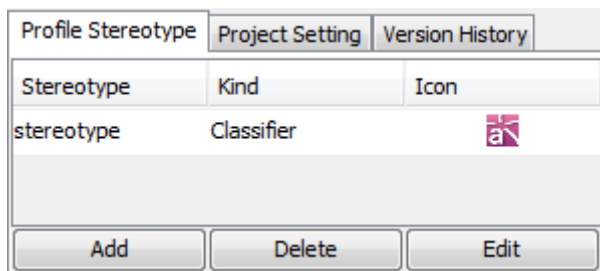
- (1) Select the Project in the Structure Tree.
- (2) Go down to its Property View and then click [Add] in the [Profile Stereotype] tab.
- (3) Select the Stereotype shown in the property view and click [Edit].
- (4) Click on the Icon button and select an image.
- (5) Specify a Stereotype name to associate to the Stereotype and click [OK].

#### ii) Using the [Set Icon for Stereotype] on [Tool]

- (1) Click [Tool] in the Main Menu and select [Set Icon for Stereotype].
- (2)-(5) As described in i) above.

### (b) Deleting Customized Icons

Select the target Icon and click [Delete].



### (c) Switching between Normal and Customized Icons

To switch icons between Normal and Customized ones, right-click on the target model element, and then select [Change Icon] in the Popup menu. Then select [Normal] or [Customize].



## 13. 5. Multiple Selection/Cancel

### 13. 5. 1. Multiple Selection

#### a. By dragging the cursor over the target area

Drag the cursor over the Diagram Editor to select the target model elements.

#### b. Using the [Shift] ([Ctrl]) key

Select model elements in the Diagram Editor by holding down the [Shift] or [Ctrl] key.

## 13. Editing Diagrams

### ***Selecting all model elements in a Diagram***

To select all the model elements in a diagram, select [Edit] - [Select All] in the Main Menu, or right-click on the Diagram Editor and select [Select All] from Pop-Up Menu. [Ctrl+A], the short cut key for [Select All] is also available.

### **13. 5. 2. Canceling the Selection**

To cancel a selection, reselect the selected model elements with holding either [Shift] or [Ctrl] key down.

## **13. 6. Copying and Pasting**

### **a. Using the Popup menu.**

- (a) Right-click on the target model element in the Diagram Editor and select [Copy].
- (b) Right-click on the Diagram Editor and select [Paste].

### **13. 6. 1. Using [Edit] in the Main Menu**

- a. Click [Edit] in the Main Menu and select [Copy].
- b. Click [Edit] in the Main Menu and select [Paste].

**Note 1) [Ctrl+C], [Ctrl+V] are available as a short cut key for Copying and pasting.**

**Note 2) Model elements may be pasted between the same types of diagrams.**

**Note 3) multiple model elements can be copied and pasted at once.**

**Note 4) Model elements can be pasted directly into a Package or a Subsystem. The pasted model elements would appear under the Package or Subsystem in the Structure Tree.**

## **13. 7. Copying as Images**

Diagram Elements copied by [Copy to Clipboard] are stored in the Clipboard. They can be pasted into other applications (MS Word, etc) as images. Model elements can also be stored in the Clipboard as EMFs (Enhanced Meta File).

## **13. 8. Copying/Pasting Style**

### **a. Using the [Edit] in the Main Menu**

- (a) Select [Edit]-[Copy Style] in the Main Menu.
- (b) Select [Edit]-[Paste Style] in the Main Menu.

### **b. Using [Copy Style]/[Paste Style] on the Tool Bar.**



## 13. Editing Diagrams

(a) Click  [Copy Style] on the Tool Bar.

(b) Click  [Paste Style] on the Tool Bar.

### **d. Using the Popup menu.**

(a) Right-click on the target Diagram Element(s) and select [Copy Style].

(b) Right-click on the Diagram Element(s) and select [Paste Style].

## **13. 9. Color Setup**

### **13. 9. 1. Setting up Colors of Diagram Elements**

#### **a. Using the [Edit] in the Main Menu**

(a) Select [Edit]-[Set Color] in the Main Menu.

(b) Select or create a color and click [OK] in the Color Chooser.

#### **a. Using the Tool Bar in the [Management View]**

(a) Select the target Diagram Element(s) in the Diagram Editor.

(b) Click the triangle mark of  [Set Color] on the Tool Bar.

(c) Select or create a color.

(d) To use the color used in the previous operation, click the color rectangle of the button.

#### **b. Using the Pop-up Menu**

(a) Right-click on the target Diagram Element(s) and select  [Set Color].

(b) Select or create a color and click [OK] in the Color Chooser.

### ***The Color Chooser Dialog***

The Color Chooser contains six image color groups: Aqua, Earth, Nature, Spring, Passion, and Winter. You can get good color combinations by using these color groups.

[Favorite] can be used to store your favorite colors up to 10 colors.



ua/

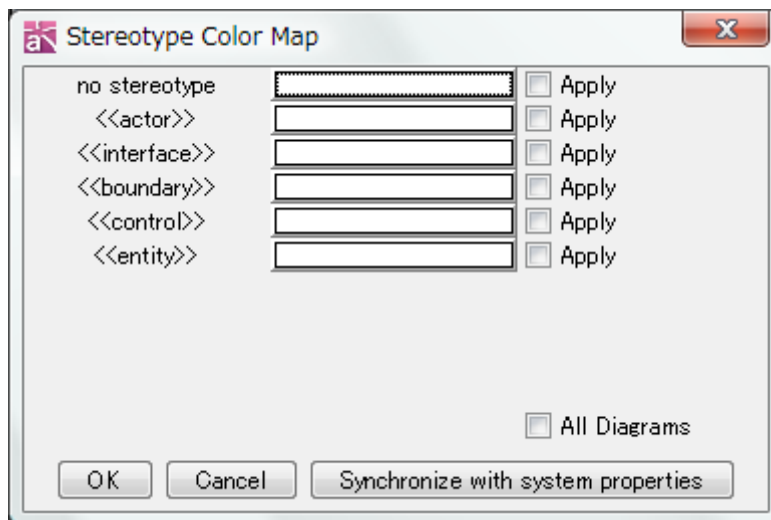
## 13. Editing Diagrams

### 13.9.2. Setting up Colors for Diagram Elements of each Stereotype

Please refer to the [New Stereotype Color](#) section for the supported Diagram Element Types.

Please refer to the [Color Setup](#) section for how to set the color for Elements.

- (a) Select [Edit] - [Set color for Stereotype] from the Main Menu.
- (b) A [Stereotype Color Map] shows up.
- (c) Select the Stereotype box then choose color.
- (d) Check on [Apply] or [All Diagrams] then press down [OK] button.




To synchronize the setting of the System Properties, press [Synchronize with system properties].

### 13.9.3. Setting up Font Colors of Diagram Elements

#### a. Using the [Edit] in the Main Menu

- (a) Select [Edit]-[Set Font Color] in the Main Menu.
- (b) Select or create a color and click [OK] in the Color Chooser.

#### a. Using the Tool Bar in the [Management View]

- (a) Select string(s) of the target Diagram Element(s) in the Diagram Editor.
- (b) Click the triangle mark of  [Set Font Color] on the Tool Bar.
- (c) Select or create a color.
- (d) To use the color used in the previous operation, click the color rectangle of the button.

#### b. Using the Pop-up Menu

- (a) Right-click on string of the target Diagram Element and select  [Set Font

### 13. Editing Diagrams

Color].

- (b) Select or create a color and click [OK] in the Color Chooser.

#### **[Diagram Element to set font color]**

- Classes (Attributes and Operations)
- Packages
- Subsystems (Operations)
- Association Classes (Attributes and Operations)
- Associations (Association Ends)
- Generalizations
- Realizations
- Dependencies
- Usages
- Interfaces
- Entities
- Boundaries
- Controls
- Instance Specifications
- Slots
- Links (Link Ends)
- Actors
- UseCases
- Extends
- Includes
- States
- Event, Guard and Action of Transitions
- Submachine states
- StubState of Submachines
- Partitions
- Actions
- CallBehaviorActions
- Flow Final Nodes
- SendSignalActions
- AcceptEventActions
- Control Flows/Object Flows
- Object Nodes

### 13. Editing Diagrams

- Processes
- Connectors
- Lifelines
- Messages (Argument, Guard, Return Value Variable, Return Value and Operation)
- Asynchronous Messages (Argument, Guard, Return Value Variable, Return Value and Operation)
- Create Messages (Argument, Guard, Return Value Variable, Return Value and Operation)
- Destroy Messages (Argument, Guard, Return Value Variable, Return Value and Operation)
- Reply Messages
- CombinedFragments
- InteractionUses
- StateInvariants
- Components
- Parts
- External Parts
- Ports (Multiplicity and Type)
- Classifiers
- Artifacts
- Nodes
- NodeInstances
- Components
- ComponentInstances
- Structured Classes
- Processes
- Transition Conditions
- External Entities
- Processes
- Data Stores
- Data Flows
- ER Entities (ER Attributes)
- Requirement
- TestCase

## 13. Editing Diagrams

### 13. 10. Editing Lines

#### 13. 10. 1. Creating Lines

There are various types of Line Elements including Association, Inheritance, Realization, Dependency, and Transition. They can all be created in a similar way:

- a. Select the target line type from the Tool Palette in the Diagram Editor.
- b. Click on a Diagram Element to select the starting point of the line.
- c. Click on a second Diagram Element to select the endpoint.

**Note)** To draw a polygonal line, click on a Diagram Element to select the starting point. Next, click on any point on the Diagram. Finally, click on a Diagram Element to select the endpoint.

**Note)** Lines can be also created by dragging the cursor between model elements.

**Note)** Lines can be redrawn by pressing the [Esc] key or by right-clicking while drawing.

#### 13. 10. 2. Editing Targets of Lines

To change the endpoint of a Line, simply drag the endpoint onto a new target.

#### 13. 10. 3. Line Styles

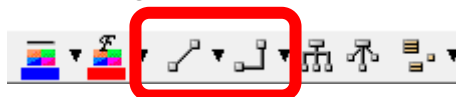
There are four line styles: “Line”, “Line (Right Angle)”, “Curve”, and “Curve (Right Angle)”. By default, “Line” is used for all diagrams except Data Flow Diagram (DFD) and ER Diagram. (“Line (Right Angle)” is default for these two diagrams.)

##### a. Using [Edit] in the Main Menu

- (a) Select a Line in the Diagram Editor.
- (b) Select [Edit] - [Line style]- [Line]/[Line (Right Angle)]/[Curve]/[Curve (Right Angle)].

##### b. Using buttons on the Tool Bar

- (a) Select the target Line in the Diagram Editor.
- (b) Click [Line]/[Line (Right Angle)]/[Curve]/[Curve (Right Angle)] on the Tool Bar in the Management View.



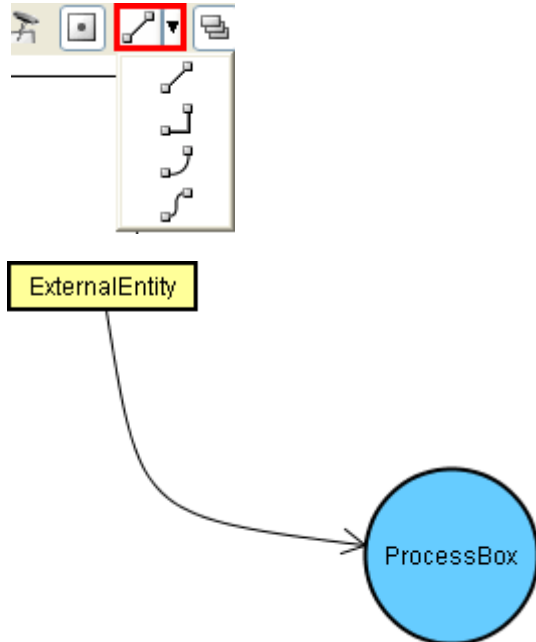
##### c. Using the Pop-up Menu

- Right-click on the target Line in the Diagram Editor and select [Line style] - [Line]/[Line (Right Angle)]/[Curve]/[Curve (Right Angle)].

## 13. Editing Diagrams

### *Changing the default setting of Line Mode*

In the Diagram Editor, select the line mode on the Tool Bar.



Note 1) Existing Lines are not changed to the selected line mode.

Note 2) Default Line styles can be set for each Diagram type in the [System Properties](#).

### 13. 11. Set Style

To set a style for line, use the Popup menu of each diagram element.


- (1) Set the line width, line type and line color to the Line and Rectangle.
- (2) Set the line color, text color, background color and font to the Text.
- (3) Set the text color and font to the Note.

#### 13. 11. 1. Setting up Line Color

##### a. Using the [Edit] in the Main Menu

- (a) Select [Edit]-[Set Line Color] in the Main Menu.
- (b) Select or create a color and click [OK] in the Color Chooser.


##### a. Using the Tool Bar in the [Management View]

- (a) Select a line in the Diagram Editor.
- (b) Click the triangle mark of  [Set Line Color] on the Tool Bar.
- (c) Select or create a color.
- (d) To use the color used in the previous operation, click the color rectangle of the

## 13. Editing Diagrams

button.

### **b. Using the Pop-up Menu**

- (a) Right-click on string of the target Diagram Element and select  [Set Font Color].
- (b) Select or create a color and click [OK] in the Color Chooser.

## **13. 12. Displaying Diagrams**

This section describes operations that affect the display of diagrams in the Diagram Editor.


### **13. 12. 1. Enlarging Diagrams**

#### **a. Using [View] in the Main Menu**

Select [View]-[Zoom In] in the Main Menu.

**Note)** Enlarging operations can be repeated by pressing the shortcut key [Ctrl+[ ].

#### **b. Using [Zoom in current Diagram Editor] on the Tool Bar.**

Click  [Zoom in current Diagram Editor].

**Note)** Enlarging operations can be repeated by pressing this icon.

#### **c. Using the Pop-up Menu**

- (a) Right-click on the Diagram Editor.
- (b) Select [Zoom In].

#### **d. Using the [Ctrl] key and the mouse**

- (a) Press the [Ctrl] key and right-drag upwards.
- (b) Press the [Ctrl] key and rotate the mouse wheel forwards.

### **13. 12. 2. Shrinking Diagrams**

#### **a. Using [View] in the Main Menu**

Select [View]-[Zoom Out] in the Main Menu.

**Note)** Shrinking operations can be repeated by pressing the shortcut key [Ctrl+] ].

#### **b. Using [Zoom out current Diagram Editor]**

Select  [Zoom out current Diagram Editor] on the Tool Bar.

**Note)** Shrinking operations can be repeated by pressing this icon.

#### **c. Using the Pop-up Menu**

- (a) Right-click on the Diagram Editor.
- (b) Select [Zoom Out].

#### **d. Using the [Ctrl] key and the mouse**

- (a) Press the [Ctrl] key and right-drag downwards.

## 13. Editing Diagrams

- (b) Press the [Ctrl] key and rotate the mouse wheel backwards.

### **13. 12. 3. Displaying Diagrams in their Original Size**

#### **a. Using [View] in the Main Menu**

Select [View]-[Zoom] in the Main Menu.

#### **b. Using [Zoom to Default] on the Tool Bar.**

Select  [Zoom to Default] on the Tool Bar.

#### **c. Using the Pop-up Menu**

(a) Right-click on the Diagram Editor.

(b) Select [Zoom].

### **13. 12. 4. Displaying the Diagram Overview**

#### **a. Using [View] in the Main Menu**

Select [View]-[Fit in Window] in the Main Menu.

#### **b. Using [Fit in Window] on the Tool Bar**

Select  [Fit in Window] on the Tool Bar.

#### **c. Using the Pop-up Menu**

(a) Right-click on the Diagram Editor.

(b) Select [Fit in Window].

**Note) [Map] on the Project View can be also used to enlarge and shrink Diagrams.**

### **13. 12. 5. Moving Diagrams**

Right-drag diagrams to move them in the Diagram Editor.

#### **(a) Moving Diagrams Vertically**

Diagrams can be moved vertically by rotating the mouse wheel. When the mouse wheel is rotated forwards, Diagrams are moved upwards. When the mouse wheel is rotated backwards, Diagrams are moved downwards.











#### **(b) Moving Diagrams Horizontally**

Diagrams can be moved horizontally by rotating the mouse wheel and pressing the [Shift] key. When the mouse wheel is rotated forwards, Diagrams are moved to the right. When the mouse wheel is rotated backwards, Diagrams are moved to the left.



## 13. Editing Diagrams

### 13.13. Alignment of Diagram Elements

[Align Top]		Align Diagram Elements with the top end of the highest Diagram Element.
[Align Horizontal Center]		Align Diagram Elements along the midpoint between the highest and lowest Diagram Elements.
[Align Bottom]		Align Diagram Elements with the bottom end of the lowest Diagram Element.
[Align Horizontal Even]		Horizontally align Diagram Elements with even spacing.
[Adjust Height]		Adjust the height of Diagram Elements so that they are the same height as the highest Diagram Element.
[Align Left]		Align Diagram Elements with the left side of the leftmost Diagram Element.
[Align Vertical Center]		Align Diagram Elements along the midpoint between the leftmost and rightmost Diagram Elements.
[Align Right]		Align Diagram Elements with the right side of the rightmost Diagram Element.
[Align Vertical Even]		Vertically align Diagram Elements with even spacing between the highest and lowest Diagram Elements.
[Adjust Width]		Adjust the width of Diagram Elements so that they are the same width as the widest Diagram Element.

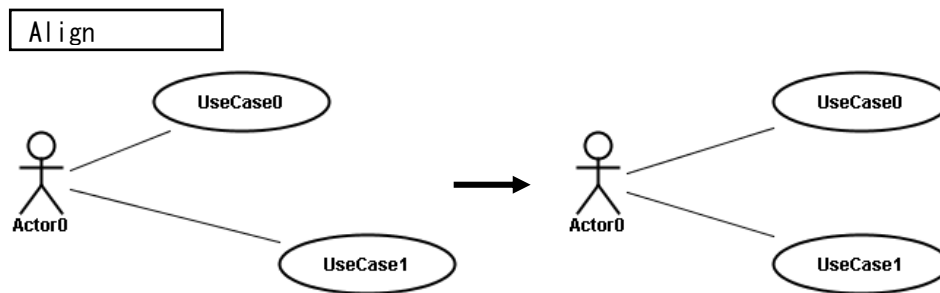
#### a. Using the Tool Buttons

- Select the target Diagram Elements to align.
- Click one of the Align Buttons on the Tool Bar.

#### b. Using [Align] on the Menu

- Select the target Diagram Elements to align.
- Select one of the options from the [Alignment] Menu.

## 13. Editing Diagrams



### Adjusting Size

Adjust the size of Diagram Elements by inputting the size directly or selecting the element.

- (1) Select Diagram Elements.
- (2) Select [Alignment] - [Adjust Size] - [Adjust Size]

#### 13.13.1. Input the size directly

To adjust Diagram Elements by the specified size, select [Adjust Size] then input the size for both of the Width and Height then press [OK].

Adjust Size

☒ Adjust size Width: Height:

☐ Adjust to the size of selected element

Name	X	Y	Width	Height
Action0	100.0	72.0	60.0	47.0
Action1	124.0	136.0	111.0	103.0
CallBehaviorAction0	266.0	66.0	130.0	38.09375

OK Cancel

#### 13.13.2. Adjust to the selected Element Size

To adjust Diagram Elements by selecting a particular model elements size, select [Align to the size of the selected element] then select a Model Element and press [OK].

**Note)** Some of model elements may not be adjusted properly depending on the length of names or comments inside of them.

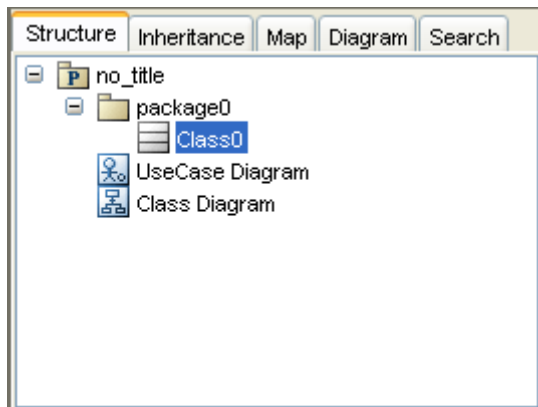
## 13.14. Jumping to Models in the Structure Tree

Jump to a Model in the Structure Tree from a Diagram Element on Diagrams.

- a. Right-click on the target Diagram Element in the Diagram Editor.
- b. Select [Show in Structure Tree].

## 13. Editing Diagrams

c. The target Diagram is displayed and selected in the Structure Tree.



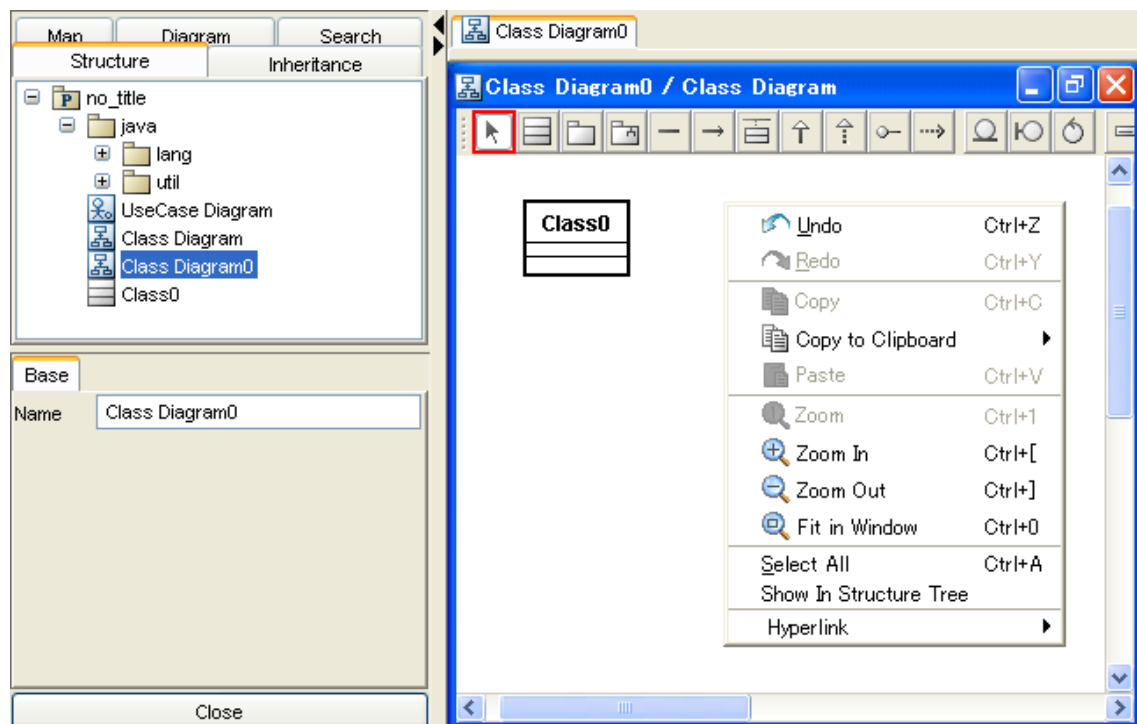
### 13. 15. Jumping to Diagrams in the Structure Tree

Jump to the Diagrams in the Structure Tree from the Diagram Editor.

a. Right-click on the Diagram Editor.

b. Select [Show in Structure Tree].

c. The target Diagram is displayed and selected in the Structure Tree.



## 14. Diagrams and Diagram Elements

### 14. Diagrams and Diagram Elements

This chapter describes Diagram Types and Elements.

#### 14. 1. Class Diagram

Class Diagrams are used to draw 4 types of Diagrams: Class Diagrams, Object Diagrams, Package Diagrams, and Robustness Diagrams.

Class Diagram	Depict the static structure of a system.
Object Diagram	Depict a static snapshot of Class instances.
Package Diagram	Depict the hierarchical structure of Packages and dependencies between Packages.
Robustness Diagram	Depict the basic structure of a system.









##### 14. 1. 1. Creating Class Diagrams

- Using [Diagram]-[Class Diagram] in the Main Menu.
- Using the Pop-up Menu in the Structure Tree in the “Project View”.

















##### 14. 1. 2. Diagram Elements of Class Diagrams

The Diagram Elements that can be used in Class Diagrams are listed below.

















Select		Mode for basic operations in the Diagram Editor
Class		Add Classes
Package		Add Packages
Subsystem		Add Subsystems
Nest		Add Nests
Association		Add Associations (Unspecified Association to Unspecified Association)
Association		Add Associations (Unspecified Association to Navigable Association)
Association		Add Associations

## 14. Diagrams and Diagram Elements

		(Non Navigable Association to Navigable Association)
Association		Add Associations. (Navigable Association to Navigable Association)
Aggregation		Add Aggregations. (Aggregation to Unspecified Association)
Aggregation		Add Aggregations. (Aggregation to Navigable Association)
Composition		Add Compositions. (Composition to Unspecified Association)
Composition		Add Compositions. (Composition to Navigable Association)
Association Class		Add Association Classes.
Generalization		Add Generalizations.
Realization		Add Realizations.
Dependency		Add Dependencies.
Usage		Add Usages.
Realization		Add Realizations.
Template Binding		Add Template Bindings.
Interface		Add Interfaces with icon notation.
Interface (Normal)		Add Interfaces with normal notation.
Required Interface		Add Required Interfaces.
Provided Interface		Add Provided Interfaces.
Entity		Add Entities.

## 14. Diagrams and Diagram Elements

Boundary		Add Boundaries.
Control		Add Controls.
Instance Specification		Add Instance Specifications/Entities/Boundaries/Controls.
Link		Add Links.
Note		Add comments to Model Elements.
Note Anchor		Anchor Notes to Model Elements.
Text		Insert Text in Diagrams.
Rectangle		Draw Rectangles/Rounded Rectangles on Diagrams. For example, Rectangle can be used to enclose a semantic collection of Model Elements.
Line		Draw Lines on Diagrams.
Image		Paste Images.
Lock Selected Mode		Lock the selected mode on the Tool Palette.
Set Relation End to the center of the item		Place the ends of lines (e.g. Association) at the center of Model Elements.
Line Mode		Set the Line Mode (Line, Line (Right Angle), Curve, Curve (Right Angle)) to draw lines (e.g. Association) between Model Elements.
Depth Lock Mode		Lock the front and behind of Model Elements that are over each other.

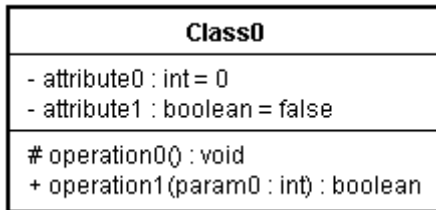
### 14.1.3. Class

#### a. Creating Classes

(a) Using  [Class] on the Tool Palette.

## 14. Diagrams and Diagram Elements

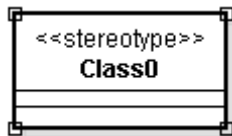
(b) Using the [Structure Tree] in the “Project View”.



### b. Editing Classes

(a) Adding Stereotypes

Right-click on the target Class and select [Add Stereotype], or go to Stereotype tab in the Property View.



Note) To delete stereotype, select it on the Diagram Editor then press [Delete] Key.

To add stereotype, use the shortcut key [Ctrl+Alt+S].

(b) Adding Attributes

i) Using the [Structure Tree] in the “Project View”.

ii) Using the Pop-up Menu.

Right-click on the target Class and select [Add Attribute].

Note) The default type of Attributes can be set in [System Properties](#).

### Note) How to operate Attributes on Diagram Editor

- Attributes can be added continuously by pressing Enter key.
- Attributes can be created and inserted above the selected Attribute by pressing [Shit + Enter].
- Attributes are transferable between Classes in the Diagram Editor.
- These shortcut keys sort Attributes.
  - [Ctrl + Upward Arrow cursor] to move up the target.
  - [Ctrl + Downward Arrow cursor] to move down the target.
- Attributes can be copied & Paste by these shortcut keys.
  - [Ctrl + C] to copy
  - [Ctrl + V] to paste

### iii) Using the “Property View”.

#### (c) Deleting Attributes

##### i) Using the [Structure Tree] in the “Project View”.

##### ii) Using the Pop-up Menu.

- (1) Right-click on the target Class and select [Delete Attribute].
- (2) Select an Attribute to delete.

##### iii) Using the [Delete] key.

Click the Attributer on the Diagram Editor, and then press [Delete] Key.

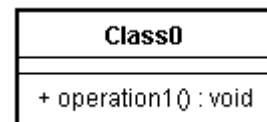
##### iv) Using the “Property View”.

#### (d) Adding Operations

##### i) Using the [Structure Tree] in the “Project View”.

##### ii) Using the Pop-up Menu.

Right-click on the target Class and select [Add Operation].



#### Note) How to operate Operations on Diagram Editor

- Operations can be added continuously by pressing Enter key.
- Operations can be created and inserted above the selected Operation by pressing [Shift + Enter].
- Operations are transferable between Classes in the Diagram Editor.
- These shortcut keys sort Operations.
  - [Ctrl + Upward Arrow cursor] to move up the target.
  - [Ctrl + Downward Arrow cursor] to move down the target.
- Operations can be copied & Paste by these shortcut keys.
  - [Ctrl + C] to copy
  - [Ctrl + V] to paste

##### iii) Using the “Property View”.

#### (e) Deleting Operations

##### i) Using the [Structure Tree] in the “Project View”.

##### ii) Using the Pop-up Menu.

- (1) Right-click on the target Class and select [Delete Operation].
- (2) Select an Operation to delete.



## 14. Diagrams and Diagram Elements

### **iii) Using the [Delete] key.**

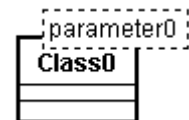
Click the Operation on the Diagram Editor, and then press [Delete] Key.

### **iv) Using the “Property View”.**

## **(f) Adding Template Parameters**

### **i) Using the Pop-up Menu on the Class.**

Right-click on the target Class and select [Add Template Parameter].



### **ii) Using the Pop-up Menu on the Template Parameter.**

Right-click on the target Template Parameter and select [Add Template Parameter].

### **iii) Using the “Property View”**

## **(g) Deleting Template Parameters**

### **i) Using the Pop-up Menu on the Class.**

(1) Right-click on the target Class and select [Delete Template Parameter].

(2) Select a Template Parameter to delete.

### **ii) Using the Pop-up Menu on the Template Parameter.**

(1) Right-click on the target Template Parameter and select [Delete Template Parameter].

(2) Select a Template Parameter to delete.

### **iii) Using the [Delete] / [Ctrl + D] key**

(1) Click the Template Parameter on the Diagram Editor, then press [Delete] or [Ctrl + D] Key.

### **iv) Using the “Property View”.**

## **(h) Editing Class Names**

Double-click the Name of the Diagram Element in the Diagram Editor and then edit the Name, or go to Base tab of the Class in the Property View.

## **(i) Showing Related Elements**

(1) Right-click on the target Class and select [Show Related Elements].

(2) All elements that are related to Classes appear on the Diagram Editor including Generalization, Realization and Dependency relationships.

## 14. Diagrams and Diagram Elements

### **(j) Showing Hidden Relationships**

- (1) Right-click on the target Class and select [Show Hidden Relationships].
- (2) To show hidden relationships, select relationships (e.g. Generalization, Realization and Dependency) in Show Hidden Relationships dialog and click OK.

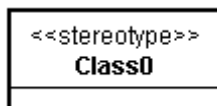
### **(k) Notation of Classes**

#### **i) Stereotype Visibility**

The display/non-display settings for a Class Stereotype can be selected from the Pop-up Menu.

#### **ii) Attribute/Operation Compartment Visibility**

The display/non-display settings for Attributes and Operations of a Class can be selected from the Pop-up Menu.



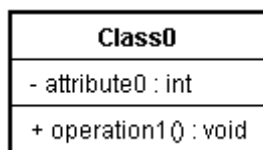
#### **iii) Show/Hide Namespace**

- (1) Right-click on the target Class and select [Extended Visibility] - [Show/Hide Namespace].
- (2) Select one of the following package levels to display.

None	None of Parent Package Names will be added to the Class Name.
Package	Only the direct Parent Package Name will be added.
All Packages	All the Parent Package Names will be added.

#### **iv) Individual Attribute/Operation Visibility**

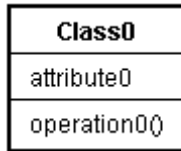
The display/non-display settings for each Attribute and Operation of a Class can be selected from the Pop-up Menu.



## 14. Diagrams and Diagram Elements

### **v) Attribute/Operation Elements Visibility**

The display/non-display settings for Elements of a Class Attribute or Operation can be selected from the Pop-up Menu.



### **vi) Visibility of Attribute/Operation**

The display/non-display settings for Elements of a Class Attribute or Operation by the visibility (Public, Protected, Package, and Private) can be selected from the Pop-up Menu.

### **vii) Other Visibilities of Attribute/Operation**

The display/non-display settings for other visibilities of a Class Attribute or Operation can be selected from the Pop-up Menu.

#### **(1) Attribute**

Type, Initial Value, Stereotype, Constraint

#### **(2) Operation**

Return Type, Parameter, Parameter Type, Parameter Direction Kind, Stereotype, Constraint

#### **(3) Template Parameter**

Template Bound Information, Template Formal Parameter

### **c. Reference from CRUD**

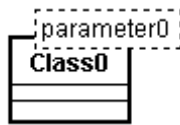
To open the CRUD, right-click on the target Class and select [Reference from CRUD].

## **14.1.4. Template Class**

### **a. Creating Template Classes**

Right-click on the target Class and select [Add Template Parameter], or go to Template parameter tab in the Class Property View.

## 14. Diagrams and Diagram Elements



### 14.1.5. Bound Class

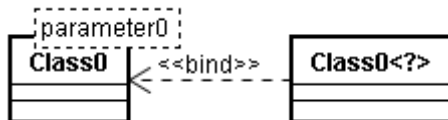
#### a. Creating Bound Classes

Add a Template Binding from a Class to a Template Class.

-> Please refer to the [Template Binding](#) for more details.

#### b. Creating Anonymous Bound Classes

Delete the name of a Bound Class.



Anonymous Bound Classes can be set to the following:

- Attribute Type
- Operation Return Value
- Operation Parameter Type
- Target of Association End A and Association End B
- Base Class of Instance Specification in Class Diagram
- Base Class of Object Node in Activity Diagram
- Base Class of Lifeline in Sequence Diagram and Communication Diagram

#### c. Specifying Anonymous Bound Classes


Anonymous Bound Classes can be specified to the following:

- Attribute Type
- Operation Return Value
- Operation Parameter Type
- Target of Association End A and Association End B
- Base Class of Instance Specification in Class
- Base Class of Object Node in Activity Diagram
- Base Class of Lifeline in Sequence Diagram and Communication Diagram

## 14. Diagrams and Diagram Elements

### 14.1.6. Package

#### a. Creating Packages

- (a) Using  [Package] on the Tool Palette.
- (b) Using the [Structure Tree] in the “Project View”.



#### b. Editing Packages

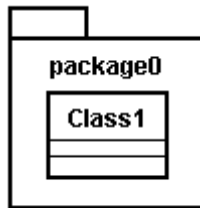
##### (a) Editing Package Names

Double-click the Name of the Diagram Element in the Diagram Editor and then edit the Name, or go to Base tab of the Package in the Property View.

##### (b) Specific operations for Packages

Models in Packages can be handled as a unit in the Diagram Editor.

Diagram Elements can be added to Packages by dragging and dropping.



##### (c) Adding Stereotypes

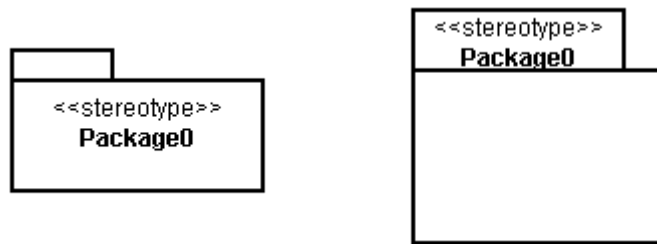
Right-click on the target Package and select [Add Stereotype], or go to Stereotype tab in the Property View.

##### (d) Package Visibility

###### i) Name in Body

The display/non-display settings for a Package Name can be selected from the Pop-up Menu.

## 14. Diagrams and Diagram Elements



### ii) Stereotype Visibility

The display/non-display settings for a Package Stereotype can be selected from the Pop-up Menu.


### iii) Show/Hide Namespace

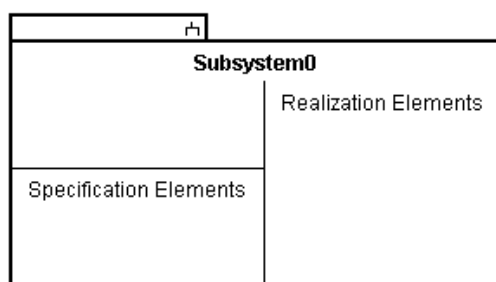
- (1) Right-click on the target Package and select [Show/Hide Namespace].
- (2) Select a package level to display.

None	None of parent package names will appear.
Show Parent	A direct parent package name will appear.
Show All Parents	All the parent package names will appear.

## 14.1.7. Subsystem

### a. Creating Subsystems

- (a) Using  [Subsystem] on the Tool Palette.
- (b) Using the [Structure Tree] in the “Project View”.

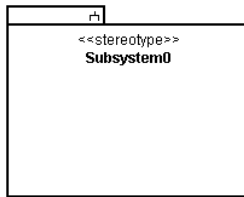


### b. Editing Subsystems

#### (a) Adding Stereotypes

Right-click on the target Subsystem and select [Add Stereotype], or go to Stereotype tab in the Property View.

## 14. Diagrams and Diagram Elements



### (b) Adding Operations

i) Using the [Structure Tree] in the “Project View”.

ii) Using the Pop-up Menu.

Right-click on the target Subsystem and select [Add Operation].

**Note)** Operations can be added continuously by pressing Enter key when selecting operations on the Diagram Editor.

iii) Using the “Property View”.

### (c) Deleting Operations

i) Using the [Structure Tree] in the “Project View”.

ii) Using the Pop-up Menu.

(1) Right-click on the target Subsystem.

(2) Select an Operation to delete from [Delete Operation].

iii) Using the “Property View”.

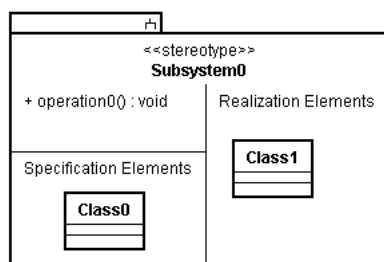
### (d) Editing Subsystem Names

Double-click the subsystem in the Diagram Editor and edit directly, or go to Base tab of the Subsystem in the Property View.

### (e) Specific operations for Subsystems

Models in a Subsystem can be handled as a unit in the Diagram Editor.

Diagram Elements can be added to a Subsystem by dragging and dropping.

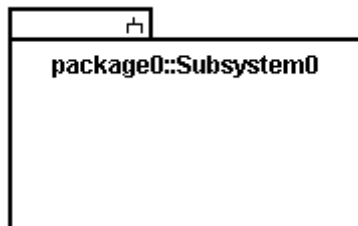


## 14. Diagrams and Diagram Elements

### (f) Notation of Subsystems

#### i) Show/Hide Namespace

- (1) Right-click on the Subsystem and select [Show/Hide Namespace].
- (2) Select a level to display.



None	None of parent package names will appear.
Show Parent	A direct parent package name will appear.
Show All Parents	All the parent package names will appear.

#### ii) Stereotype Visibility

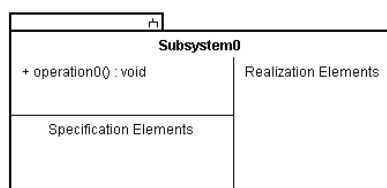
The display/non-display settings for a Subsystem Stereotype can be selected from the Pop-up Menu.

#### iii) Detail Visibility

The display/non-display settings for Details (Operations, Specification Elements, Realization Elements) that appear in the body of a Subsystem can be selected from the Pop-up Menu.

#### iv) Extended Visibility

If Detail Visibility option is on, you can select to display or no not for Parameter, Return Type, and Parameter Direction Kind, Stereotype and Constraints of operations.



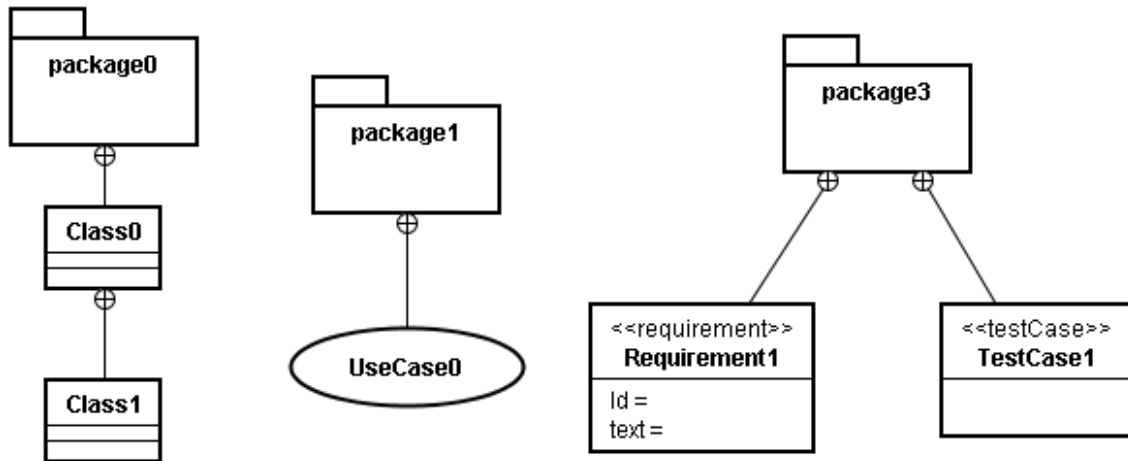


## 14. Diagrams and Diagram Elements

### 14.1.8. Nest

#### a. Creating Nests

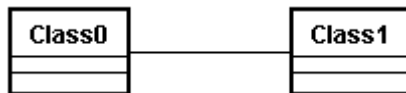
To create a Nest, use  [Nest] on the Tool Palette.



### 14.1.9. Association / Unidirectional Association

#### a. Creating Associations

To create an Association, use  [Association] on the Tool Palette.



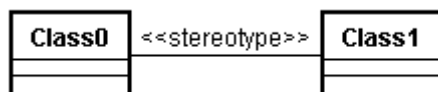
#### b. Editing Associations

##### (a) Setting Association Names

Double-click the Name of the Association and edit the name directly, or go to Base tab of the Association in the Property View.

##### (b) Adding Stereotypes

Right-click on the target Association and select [Add Stereotype] or go to Stereotype tab in the Property View.



## 14. Diagrams and Diagram Elements

### **(c) Stereotype Visibility**

The display/non-display settings for an Association Stereotype can be selected from the Pop-up Menu.

### **(d) Adding Constraints**

Right-click on the target Association and select [Add Constraint], or go to Constraint tab of the Association in the Property View.

- (1) Adding a Constraint for an Association.
- (2) Adding a Constraint for Role A.
- (3) Adding a Constraint for Role B.

### **(e) Constraint Visibility**

The display/non-display settings for a Constraint can be selected from the Pop-up Menu.

### **(f) Setting Navigations**

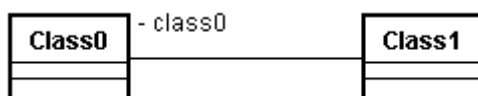
#### **i) Using the Pop-up Menu.**

Right-click on the target Association and select [Navigation].

### **(g) Setting Association End Names**


#### **i) Using the Pop-up Menu.**

Right-click on the target Association and select [Set Role Name].



### **(h) Set Aggregation Type**

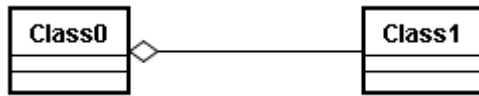
#### **i) Using the Button on Tool Palette**

Use  from [Association] dropdown buttons from Tool Palette in Main Menu.

#### **ii) Using the Pop-up Menu.**

- (1) Right-click on the Association near the target to set the Aggregation type.
- (2) Select [Aggregation] and choose one of the following: [Aggregate], [Composite], or [None].

## 14. Diagrams and Diagram Elements



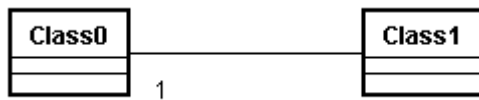
-> In this example, an Aggregation is set from Class0 to Class1.

### (i) Set the Multiplicity of an Association

#### i) Using the Pop-up Menu.

(1) Right-click on the end of the target Association.

(2) Select [Multiplicity] and choose one of the following: [1], [0..1], [0..\*], [1..\*], or [Unspecified].



#### ii) Using the “Property View”.

-> Please refer to the [\[Association End\] Tab](#) section for more details.

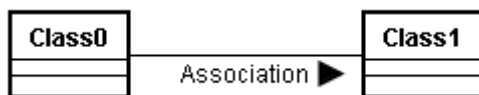
### (j) Name Direction

Use the Pop-up Menu to display the Name Direction of an Association.

(1) Right-click on the target Association and select [Name Direction].

(2) Check [Visibility].

(3) To reverse the direction, click [Reverse Direction].



### (k) Line Style

The association lines can be one of 4 Styles: “Line” or “Line (Right Angle)”, “Curve”, “Curve (Right Angle)”.

### (l) Adding Qualifiers

Right-click on the target Association and select [Add Qualifier].

### *Qualifier Properties*

Qualifiers can be added and deleted in the “Property View”.

(1) Select the target Qualifier to display its properties in the “Property View”.

## 14. Diagrams and Diagram Elements

(2) Open [Attribute View] and select [Add], [Delete], [Up], or [Down] (to add, delete, or change the order of Qualifier properties respectively).

### ***Qualifier Attribute Properties***

Qualifier Attributes can be set in “Property View”.

- (1) Select a target Qualifier Attribute to display its properties in “Property View”.
- (2) Set components of the Attribute.

### **(m) Deleting Qualifiers**

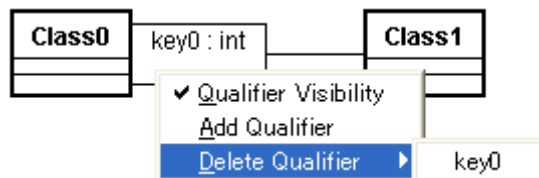
#### **i) Using the Pop-up Menu of the Association.**

Right-click on the target Association and select [Delete Qualifier]. Then select a Qualifier to delete.

**Note) If both sides of association have Qualifiers, the Qualifiers of the closest target to the Pop-up Menu are listed.**

#### **ii) Using the Pop-up Menu of the Qualifier.**

Right-click on the target Qualifier and select [Delete Qualifier]. Then select a Qualifier to delete.



#### **iii) Using the “Property View”.**

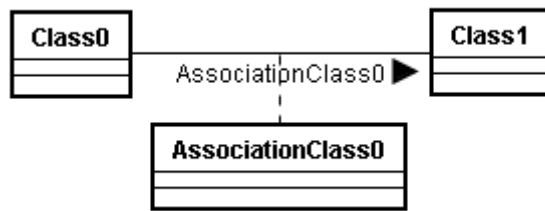
### **14. 1. 10. Association Class**

#### **a. Creating Association Classes**

To create an Association Class, use  [Association Class] on the Tool Palette.

1. Click [Association Class] on the Tool Palette.
2. Click 2 Classes to associate.

## 14. Diagrams and Diagram Elements



### b. Editing Association Classes

#### (a) Setting Association Class Names

Place the cursor on the target Association Name in the Diagram Editor, double-click, and enter the Name directly.

#### (b) Name Visibility for Association Classes

The display/non-display settings for Names of Association Classes can be selected from the Pop-up Menu.

#### (c) Converting Association Class to Class or Association

Association Classes can be converted to Classes or Associations.

To convert Association Classes, go to [Convert to Class] / [Convert to Associations] in the popup menu of Association Class.

#### (d) Adding Constraints

Right-click on the target Association and select [Add Constraint].

- (1) Click near the center of an Association -> A Constraint for the Association is added.
- (2) Click near the start point of an Association -> A Constraint for Role A is added.
- (3) Click near the end point of an Association -> A Constraint for Role B is added.


#### (e) Constraint Visibility

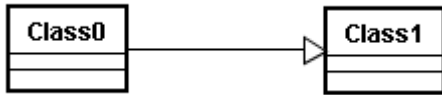
The display/non-display settings for a Constraint can be selected from the Pop-up Menu.

## 14. Diagrams and Diagram Elements

### 14.1.11. Generalization

#### a. Creating Generalizations

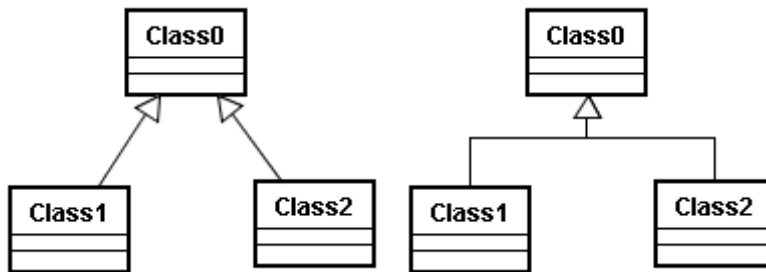
To create a Generalization,  use [Generalization] on the Tool Palette.



#### b. Editing Generalizations

##### (a) Notation of Inheritance


There are 2 notation types for Inheritance, “Separated” and “Shared”.



##### i) Using [Edit] in the Main menu.

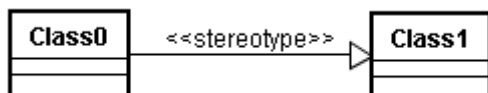
- (1) In the Diagram Editor, select target Inheritance.
- (2) Select [Edit] - [Generalization Style] - [Shared] in Main Menu.

##### ii) Using [Shared] on the Tool Bar.

- (1) In the Diagram Editor, select the target Inheritance.
- (2) Click  [Shared] on the Tool Bar in the “Management View”.

#### (b) Adding Stereotypes

Right-click on the target Generalization and select [Add Stereotype], or go to Stereotype tab in the Property View.



##### (c) Stereotype Visibility

The display/non-display settings for a Generalization Stereotype can be selected from the Pop-up Menu.

### (d) Adding Constraints

Right-click on the target Generalization and select [Add Constraint], or go to Constraint tab in the Property View.

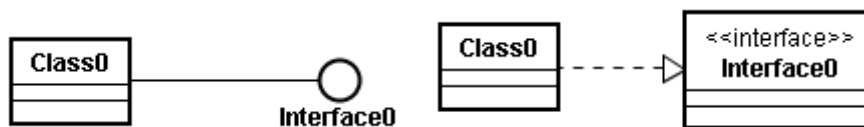
### (e) Constraint Visibility

The display/non-display settings for a Constraint can be selected from the Pop-up Menu.

## 14.1.12. Realization

### a. Creating Realizations

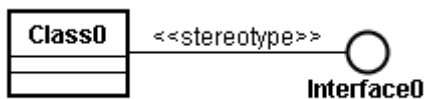
To create a Realization, use  or  [Realization] on the Tool Palette.



### b. Editing Realizations

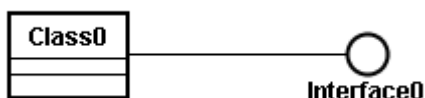
#### (a) Adding Stereotypes

Right-click on the target Realization and select [Add Stereotype], or go to Stereotype tab in the Property View.



#### (b) Stereotype Visibility

The display/non-display settings for a Realization Stereotype can be selected from the Pop-up Menu.



#### (c) Adding Constraints

Right-click on the target Realization and select [Add Constraint], or go to Constraint tab

## 14. Diagrams and Diagram Elements


in the Property View.

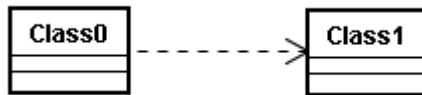
### (d) Constraint Visibility

The display/non-display settings for a Constraint can be selected from the Pop-up Menu.

#### 14.1.13. Dependency

##### a. Creating Dependencies

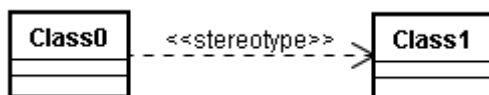
To create a Dependency,  use [Dependency] on the Tool Palette.



##### b. Editing Dependencies

###### (a) Adding Stereotypes

Right-click on the target Dependency and select [Add Stereotype], or go to Stereotype tab in the Property View.



###### (b) Stereotype Visibility

The display/non-display settings for a Dependency Stereotype can be selected from the Pop-up Menu.

###### (c) Adding Constraints

Right-click on the target Dependency and select [Add Constraint], or go to Constraint tab in the Property View.

###### (d) Constraint Visibility

The display/non-display settings for a Constraint can be selected from the Pop-up Menu.

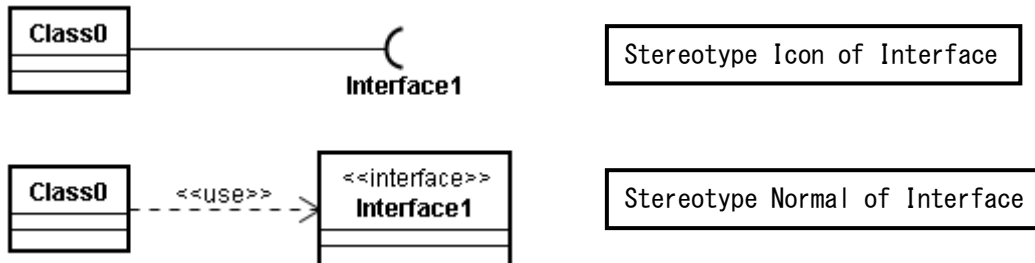


## 14. Diagrams and Diagram Elements

### 14.1.14. Usage

#### a. Creating Usages

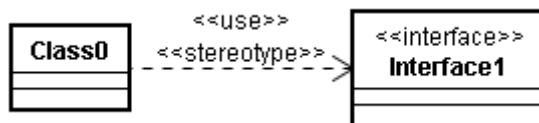
To create a Usage, use  [Usage] on the Tool Palette.



#### b. Editing Usages

##### (a) Adding Stereotypes

Right-click on the target Usage and select [Add Stereotype], or go to Stereotype tab in the Property View.



Note) To display added stereotype, interface needs to be shown in Stereotype Normal.

##### (b) Stereotype Visibility

The display/non-display settings for a Usage Stereotype can be selected from the Pop-up Menu.

##### (c) Adding Constraints

Right-click on the target Usage and select [Add Constraint], or go to Constraint tab in the Property View.


##### (d) Constraint Visibility

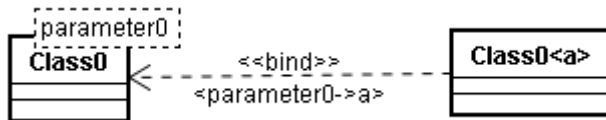
The display/non-display settings for a Constraint can be selected from the Pop-up Menu.

## 14. Diagrams and Diagram Elements

### 14.1.15. Template Binding

#### a. Creating Template Bindings

To create a Template Binding, use  [Template Binding] on the Tool Palette. It can be created from a Class or a Template Class to Class.







#### b. Editing Template Bindings

##### (a) Visibility of Template Bindings

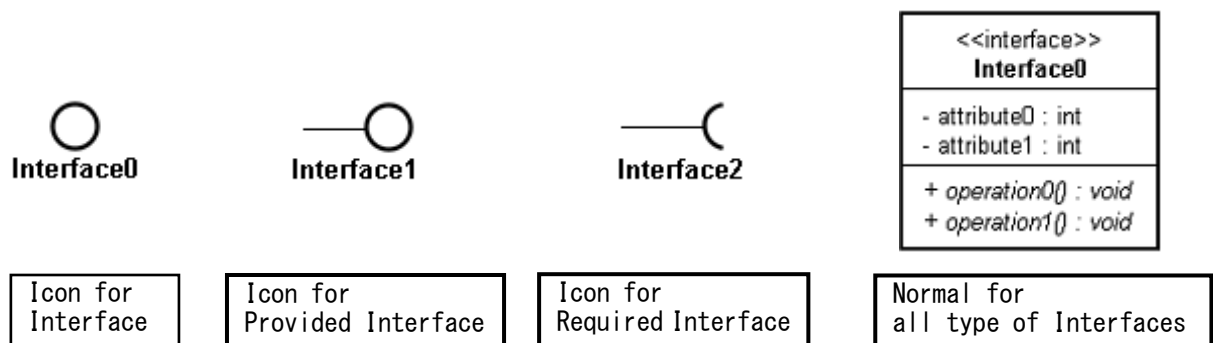
Right-click on the target Class and select [Extended Visibility] - [Template Bound Information Visibility].

### 14.1.16. Interface/Required Interface/Provided Interface

#### a. Creating Interfaces, Required Interfaces, Provided Interfaces

To create an Interface, use  [Interface],  [Interface (Normal)],  [Required Interface],  [Provided Interface] on the Tool Palette.

\*Interface can be created using the [Structure Tree] in the “Project View”.



#### b. Editing Interfaces

Double-click the Name of the Diagram Element in the Diagram Editor and then edit the Name, or go to Base tab of the Interface in the Property View.


## 14. Diagrams and Diagram Elements

### 14.1.17. Entity/Boundary/Control

#### a. Creating Entities, Boundaries, and Controls

To create an Entity, use  [Entity] on the Tool Palette.

To create a Boundary,  use [Boundary] on the Tool Palette.

To create a Control, use  [Control] on the Tool Palette.



#### b. Editing Entities, Boundaries, and Controls

Double-click the Name of the Diagram Element in the Diagram Editor and then edit the Name, or go to Base tab of the Entity/Boundary/Control in the Property View.

### 14.1.18. Instance Specification

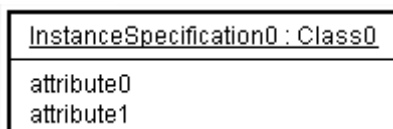
#### a. Creating Instance Specifications

i) Use [Instance Specification] on the Tool Palette.

Instance Specification or Instance Specification with Entity/Boundary/Control will be created.

ii) Drag & Drop the Class on the Diagram Editor from the Structure Tree.

A new Instance Specification will be created with the dragged class as its base class.



#### b. Editing Instance Specifications

##### (a) Editing the Name of Instance Specification/Base Class

Double-click the Name of Instance Specification in the Diagram Editor and then edit the Name directly, or go to Base tab of the Instance Specification in the Property View.

##### (b) Notation of Instance Specifications

###### i) Instance Specification Name Visibility

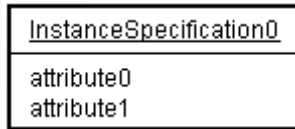
The display/non-display settings for an Instance Specification Name can be selected

## 14. Diagrams and Diagram Elements

from the Pop-up Menu.

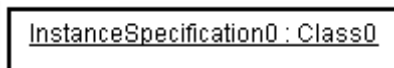
### ii) Classifier Visibility

The display/non-display settings for a Classifier can be selected from the Pop-up Menu.



### iii) Slot Visibility/Slot Value Visibility/No Value Slot Visibility

The display/non-display settings for a Slot and Slot Value can be selected from the Pop-up Menu. Slots are Attributes of the base class.




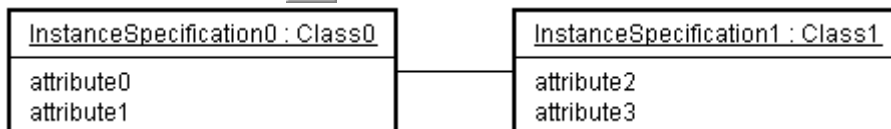
### iv) Stereotype Visibility

The display/non-display settings for a Stereotype can be selected from the Pop-up Menu.

## 14.1.19. Link

### a. Creating Links

To create a Link,  use [Link] on the Tool Palette.



### (a) Setting Navigations

Right-click on the target Link, then Check [Navigation].

### (b) Set Aggregation Type

- (1) Right-click on the Association near the target to set the Aggregation type.
- (2) Select [Aggregation] and choose one of the following: [Aggregate], [Composite], or [None].

## 14. Diagrams and Diagram Elements

### 14. 2. UseCase Diagrams

This section describes UseCase Diagrams and the Diagram Elements.

#### 14. 2. 1. Creating UseCase Diagrams


















- i) Using [Diagram]-[UseCase Diagram] in the Main Menu.
- ii) Using the [Structure Tree] in the “Project View” (by right-clicking).

#### 14. 2. 2. Diagram Elements in UseCase Diagrams





Select		Mode for basic operations in the Diagram Editor.
Actor		Add Actors.
UseCase		Add UseCases.
Package		Add Packages.
Subsystem		Add Subsystems.
Nest		Add Nests.
Association		Add Associations. (Unspecified Association to Unspecified Association)
Association		Add Associations. (Unspecified Association to Navigable Association)
Association		Add Associations. (Non-Navigable Association to Navigable Association)
Association		Add Associations. (Navigable Association to Navigable Association)
Aggregation		Add Aggregations. (Aggregation to Unspecified Association)
Aggregation		Add Aggregations. (Aggregation to Navigable Association)
Composition		Add Composition.

## 14. Diagrams and Diagram Elements

		(Composition to Unspecified Association)
Composition		Add Composition. (Composition to Navigable Association)
Extend		Add Extends.
Include		Add Includes.
Generalization		Add Generalizations.
Dependency		Add Dependencies.
Template Binding		Add Template Bindings.
Entity		Add Entities.
Boundary		Add Boundaries.
Control		Add Controls.
Note		Add comments to Model Elements.
Note Anchor		Anchor Notes to related Model Elements.
Text		Insert Text in Diagrams.
Rectangle		Draw Rectangles/Rounded Rectangles on Diagrams. For example, Rectangle can be used to enclose a semantic collection of Model Elements.
Line		Draw Lines on Diagrams.
Image		Paste Images.
Lock Selected Mode		Lock the selected mode on the Tool Palette.
Set Relation End to the center of the		Place the ends of lines (e.g. Associations, Generalizations, or Dependencies) at the center of Model Elements.

## 14. Diagrams and Diagram Elements


item

Line Mode		Set the Line Mode (Line, Line (Right Angle), Curve, Curve (Right Angle)) to draw lines (e.g. Association) between Model Elements.
Depth Lock Mode		Lock the front and behind of Model Elements that are over each others.

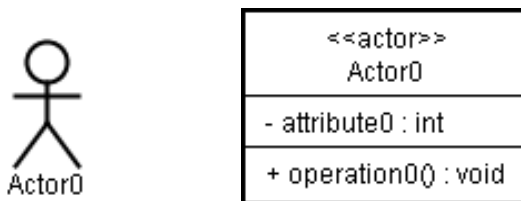
### 14.2.3. Actor

#### a. Creating Actors

Note) Actor is outside the scope of Java Skeleton Code Generation.

- (a) Using  [Actor] on the Tool Palette
- (b) Using the [Structure Tree] in the “Project View”

There are 2 notations for Actors: “Icon” (left) and “Normal” (right).




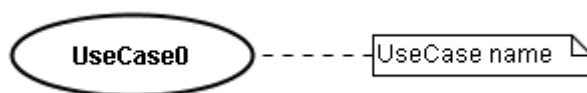
#### b. Editing Actors

Double-click the Actor in the Diagram Editor and then edit its name directly, or go to Base tab of the Actor in the Property View.

### 14.2.4. UseCases

#### a. Creating UseCases

- (a) Using  [UseCase] on the Tool Palette.
- (b) Using the [Structure Tree] in the “Project View”.



#### b. Editing UseCases

##### (a) UseCase Description

-> Please refer to the [UseCase Description](#) section.

### (b) Adding Stereotypes

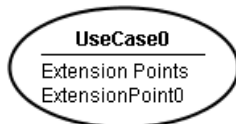
Right-click on the target UseCase and select [Add Stereotype], or go to Stereotype tab in the Property View.

### (c) Stereotype Visibility

The display/non-display settings for a Stereotype can be selected from the Pop-up Menu.

### (d) Adding Extension Points

Right-click on the target UseCase and select [Add Extension Point] or go to Extension Point tab in the Property View.

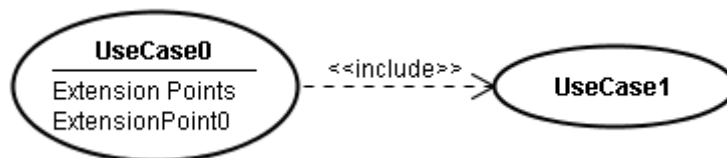


### (e) Adding Included UseCases

#### i) Drawing an Include line between UseCases.

(1) Create new UseCases.

(2) Use  [Include] on the Tool Palette to set an Include between the UseCases.



#### ii) Using the Pop-up Menu.

Right-click on the target UseCase and select [Add Included UseCase].

### (f) Showing all the Included UseCases

To show all the Included UseCases, right-click on the target UseCase and select [Show Included UseCase].

### (g) Editing UseCase Names

Double-click the Name of the Diagram Element in the Diagram Editor and then edit the Name, or go to Base tab of the UseCase in the Property View.



### (h) Showing related Elements

To show the related elements (Association, Dependency, Extend, Include) to the selected UseCase, right-click on the target UseCase and select [Show Related Elements].

### (i) Notation of UseCases

Right-click on the UseCase and select [Name in Oval]. The Name will be shown under the oval.



### (j) Opening UseCase Description

Right-click on the target UseCase and select [Open UseCase Description].

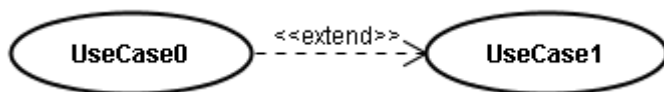
### (k) Reference from CRUD


To open the CRUD, right-click on the target UseCase and select [Reference from CRUD].

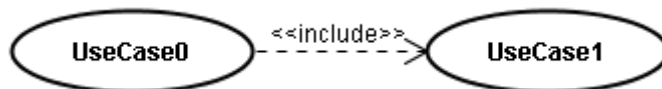
## 14. 2. 5. Extends and Includes

### a. Creating Extends and Includes

To create an Extend,  use [Extend] on the Tool Palette.



To create an Include,  use [Include] on the Tool Palette.



### *Notes about Extends and Includes*

Extends are not the same as Dependencies with the Stereotype <<extend>>. Similarly, Includes are not the same as Dependencies with the Stereotype <<include>>. Dependencies with “extend” or “include” as their Stereotypes are not recognized as Extends or Includes by astah\*.

## 14. Diagrams and Diagram Elements

### 14. 3. Statemachine Diagrams

This section describes Statemachine Diagrams and the Diagram Elements that they can contain.













#### 14. 3. 1. Creating Statemachine Diagrams

a. Using [Diagram]-[Statemachine Diagram] in the Main Menu.

b. Using the [Structure Tree] in the “Project View” (by right-clicking).

#### 14. 3. 2. Diagram Elements of Statemachine Diagrams



Select		Mode for basic operations in the Diagram Editor.
Initial State		Add Initial Pseudo State.
State		Add States.
Final State		Add Final State.
Transition		Add Transitions.
Shallow Pseudo State		Add Shallow History Pseudo States.
Deep Pseudo State		Add Deep History Pseudo State.
Junction Pseudo State		Add Junction Pseudo States.
Choice Pseudo State		Add Choice Pseudo States.
Fork Pseudo State		Add Fork Pseudo States. Able to choose Vertical or Horizontal
Join Pseudo State		Add Join Pseudo States. Able to choose Vertical or Horizontal
StubState In Submachine		Add StubStates in Submachine State.

## 14. Diagrams and Diagram Elements

State

Note



Add comments to Model Elements.

Note Anchor



Anchor Notes to related Model Elements.

Text



Insert Text in Diagrams.

Rectangle



Draw Rectangles/Rounded Rectangles on Diagrams.

For example, Rectangle can be used to enclose a semantic collection of Model Elements.

Line



Draw Lines on Diagrams.

Image



Paste Images.

Lock Selected Mode



Lock the selected mode on the Tool Palette.

Set Relation End to the center of the item



Place the ends of lines (Associations, Generalizations, or Dependencies) at the center of Model Elements.

Line Mode



Set the Line Mode (Line, Line (Right Angle), Curve, Curve (Right Angle)) to draw lines (e.g. Association) between Model Elements.


Depth Lock Mode



Lock the front and behind of Model Elements that are over each others.

### 14.3.3. Initial Pseudo States

#### a. Creating Initial Pseudo States

To create an Initial Pseudo State, use  [Initial Pseudo State] on the Tool Palette.



Note) Initial Pseudo State cannot be created more than one in a diagram.

## 14. Diagrams and Diagram Elements

### 14.3.4. States

#### a. Creating States

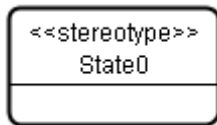
To create a State, use  [State] on the Tool Palette.



#### b. Editing States

##### (a) Adding Stereotypes

Right-click on the State and select [Add Stereotype], or go to Stereotype tab in the Property View.



##### (b) Adding Regions

###### i) Using the Pop-up Menu.

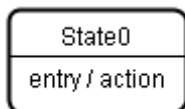
Right-click on the State and select [Add Region].



##### (c) Adding Actions

###### i) Using the Pop-up Menu.

Right-click on the State and select [Add Action].



###### ii) Using the “Property View”.

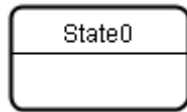
##### (d) Deleting Actions

###### i) Using the Pop-up Menu.

Right-click on the State and select [Remove Action] and then select an Action

## 14. Diagrams and Diagram Elements

([Entry]/[Do]/[Exit]) to remove.



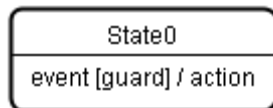
ii) Using the "Property View".

### (e) Adding Internal Transitions

i) Using the Pop-up Menu.

(1) Right-click on State and select [Add Internal Transition].

(2) Double-click on the Internal Transition and enter the event, [guard], and /action names.



Note) When entering Internal Transitions, the guard conditions should be enclosed in square brackets ([ ]) and actions should be preceded with a "/".

i.e.) event[guard]/action.

ii) Using the "Property View".

### (f) Deleting Internal Transitions

To delete an Internal Transition, use [Internal Transition] tab of States Property View.

### (g) Editing State Names

Double-click the Name of state in the Diagram Editor and then edit the name directly, or go to Base tab of the State in the Property View.

### (h) Action Visibility

The display/non-display settings for an Action (including Internal Transitions) can be selected from the Pop-up Menu.



## 14. Diagrams and Diagram Elements

### (i) Stereotype Visibility

The display/non-display settings for a Stereotype can be selected from the Pop-up Menu.

#### 14.3.5. Final States


##### a. Creating Final States

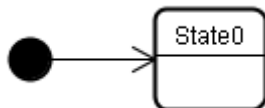
To create a Final State, use  [Final State] on the Tool Palette.



#### 14.3.6. Transitions

##### a. Creating Transitions

To create a Transition, use  [Transition] on the Tool Palette.



“Event” is added to a transition by default when creating a transition from State/Submachine State.

“[Guard]” is added to a transition by default when creating a transition from Junction Pseudo State/Choices Pseudo State.

##### b. Editing Transitions

Use Transition Properties to set an Action on a Transition.

To insert a new line in Event, Guard, and Action for Transitions, press the [Shift+Enter] or [Alt+Enter] keys.

#### 14.3.7. Shallow History Pseudo State and Deep History Pseudo State

##### a. Creating History Pseudo State

To create a history Pseudo State, use  [Shallow History Pseudo State] or  [Deep History Pseudo State] on the Tool Palette.


*<Shallow History Pseudo State >*    *<Deep History Pseudo State >*



## 14. Diagrams and Diagram Elements

### 14.3.8. Junction Pseudo States

#### a. Creating Junction Pseudo States

To create a Junction Pseudo State, use  [Junction Pseudo State] on the Tool Palette.

*<Junction Pseudo State >*



### 14.3.9. Choices Pseudo States

#### a. Creating Choices Pseudo States





To create a Choice Pseudo State, use  [Choice Pseudo State] on the Tool Palette.

*<Choice Pseudo State >*



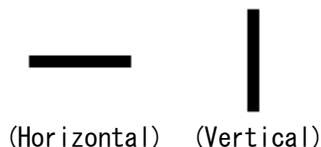
### 14.3.10. Fork Pseudo States and Join Pseudo States

#### a. Creating Fork Pseudo States and Join Pseudo States

To create a Fork Pseudo State, use  or  [Fork Pseudo State] on the Tool Palette.  
To create a Join Pseudo State, use  or  [Join Pseudo State] on the Tool Palette.

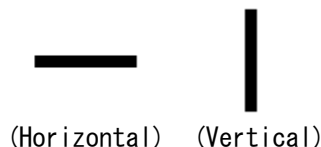
*<Fork Pseudo State>*

*<Join Pseudo State>*



(Horizontal)

(Vertical)



(Horizontal)

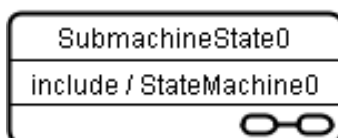
(Vertical)

### 14.3.11. Submachine States

#### a. Creating Submachine States

##### i) Using a Tool Bar

To create a Submachine State, use a  [Submachine State] on the Tool Palette.



##### ii) Drag the Submachine Diagram from the Structure Tree and drop it onto another

## 14. Diagrams and Diagram Elements

### **Submachine Diagram on the Diagram Editor**

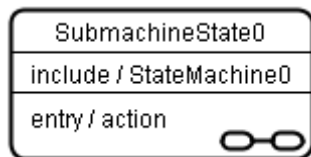
- (1) Select the Submachine diagrams on the Structure Tree.
- (2) Drag the Submachine diagrams and drop them onto another Submachine Diagram Editor.

#### **b. Editing Submachine States**

##### **(a) Adding Actions**

###### **i) Using the Pop-up Menu.**

Right-click on the target Submachine State and select [Add Action]. Then select an Action ([Entry]/[Do]/[Exit]) to add.

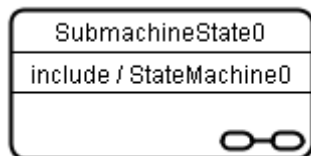


###### **ii) Using the “Property View”.**

##### **(b) Deleting Actions**

###### **i) Using the Pop-up Menu.**

Right-click on the target Action and select [Remove Action]. Then select an Action ([Entry]/[Do]/[Exit]) to delete.



###### **ii) Using the “Property View”.**

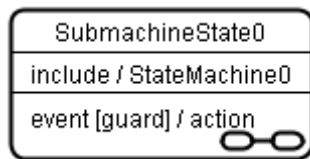
##### **(c) Adding Internal Transitions**

###### **i) Using the Pop-up Menu.**

- (1) Right-click on the target State and select [Add Internal Transition].
- (2) Double-click on the Internal Transition and enter the event, [guard], and /action names.



## 14. Diagrams and Diagram Elements



**Note)** When entering Internal Transitions, the guard conditions should be enclosed in square brackets ([ ]) and actions should be preceded with a “/”.

i.e.) event[guard]/action.

ii) Using the “Property View”.

### (d) Deleting Internal Transitions

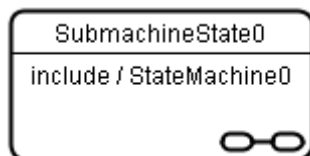
To delete Internal Transitions, use [Internal Transition] of SubmachineState property view.

### (e) Editing Submachine State Names

Double-click the Name of Submachine state in the Diagram Editor and then edit its name directly, or go to Base tab of the Submachine State in the Property View.

### (f) Action Visibility

The display/non-display settings for an Action can be selected from the Pop-up Menu.



### (g) Creating a Submachine State

Right-click on a Submachine State and select [Create Nested Diagram], or double-click on the target Submachine State. Also, use Submachine tab of Submachine State in the Property View.


### (h) Opening Statemachine Diagram

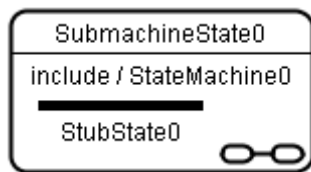
Right-click on the target Submachine State and select [Open Nested Diagram], or double-click on the target Submachine State.

## 14. Diagrams and Diagram Elements

### 14.3.12. StubStates in Submachine States

#### a. Creating StubStates

To create a StubState,  use [StubState in Submachine State] on the Tool Palette. StubStates are created inside Submachine States.



## 14. Diagrams and Diagram Elements

### 14. 4. Activity Diagrams

This section describes Activity Diagrams and the Diagram Elements that they can contain.

#### 14. 4. 1. Creating Activity Diagrams

a. Using [Diagram] - [Activity Diagram] - [New Activity Diagram] or [Template Activity Diagram] in the Main Menu.

b. Using the [Structure Tree] in the “Project View” (by right-clicking).


#### - Notes to use Template Activity Diagrams -

a. A new Activity diagram will be created based on the selected Activity diagram by [Template Activity Diagram] and it will lose both of the references of CallBehaviorActions and class information of the type of Object Node from the original Activity diagram.

b. To select a project file that contains more than one Activity Diagram, a new Activity diagram will be created based on the top Activity diagram in the project file.

#### 14. 4. 2. Diagram Elements of Activity Diagrams



Select  Mode for basic operations in the Diagram Editor.

Partition  
[Vertical]  Add Vertical Partitions.

Partition  
[Horizontal]  Add Horizontal Partitions.

Initial Node  Add Initial Nodes.


















Action  Add Action.

CallbehaviorAction  Add CallbehaviorAction.




Activity Final  Add Activity Finals.

Flow Final Node  Add Flow Final Nodes.

## 14. Diagrams and Diagram Elements

SendSignalAction		Add SendSignalActions.
AcceptEventAction		Add AcceptEventActions.
Control Flow/Object Flow		Add Control Flows/Object Flows.
Merge Node & Decision Node		Add Merge Nodes/Decision Nodes.
Fork Nodes		Add Fork Nodes.
Join Nodes		Add Join Nodes.
Object Node		Add Object Nodes.
Process		Add Processes.
Dependency		Add Dependencies.
Note		Add comments to Model Elements.
Note Anchor		Anchor Notes to related Model Elements.
Text		Insert Text in Diagrams.
Rectangle		Draw Rectangles/Rounded Rectangles on Diagrams. For example, Rectangle can be used to enclose a semantic collection of Model Elements.
Line		Draw Lines on Diagrams.
Image		Paste Images.
Lock Selected Mode		Lock the selected mode on the Tool Palette.
Set Relation End to the center of the item		Place the ends of lines (e.g. Associations, Generalizations, or Dependencies) at the center of Model Elements.

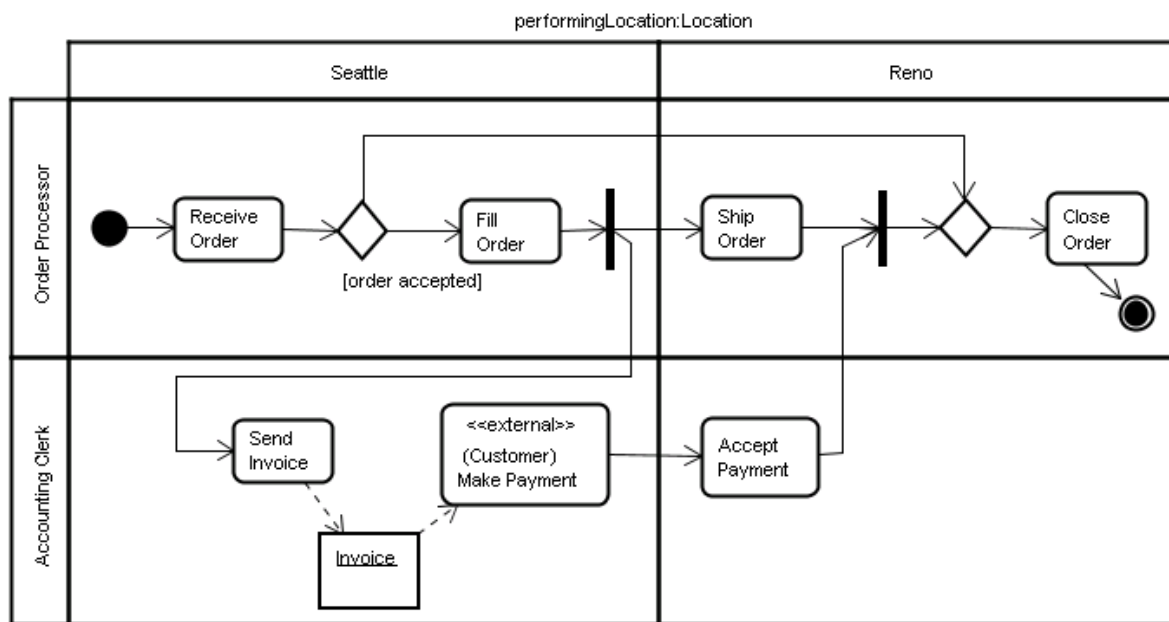
## 14. Diagrams and Diagram Elements

Line Mode		Set the Line Mode (Line, Line (Right Angle), Curve, Curve (Right Angle)) to draw lines (e.g. Association) between Model Elements.
Synchronization Bar - Independent Mode		Use this Mode to create Synchronization Bars independently from Partitions.
Depth Lock Mode		Lock the front and behind of Model Elements that are over each other's.

### 14.4.3. Partitions

#### a. Creating Partitions

To create a Partition, use  or  [Partitions] on the Tool Palette.



#### b. Editing Partitions

##### (a) Editing Partitions Names

Double-click the Name of Partition in the Diagram Editor and then edit its name directly, or go to Base tab of the Partition in the Property View.

## 14. Diagrams and Diagram Elements

### 14. 4. 4. Initial Nodes

#### a. Creating Initial Nodes

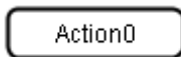
To create an Initial Node, use  [Initial Node] on the Tool Palette.



### 14. 4. 5. Action

#### a. Creating Action

To create an Action, use  [Action] on the Tool Palette.



#### b. Editing Action

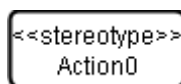
##### (a) Editing Action Names

Double-click the Name of Action in the Diagram Editor and then edit its name directly, or go to Base tab of the Action in the Property View.

To insert new lines in the Action name, press SHIFT+ENTER, ALT+ENTER, CTRL+ENTER.

##### (b) Adding Stereotypes

Right-click on the Action and select [Add Stereotype], or go to Stereotype tab in the Property View.



##### (c) Stereotype Visibility

The display/non-display settings for a Stereotype of an Action can be selected from the Pop-up Menu.

##### (d) Reference from CRUD

To open the CRUD, right-click on the target Action and select [Reference from CRUD].

##### (e) Convert to CallBehaviorAction

(1) Select a target Action to convert to CallBehaviorAction.

## 14. Diagrams and Diagram Elements

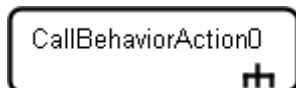
(2) Select [Convert to CallBehaviorAction] from its Pop-Up Menu.

### 14. 4. 6. CallBehaviorAction

#### a. Creating CallBehaviorAction

##### i) Using a Tool Bar

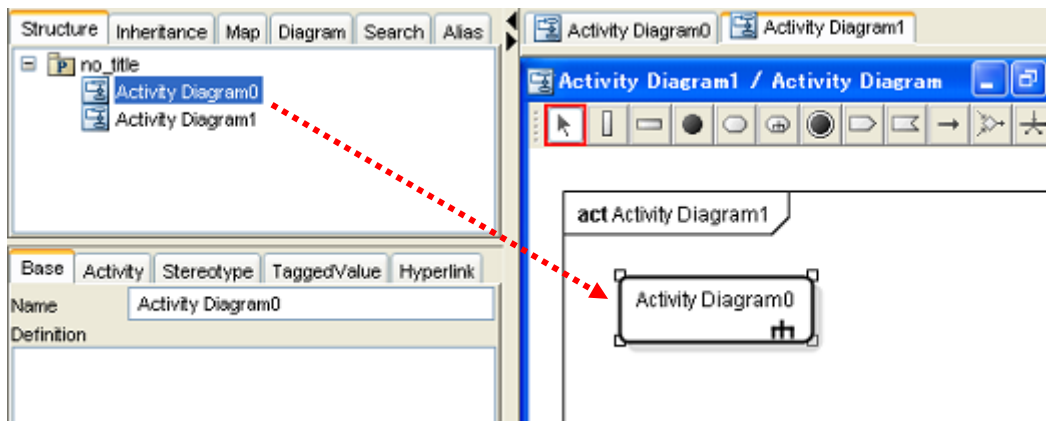
To create a CallBehaviorAction, use a  [Call Behavior Action] on the Tool Palette.



##### ii) Drag the Activity Diagram from the Structure Tree and drop it onto another Activity Diagram on the Diagram Editor

(1) Select the Activity diagrams on the Structure Tree.

(2) Drag the Activity diagrams and drop them onto another Activity Diagram Editor.



Drag the [Activity Diagram0] then drop it onto the [Activity Diagram 1] in the Diagram Editor

#### b. Editing CallBehaviorAction

##### (a) Editing CallBehaviorAction Names

Double-click the Name of CallBehaviorAction in the Diagram Editor and edit its name directly, or go to Base tab of the CallBehaviorAction in the Property View.

To insert new lines in the CallBehaviorAction name, press SHIFT+ENTER, ALT+ENTER, CTRL+ENTER.

##### (b) Adding Stereotypes

Right-click on the CallBehaviorAction and select [Add Stereotype], or go to Stereotype

## 14. Diagrams and Diagram Elements

tab in the Property View.



### (c) Stereotype Visibility

The display/non-display settings for a Stereotype of a CallBehaviorAction can be selected from the Pop-up Menu.

### (d) Reference from CRUD

To open the CRUD, right-click on the target CallBehaviorAction and select [Reference from CRUD].

### (e) Convert to Action

Select a target CallBehaviorAction and select [Convert to Action] Pop-Up Menu.

#### c. Open the nest diagram

Select a target CallBehaviorAction and select [Open Nested Diagram] Pop-Up Menu. Or, double-click the CallBehaviorAction on the Diagram Editor.

## 14. 4. 7. Activity Finals

### a. Creating Activity Finals

To create an Activity Final, use  [Activity Final] on the Tool Palette.



## 14. 4. 8. Flow Final Nodes

### a. Creating Flow Final Nodes

To create a Flow Final Node, use  [Flow Final Node] on the Tool Palette.







## 14. Diagrams and Diagram Elements

### 14. 4. 9. SendSignal Actions and AcceptEvent Actions

#### a. Creating Signals

To create a SendSignal  Action, use [SendSignalAction] on the Tool Palette.

To create a ActionEvent  Action, use [AcceptEventAction] on the Tool Palette.



#### b. Editing Signals

##### (a) Editing Signal Names

Double-click the Name of the Diagram Element in the Diagram Editor and then edit the Name, or go to Base tab of the Signal Action in the Property View.

To insert new lines in the Signal name, press SHIFT+ENTER, ALT+ENTER, CTRL+ENTER.

##### (b) Adding Stereotypes

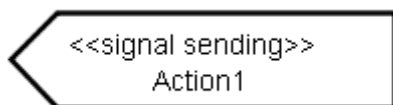
Right-click on the Action and select [Add Stereotype], or go to Stereotype tab in the Property View.

##### (c) Stereotype Visibility

The display/non-display settings for a Stereotype of an Action can be selected from the Pop-up Menu.

##### (d) Reverse Signal


Using this function, the direction of the target Signal can be reversed.

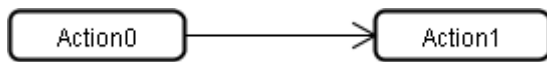


## 14. Diagrams and Diagram Elements

### 14. 4. 10. Control Flow/Object Flow

#### a. Creating Control Flows/Object Flows

To create a Control Flow/Object Flow, use  [Control Flow/Object Flow] on the Tool Palette.




#### b. Editing Control Flows/Object Flows

Actions can be set on Control Flows/Object Flows using Control Flows/Object Flows Properties.

### 14. 4. 11. Merge Nodes/Decision Nodes

#### a. Creating Merge Nodes & Decision Nodes

To create a Merge Nodes & Decision Nodes, use  [Merge Nodes & Decision Nodes] on the Tool Palette.



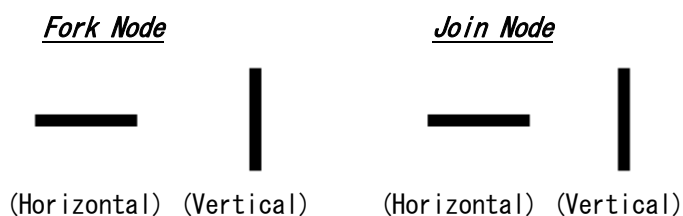
### 14. 4. 12. Fork Nodes/Join Nodes


#### a. Creating Fork Nodes/Join Nodes

To create a Fork Node, use  or  [Fork Node] on the Tool Palette.

To create a Join Node, use  or  [Join Node] on the Tool Palette.

They are also called "Synchronization Bars".



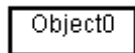
Note) To create a Synchronization Bar independently from Partitions, use [Synchronization Bar - Independent Mode]  on the Tool Palette.

## 14. Diagrams and Diagram Elements

### 14. 4. 13. Object Nodes

#### a. Creating Object Nodes

To create an Object Node, use  [Object Node] on the Tool Palette.



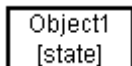
#### b. Editing Object Nodes

##### (a) Editing Object Node Names

Double-click the Name of Object in the Diagram Editor, or go to Base tab of the Object Node in the Property View.

##### (b) Adding States

Right-click on the Object Node and select [Add State], or go to Base tab of the Object Node in the Property View.



##### (c) Deleting States

Right-click on the target Object Node and select [Remove State], or go to the Base tab of the Object Node in the Property View.

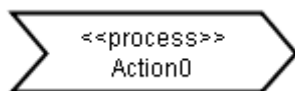
##### (d) Set Customized Icon for Object Nodes [P]

- Select Stereotype and its Classifier in Property View of the Project, and select the customized icon. -> Please see the [Customized Icons](#) for detail.
- Set the Stereotype for the Base Class of Object Node.
- Select [Set Customized Icon] from the popup menu of the Object Node.

### 14. 4. 14. Processes

#### a. Creating Processes

To create a Process, use  [Process] on the Tool Palette.



## 14. Diagrams and Diagram Elements

### b. Editing Processes

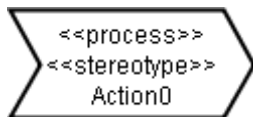
#### (a) Editing Process Names

Double-click the Name of Process in the Diagram Editor and then edit its name directly, or go to Base tab of the Process in the Property View.

To insert new lines in the Process name, press SHIFT+ENTER, ALT+ENTER, CTRL+ENTER.

#### (b) Adding Stereotypes

Right-click on the Process and select [Add Stereotype], or go to Stereotype tab in the Property View.



#### (c) Stereotype Visibility

The display/non-display settings for a Stereotype of a Process can be selected from the Pop-up Menu.

### 14. 4. 15. Connector

#### a. Creating Connectors

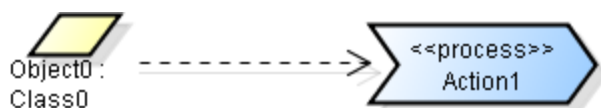
To create a Connector, use  [Connector] on the Tool Palette.



### 14. 4. 16. Dependencies

#### a. Creating Dependencies

To create a Process, use  [Dependency] on the Tool Palette.



## 14. Diagrams and Diagram Elements

### 14.5. Sequence Diagrams













This section describes Sequence Diagrams and the Diagram Elements that they can contain.

#### 14.5.1. Creating Sequence Diagrams










- i) Using [Diagram]-[Sequence Diagram] in the Main Menu
- ii) Using the [Structure Tree] in the “Project View” (by right-clicking)

#### 14.5.2. Diagram Elements of Sequence Diagrams



Select		Mode for basic operations in the Diagram Editor.
Lifeline		Add Lifelines/Actors/Entities/Boundaries/Controls.
Message		Add Synchronous Messages.
Asynchronous Message		Add Asynchronous Messages.
Create Message		Add “Create” Messages.
Destroy Message		Add “Destroy” Messages.
Reply Message		Add “Reply” Messages.
Stop		Add Stops.
Combined Fragment		Add Combined Fragments.
Interaction Use		Add Interaction Uses.
State Invariant		Add State Invariants.
Note		Add comments to Model Elements.

## 14. Diagrams and Diagram Elements

Note Anchor		Anchor Notes to related Model Elements.
Text		Insert Text in Diagrams.
Rectangle		Draw Rectangles/Rounded Rectangles on Diagrams. For example, Rectangle can be used to enclose a semantic collection of Model Elements.
Line		Draw Lines on Diagrams.
Image		Paste Images.
Lock Selected Mode		Lock the selected mode on the Tool Palette.
Line Mode		Set the Line Mode (Line, Line (Right Angle), Curve, Curve (Right Angle)) to draw lines (e.g. Association) between Model Elements.
Reply Message Automatic Mode		Create a Reply message for each message automatically.
Depth Lock Mode		Lock the front and behind of Model Elements that are over each others.

### 14.5.3. Lifelines

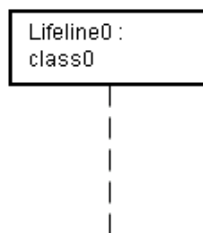
#### a. Creating Lifelines

##### i) Using [Lifeline] on the Tool Palette.

Lifeline/Actor/Entity/Boundary/Control can be created.

##### ii) Using the [Structure Tree] in the “Project View”

Drag the target Class in the Structure Tree and drop it onto a Diagram. A Lifeline is created which has the target Class Model as its Base Class.



**Ex : Inputting the Base class directly in the Diagram Editor**

## 14. Diagrams and Diagram Elements

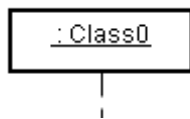
Type the base class in Lifeline in Sequence Diagram directly. If the typed Class does not exist in the Project file, a new class will be created.

### b. Editing Lifelines

#### (a) Notation of Lifelines

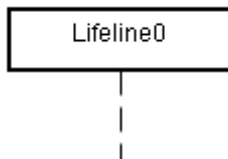
##### i) Name Visibility

The display/non-display settings for a Lifeline Name can be selected from the Pop-up Menu.



##### ii) Class Name Visibility

The display/non-display settings for a Class Name can be selected from the Pop-up Menu [Class Name Visibility].



##### iii) Adjust Lifeline Length

To adjust the Lifeline Length, use the Pop-up Menu [Adjust Lifeline Length].

For the plural Pop-up Menu and the Sequence diagram Pop-up Menu, use [Adjust Lifeline Length] – [Default]/[Align to Minimum]/[Align to Maximum].


##### iv) Adjust Execution Specification Length

To adjust the Execution Specification Length, use the Pop-up Menu [Adjust Execution Specification Length].


For the plural Pop-up Menu and the Sequence diagram Pop-up Menu, use [Adjust Execution Specification Length].

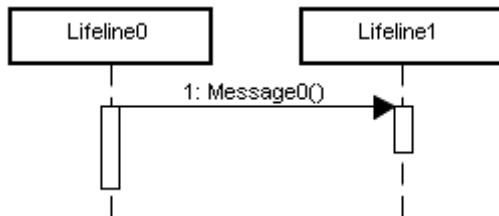
## 14.5.4. Synchronous Messages

### a. Creating Synchronous Messages

To create a Synchronous Message, use  [Message] on the Tool Palette.

## 14. Diagrams and Diagram Elements

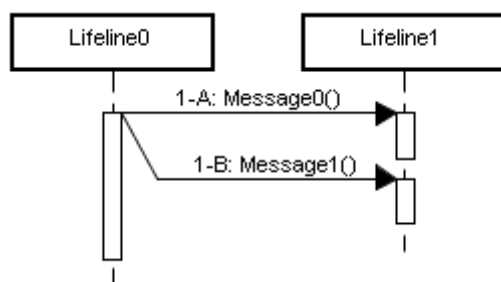
- (1) Select  [Message] on the Tool Palette.
- (2) Click the Lifeline that sends the Message.
- (3) Click the Lifeline that receives the Message.



### b. Editing Synchronous Messages

#### (a) Creating Branch Messages

- (1) Right-click on the target Message and select [Branch Message].
- (2) Click the Lifeline that receives the Message (similar to creating Messages).



#### (b) Editing Synchronous Message Names

Double-click the Name of Message in the Diagram Editor and then edit its name directly, or go to Base tab of the Synchronous Message in the Property View.

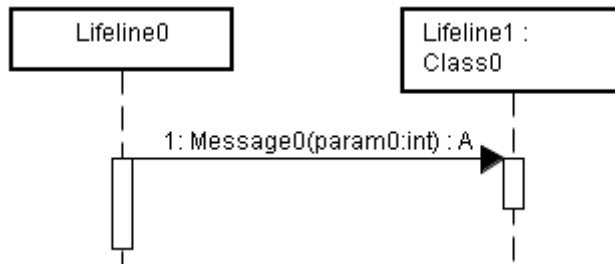
#### (c) Message Parameter / Message Parameter Type / Message Parameter Direction Kind

##### / Return Value Variable / Return Value Visibility

The display/non-display settings for Message Parameters can be selected from the Pop-up Menu. These settings can be selected: [Message Parameter Visibility], [Message Parameter Type Visibility], [Message Parameter Direction Kind Visibility], [Message Return Value Variable Visibility] and [Message Return Value Visibility].



## 14. Diagrams and Diagram Elements



### (d) Adding Stereotypes

Right-click on the target Message and select [Add Stereotype], or go to Stereotype tab in the Property View.

### (e) Stereotype Visibility

The display/non-display settings for a Stereotype can be selected from the Pop-up Menu.

### (f) Adding Constraints

Right-click on the target Message and select [Add Constraint], or go to Constraint tab in the Property View.

### (g) Constraint Visibility


The display/non-display settings for a Constraint can be selected from the Pop-up Menu.

### (h) Moving Message

To move Message, drag an Execution Specification of the Message to the lifeline of another Lifeline. (This can be done with restrictions.)

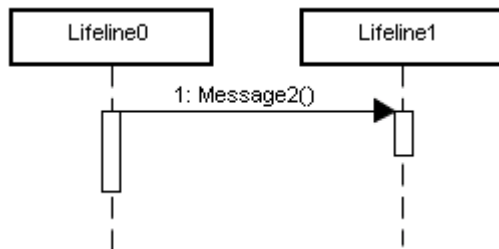
## 14.5.5. Asynchronous Messages

### a. Creating Asynchronous Messages

To create an Asynchronous Message,  use [Asynchronous Message] on the Tool Palette.

- (1) Select [Asynchronous Message] on the Tool Palette.
- (2) Click the Lifeline that sends the Message.
- (3) Click the Lifeline that receives the Message.

## 14. Diagrams and Diagram Elements



### b. Editing Asynchronous Messages

#### (a) Creating Branch Messages

Branch Messages can be created in the same way as Synchronous Messages as described in the [Sequence Diagram - Synchronous Messages](#) section.

#### (b) Editing Asynchronous Message Names

Double-click the Name of the Diagram Element in the Diagram Editor and then edit the Name, or go to Base tab of the Asynchronous Message in the Property View.

#### (c) Message Parameter / Message Parameter Type / Return Value Variable / Return

##### Value Visibility

Please refer to the [Sequence Diagram - Synchronous Message](#) section.

#### (d) Adding Stereotypes

Right-click on the target Asynchronous Message and select [Add Stereotype], or go to Stereotype tab in the Property View.

#### (e) Stereotype Visibility

The display/non-display settings for a Stereotype can be selected from the Pop-up Menu.

#### (f) Adding Constraints

Right-click on the target Asynchronous Message and select [Add Constraint], or go to Constraint tab in the Property View.



## 14. Diagrams and Diagram Elements



### (g) Constraint Visibility

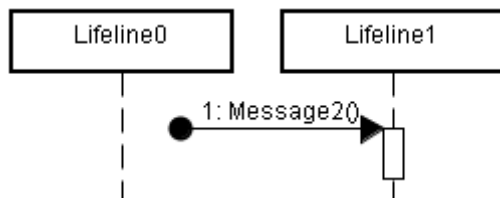
The display/non-display settings for a Constraint can be selected from the Pop-up Menu.

#### 14.5.6. Found Messages

##### a. Creating Found Messages



To create a Found Message, use  [Message] or  [Asynchronous Message] on the Tool Palette.



- (1) Select  [Message] or  [Asynchronous Message] on the Tool Palette.
- (2) Click on the Diagram Editor except the Lifeline.
- (3) Click the Lifeline that receives the Message.

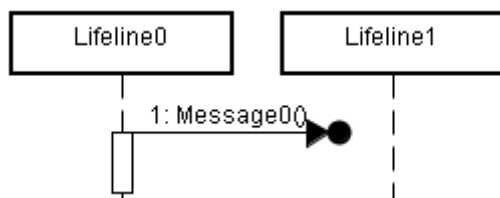


#### 14.5.7. Lost Messages

##### a. Creating Lost Messages



To create a Lost Message, use  [Message]  or [Asynchronous Message] on the Tool Palette.

- (1) Select  [Message] or  [Asynchronous Message] on the Tool Palette.
- (2) Click the Lifeline that sends the Message.
- (3) Click on the Diagram Editor except the Lifeline.





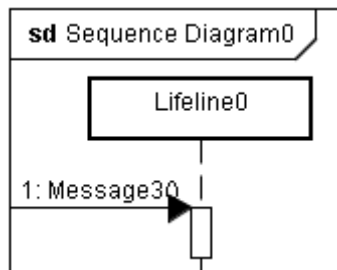
#### 14.5.8. Gate

##### a. Creating Gate

To create a Gate, use  [Message] or  [Asynchronous Message] on the Tool Palette.

## 14. Diagrams and Diagram Elements

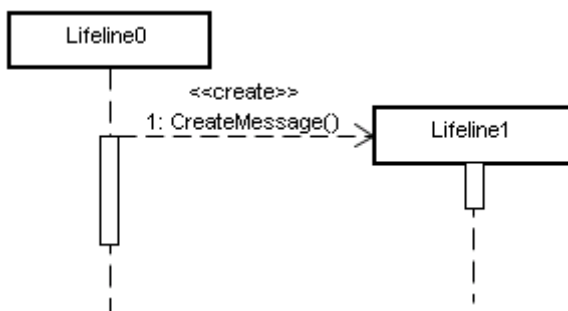
- (1) Select  [Message] or  [Asynchronous Message] on the tool Palette.
- (2) Click the Frame that sends the Message.
- (3) Click the Lifeline that receives the Message.



### 14.5.9. "Create" Messages

#### Creating "Create" Messages

To create a "Create" Message, use  [Create Message] on the Tool Palette.



#### b. Editing "Create" Messages

##### (a) Creating Branch Messages

Branch Messages can be created in the same way as Synchronous Messages as described in the [Sequence Diagram - Synchronous Messages](#) section.

##### (b) Editing "Create" Message Names

Double-click the Name of the Diagram Element in the Diagram Editor and then edit the Name, or go to Base tab of the Create Message in the Property View.

##### (c) Message Parameter / Message Parameter Type / Return Value Variable / Return

##### Value Visibility

Please refer to the [Sequence Diagram - Synchronous Message](#) section.

## 14. Diagrams and Diagram Elements

### (d) Adding Stereotypes

Right-click on the target “Create” Message and select [Add Stereotype], or go to Stereotype tab in the Property View.

### (e) Stereotype Visibility

The display/non-display settings for a Stereotype can be selected from the Pop-up Menu.

### (f) Adding Constraints

Right-click on the target “Create” Message and select [Add Constraint], or go to Constraint tab in the Property View.

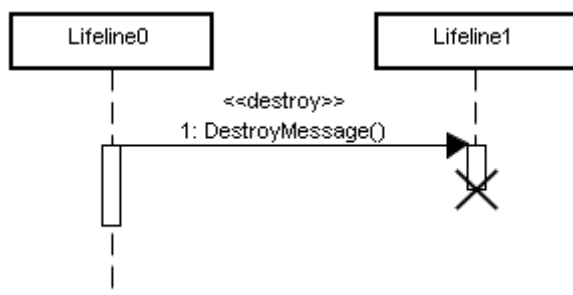
### (g) Constraint Visibility

The display/non-display settings for a Constraint can be selected from the Pop-up Menu.

## 14.5.10. “Destroy” Messages

### a. Creating “Destroy” Messages

To create a “Destroy” Message, use  [Destroy Message] on the Tool Palette.



### b. Editing “Destroy” Messages

#### (a) Creating Branch Messages

Branch Messages can be created in the same way as Synchronous Messages as described in the [Sequence Diagram - Synchronous Messages](#) section.

#### (b) Editing “Destroy” Message Names

Double-click the Name of the Diagram Element in the Diagram Editor and then edit the

## 14. Diagrams and Diagram Elements

Name, or go to Base tab of the Destroy Message in the Property View.

### **(c) Message Parameter / Message Parameter Type / Return Value Variable / Return Value Visibility**

Please refer to the [Sequence Diagram - Synchronous Message](#) section for more details.

### **(d) Adding Stereotypes**

Right-click on the target “Destroy” Message and select [Add Stereotype], or go to Stereotype tab in the Property View.

### **(e) Stereotype Visibility**

The display/non-display settings for a Stereotype can be selected from the Pop-up Menu.

### **(f) Adding Constraints**

Right-click on the target “Create” Message and select [Add Constraint], or go to Constraint tab in the Property View.

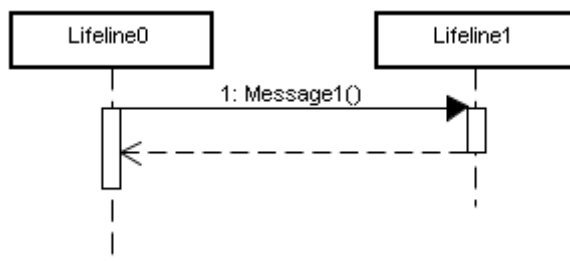
### **(g) Constraint Visibility**

The display/non-display settings for a Constraint can be selected from the Pop-up Menu.

## **14.5.11. “Reply” Messages**

### **a. Creating “Reply” Messages**

Click  [Reply Message] on the Tool Palette and select the Execution Specification that sends the “Reply” Message.



## 14. Diagrams and Diagram Elements

Or, use  [Reply Message Automatic Mode] on the Tool Bar.

### **b. Editing “Reply” Messages**

#### **(a) Adding Stereotypes**

Right-click on the target “Reply” Message and select [Add Stereotype], or go to Stereotype tab in the Property View.

#### **(b) Stereotype Visibility**

The display/non-display settings for a Stereotype can be selected from the Pop-up Menu.

#### **(c) Adding Constraints**


Right-click on the target “Reply” Message and select [Add Constraint], or go to Constraint tab in the Property View.

#### **(d) Constraint Visibility**

The display/non-display settings for a Constraint can be selected from the Pop-up Menu.

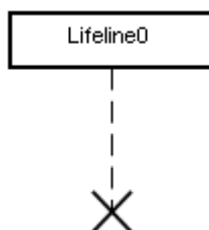
## **14.5.12. Stop**

### **a. Creating Terminations**

To create a Stop, use [Stop]  on the Tool Palette.

(1) Select  [Stop] on the Tool Palette.

(2) Click the target Lifeline.



## 14. Diagrams and Diagram Elements

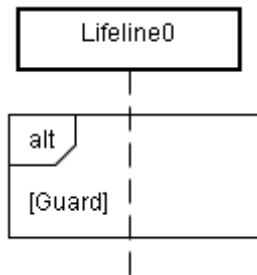
### 14.5.13. Combined Fragment

#### a. Creating Combined Fragments

To create a Combined Fragment, use  [Combined Fragment] on the Tool Palette.

(1) Select  [Combined Fragment] on the Tool Palette.

(2) Click on the Diagram Editor near the Lifeline.



#### b. Editing Combined Fragments

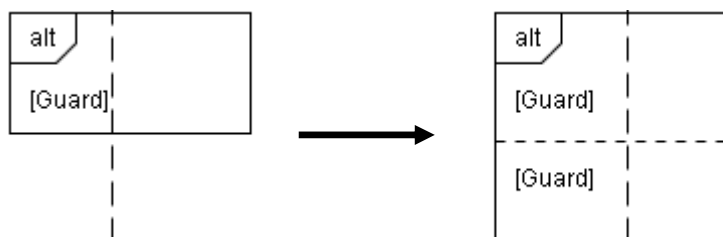
##### (a) Editing Combined Fragment Names

Double-click on the top left corner of the Combined Fragment then type the name directly, or go to Base tab of Combined Fragment in the Property View.

##### (b) Adding Operands

(a) Click the target Combined Fragment and select [Add Operand] Pop-Up Menu.

(b) Double-click on the inserted [Guard].



Or, go to Operand tab of Combined Fragment in the Property View.

### 14.5.14. Interaction Use

#### a. Creating Interaction Uses

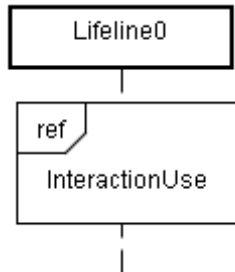
To create an Interaction Use, use  [Interaction Use] on the Tool Palette.



## 14. Diagrams and Diagram Elements

(1) Select  [Interaction Use] on the Tool Palette.

(2) Click on the Diagram Editor near the Lifeline.



### b. Editing Interaction Uses

#### (a) Editing Interaction Use Names

Double-click the Name of Interaction Use in the Diagram Editor and then edit its name directly, or go to the property view of Interaction Use.

### c. Creating a Interaction Use


Right-click on an Interaction Use and select [Create Sequence Diagram], or double-click on the target Interaction Use. Also, use base tab of Interaction Use in the Property View.


### d. Opening Sequence Diagram

Right-click on the target Interaction Use and select [Open Nested Diagram], or double-click on the target Interaction Use.

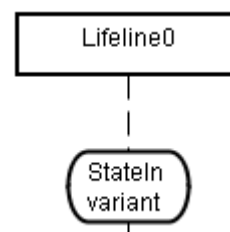
## 14.5.15. State Invariant

### a. Creating State Invariants

To create a State Invariant, use  [State Invariant] on the Tool Palette.

(1) Select  [State Invariant] on the Tool Palette.

(2) Click the target Lifeline.



## 14. Diagrams and Diagram Elements

### **b. Editing State Invariants**

#### **(a) Editing State Invariant Names**

Double-click the Name of State Invariant in the Diagram Editor and then edit its name directly, or go to the property view of State Invariant.

## 14. Diagrams and Diagram Elements

### 14. 6. Communication Diagrams













This section describes Communication Diagrams and the Diagram Elements that they can contain.

#### 14. 6. 1. Creating Communication Diagrams


- i) Using [Diagram]-[Communication Diagram] in the Main Menu.
- ii) Using the [Structure Tree] in the “Project View” (by right-clicking).

#### 14. 6. 2. Diagram Elements of Communication Diagrams



Select		Mode for basic operations in the Diagram Editor.
Lifeline		Add Lifelines/Actors/Entities/Boundaries/Controls.
Link		Add Links.
Message		Add Synchronous Messages.
Note		Add comments to Model Elements.
Note Anchor		Anchor Notes to related Model Elements.
Text		Insert Text in Diagrams.
Rectangle		Draw Rectangles/Rounded Rectangles on Diagrams. For example, Rectangle can be used to enclose a semantic collection of Model Elements.
Line		Draw Lines on Diagrams.
Image		Paste Images.
Lock Selected Mode		Lock the selected mode on the Tool Palette.
Line Mode		Set the Line Mode (Line, Line (Right Angle), Curve, Curve (Right Angle)) to draw lines (e.g. Association) between

## 14. Diagrams and Diagram Elements

Depth Lock Mode		Model Elements. Lock the front and behind of Model Elements that are over each others.
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### 14. 6. 3. Lifelines

#### a. Creating Lifelines

i) Using  [Lifeline] on the Tool Palette.

Lifeline/Actor/Entity/Boundary/Control can be created.

ii) **By dragging and dropping from the [Structure Tree] onto a Diagram**

Drag a Class Model from the [Structure Tree] in the Project View and drop it onto a diagram.

A new Lifeline is created using the Class Model as its Base Class. The base class can be input and modified directly in the Diagram Editor.

Lifeline0 : Class0

#### b. Editing Lifelines

##### (a) Notation of Lifelines

###### i) Name Visibility

The display/non-display settings for a Lifeline Name can be selected from the Pop-up Menu.

: Class0


###### ii) Class Name Visibility

The display/non-display settings for the Base Class Name of Lifeline can be selected from the Pop-up Menu.

Lifeline0

### 14. 6. 4. Links

#### a. Creating Links

To create a Link,  use [Link] on the Tool Palette.


Lifeline0 : Class0 — Lifeline1 : Class1

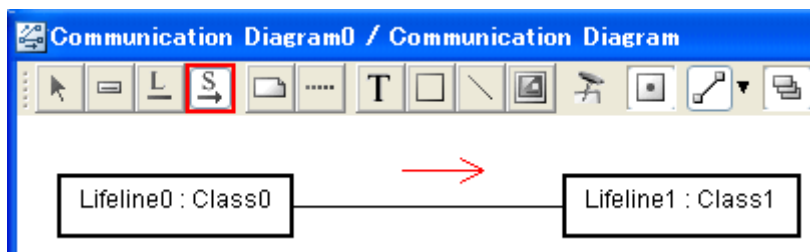
## 14. Diagrams and Diagram Elements

### 14.6.5. Messages

#### a. Creating Messages

To create a Message, use  [Message] on the Tool Palette.

- (1) Select  [Message] on the Tool Palette.
- (2) Click on the Link between the Lifelines that send and receive the Message.
- (3) Move the mouse pointer to the Lifeline that receives the Message.  
-> A red arrow is displayed above or below the Link.
- (4) Confirm that the direction of the arrow matches the direction of the Message and then click.



#### b. Editing Messages

##### (a) Editing Message Names

Double-click the Name of the Message in the Diagram Editor and then edit its name directly, or go to Base tab of the Message in the Property View.

##### (b) Message Parameter / Message Parameter Type / Message Parameter Kind Direction / Return Value Variable / Return Value Visibility

The display/non-display settings for Message can be selected from the Pop-up Menu. These settings can be selected: [Message Parameter Visibility], [Message Parameter Type Visibility], [Message Parameter Kind Direction], [Message Return Value Variable Visibility] and [Message Return Value Visibility].



## 14. Diagrams and Diagram Elements

### 14. 7. Component Diagrams













This section describes Component Diagrams and the Diagram Elements that they can contain.

#### 14. 7. 1. Creating Component Diagrams















- i) Using [Diagram]-[Component Diagram] in the Main Menu.
- ii) Using the [Structure Tree] in the “Project View” (by right-clicking).

#### 14. 7. 2. Diagram Elements of Component Diagrams



Select		Mode for basic operations in the Diagram Editor.
Component		Add Components.
Part		Add Parts.
External Part		Add External Parts.
Connector		Add Connectors
Port		Add Ports.
Interface		Add Interfaces with icon notation.
Interface (Normal)		Add Interface with normal notation.
Provided Interface		Add Provided Interfaces.
Required Interface		Add Required Interfaces.
Dependency		Add Dependencies.
Realization		Add Realizations.

## 14. Diagrams and Diagram Elements

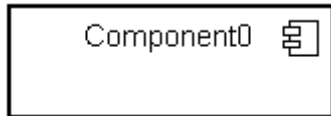
Usage		Add Usages.
Classifier		Add Classifiers.
Artifact		Add Artifacts.
Nest		Add Nests.
Note		Add comments to Model Elements.
Note Anchor		Anchor Notes to related Model Elements.
Text		Insert Text in Diagrams.
Rectangle		Draw Rectangles/Rounded Rectangles on Diagrams. For example, Rectangle can be used to enclose a semantic collection of Model Elements.
Line		Draw Lines on Diagrams.
Image		Paste Images.
Lock Selected Mode		Lock the selected mode on the Tool Palette.
Set Relation End to the center of the item		Place the ends of lines (e.g. Associations, Generalizations, or Dependencies) at the center of Model Elements.
Line Mode		Set the Line Mode (Line, Line (Right Angle), Curve, Curve (Right Angle)) to draw lines (e.g. Association) between Model Elements.
Depth Lock Mode		Lock the front and behind of Model Elements that are over each others.

## 14. Diagrams and Diagram Elements

### 14.7.3. Components

#### a. Creating Components

To create a Component, use  [Component] on the Tool Palette.



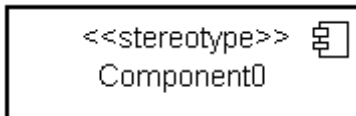
#### b. Editing Components

##### (a) Editing Component Names

Double-click the Name of the Component in the Diagram Editor and then edit its name directly, or go to Base tab of the Component in the Property View.

##### (b) Adding Stereotypes

Right-click on the Component and select [Add Stereotype], or go to Stereotype tab in the Property View.



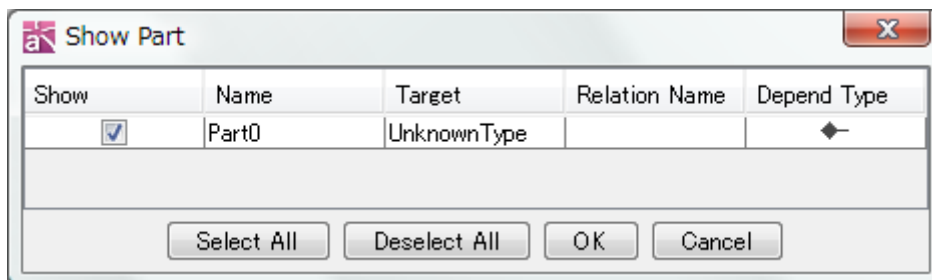
##### (c) Stereotype Visibility

The display/non-display settings for a Stereotype of a Component can be selected from the Pop-up Menu.

##### (d) Show Part

The display/non-display settings for each Parts of Components can be selected from the Pop-up Menu.

- 1) Right-click on the Component and select [Show Part].
- 2) Check in the box of Parts and press [OK].



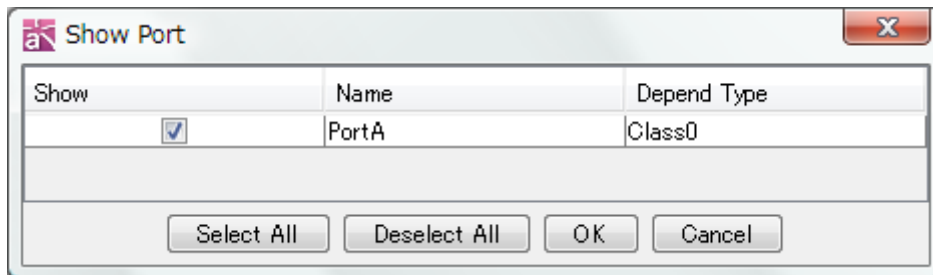


## 14. Diagrams and Diagram Elements

### (e) Show Port

The display/non-display settings for each Ports of Component can be selected from the Pop-up Menu.

- 1) Right-click on the Component and select [Show Port].
- 2) Check in the box of Ports to display then press [OK].

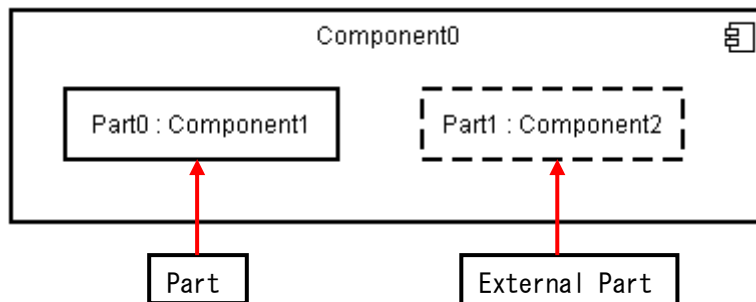


### 14.7.4. Part/External Part

#### a. Creating Part/External Part

To create a Part, use  [Part] on the Tool Palette.

To create an External Part, use  [External Part] on the Tool Palette.



#### b. Editing Parts/External Parts

##### (a) Editing Parts/External Parts Names

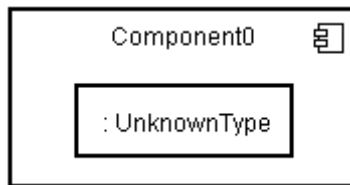
Double-click the name of the Part in the Diagram Editor and then edit its Name, or go to Base tab of the Part/External Part in the Property View.

##### (b) Notation of Parts/External Parts

###### i) Name Visibility

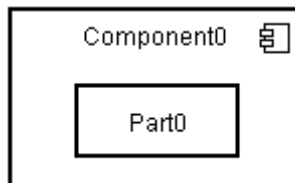
The display/non-display settings for a Part/External Part Name can be selected from the Pop-up Menu [Name Visibility].

## 14. Diagrams and Diagram Elements



### ii) Type Visibility

The display/non-display settings for a Type can be selected from the Pop-up Menu [Type Visibility].

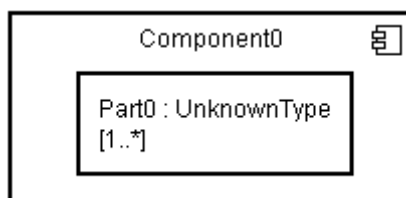


### iii) Auto Resize function

When Auto Resize is selected, the width of a Part/External Part in a diagram is automatically increased or decreased according to the length of the Part/External Part Name.

### (c) Set Multiplicity

- (1) Right-click on the Part/External Part and select [Multiplicity].
- (2) Select [1], [0..1], [0..\*], [1..\*], or [Unspecified].



Or, go to Association End tab in the Property View.

## 14. 7. 5. Connector

### a. Creating Connectors

To create a Connector, use  [Connector] on the Tool Palette.

### b. Editing Connectors

#### (a) Editing Connector Names

Right-click on the Connector and select [Set Name], or go to Connector Base tab in the

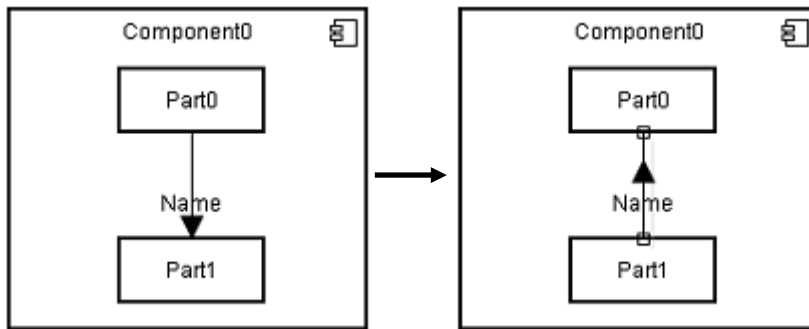
## 14. Diagrams and Diagram Elements

Project View.

### (b) Reverse Direction

(1) Right-click on the Connector and select [Name Direction] - [Reverse Direction].

To display the direction of Connector, the connector name needs to be set.



### (c) Constraint Visibility

The display/non-display settings for a Constraint can be selected from the Pop-up Menu.

### (d) Multiplicity Visibility

The display/non-display settings for a Multiplicity can be selected from the Pop-up Menu.

### (e) Role Name Visibility

The display/non-display settings for a Role Name can be selected from the Pop-up Menu.

### (f) Name Visibility

The display/non-display settings for Connector Name can be selected from the Pop-up Menu.

### (g) Line Style

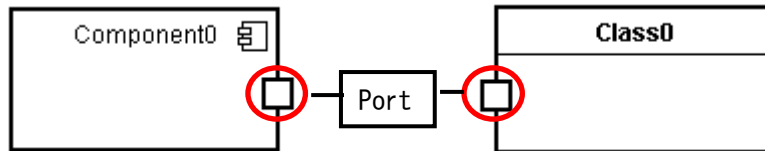
The Lines that connect Diagram Elements can have one of 4 Styles: "Line" or "Line (Right Angle)", "Curve", "Curve (Right Angle)".

## 14. Diagrams and Diagram Elements

### 14.7.6. Port

#### a. Creating Ports

To create a Port, use  [Port] on the Tool Palette.



#### b. Editing Ports

##### (a) Editing Port Names

Right-click on the Port and select [Set Name], or go to Base tab of the Port in the Property View.

##### (b) Set the Multiplicity

(1) Right-click on the Port and select [Multiplicity].

(2) Select [1], [0..1], [0..\*], [\*, [1..\*], or [Unspecified].

Or, go to Association End tab in the Property View.

##### (c) Add Required Interfaces, Provided Interfaces

Right-click on the Port and select [Add Required Interfaces], [Provided Interfaces].

Or, go to Required Interface or Provided Interface tab of the Port in the Property View.

##### (e) Name Visibility

The display/non-display settings for Port Name can be selected from the Pop-up Menu.

##### (f) Type Visibility

The display/non-display settings for a Type can be selected from the Pop-up Menu.

##### (g) Multiplicity Visibility

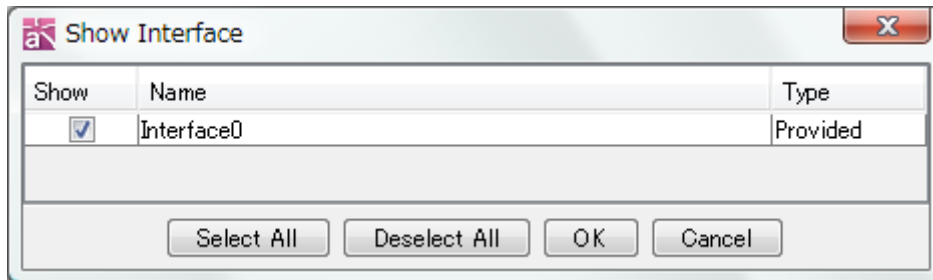
The display/non-display settings for a Multiplicity can be selected from the Pop-up Menu.

## 14. Diagrams and Diagram Elements

### (h) Show Interface

The display/non-display settings for each Interfaces can be selected from the Pop-up Menu.

- 1) Right-click on the target Port and select [Show Interface].
- 2) Check in the box of Interfaces and press [OK].



### 14. 7. 7. Interface/Required Interface/Provided Interface

-> Please refer to the [Interface/Required Interface/Provided Interface of Class Diagram](#).

### 14. 7. 8. Dependency

-> Please refer to the [Dependency of Class Diagram](#).

### 14. 7. 9. Realization

-> Please refer to the [Realization of Class Diagram](#).

### 14. 7. 10. Usage

-> Please refer to the [Usage of Class Diagram](#).

### 14. 7. 11. Classifiers

#### a. Creating Classifiers

To create a Classifier, use  [Classifier] on the Tool Palette.

**Classifier0**

#### b. Editing Classifiers

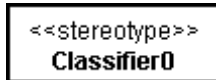
##### (a) Editing Classifier Names

Double-click the name of Classifier in the Diagram Editor and then edit its name directly, or go to Base tab of the Classifier in the Property View.

## 14. Diagrams and Diagram Elements

### (b) Adding Stereotypes

Right-click on the Classifier and select [Add Stereotype], or go to Stereotype tab of Classifier's in the Property View.



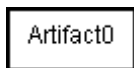
### (c) Stereotypes visibility

The display/non-display settings for a Stereotype can be selected from the Pop-up Menu.

## 14. 7. 12. Artifacts

### a. Creating Artifacts

To create an Artifact, use  [Artifact] on the Tool Palette.



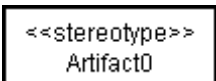
### b. Editing Artifacts

#### (a) Editing Artifact Names

Double-click the Name of the Artifact in the Diagram Editor and then edit its name directly, or go to Base tab of the Artifact in the Property View.

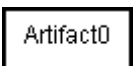
### (b) Adding Stereotypes

Right-click on the target Artifact and select [Add Stereotype], or go to Stereotype tab in the Property View.



### (c) Stereotype Visibility

The display/non-display settings for a Stereotype of an Artifact can be selected from the Pop-up Menu.



## 14. Diagrams and Diagram Elements

### 14. 8. Deployment Diagrams

This section describes Deployment Diagrams and the Diagram Elements that they can contain.

#### 14. 8. 1. Creating Deployment Diagrams

















- i) Using [Diagram]-[Deployment Diagram] in the Main Menu.
- ii) Using the [Structure Tree] in the “Project View” (by right-clicking).

#### 14. 8. 2. Diagram Elements of Deployment Diagrams



Select		Mode for basic operations in the Diagram Editor.
Node		Add Nodes.
NodeInstance		Add NodeInstances.
Component		Add Components.
ComponentInstance		Add ComponentInstances.
Association		Add Associations. (Unspecified Association to Unspecified Association)
Association		Add Associations. (Unspecified Association to Navigable Association)
Association		Add Associations. (Non-Navigable Association to Navigable Association)
Association		Add Associations. (Navigable to Navigable Association)
Aggregation		Add Aggregations. (Aggregation to Unspecified Association)
Aggregation		Add Aggregations. (Aggregation to Navigable Association)
Compositions		Add Compositions. (Composites to Unspecified Association)

## 14. Diagrams and Diagram Elements

Compositions		Add Compositions. (Compositions to Navigable Association)
Realization		Add Realizations.
Interface		Add Interfaces with icon notation.
Interface (Normal)		Add Interface with normal notation.
Dependency		Add Dependencies.
Instance Specification		Add Instance Specifications/Entities/Boundaries/Controls.
Link		Add Links.
Note		Add comments to Model Elements.
Note Anchor		Anchor Notes related Model Elements.
Text		Insert Text in Diagrams.
Rectangle		Draw Rectangles in Diagrams. For example, Rectangle can be used to enclose a semantic collection of Model Elements.
Line		Draw Lines on Diagrams.
Image		Paste Images.
Paste Images.		Lock the selected mode on the Tool Palette.
Set Relation End to the center of the item		Place the ends of lines (e.g. Associations, Generalizations, or Dependencies) at the center of Model Elements.
Line Mode		Set the Line Mode (Line, Line (Right Angle), Curve, Curve (Right Angle)) to draw lines (e.g. Association) between Model Elements.



## 14. Diagrams and Diagram Elements

Depth Lock Mode

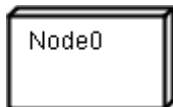


Lock the front and behind of Model Elements that are over each others.

### 14.8.3. Nodes

#### a. Creating Nodes

To create a Node, use  [Node] on the Tool Palette.



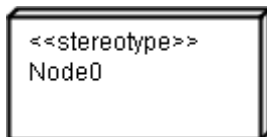
#### b. Editing Nodes

##### (a) Editing Node Names

Double-click the Name of the Node in the Diagram Editor and then edit its name directly, or go to Base tab of the Node in the Property View.

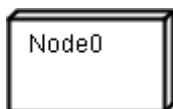
##### (b) Add Stereotypes

Right-click on the target Node and select [Add Stereotype], or go to Stereotype tab in the Property View.



##### (c) Stereotype Visibility

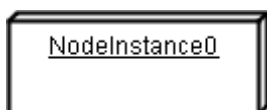
The display/non-display settings for a Stereotype of a Node can be selected from the Pop-up Menu.



### 14.8.4. NodeInstances

#### a. Creating NodeInstances

To create NodeInstances, use  [NodeInstance] on the Tool Palette.



## 14. Diagrams and Diagram Elements

### **b. Editing NodeInstances**

#### **(a) Editing NodeInstance Names**

Double-click the Name of NodeInstance in the Diagram Editor and then edit its name directly, or go to Base tab of the NodeInstance in the Property View.

#### **(b) Name/Node Type Visibility**

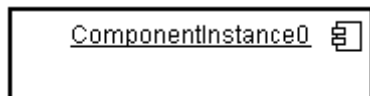
The display/non-display settings for a Node Name and a Node Type can be selected from the Pop-up Menu using [Name Visibility] and [Node Type Visibility].



### **14. 8. 5. ComponentInstances**

#### **a. Creating ComponentInstances**

To create a ComponentInstance, use  [ComponentInstance] on the Tool Palette.



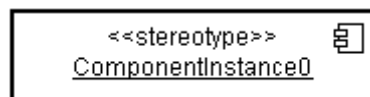
#### **b. Editing ComponentInstances**

##### **(a) Editing ComponentInstance Names**

Double-click the name of the ComponentInstance in the Diagram Editor and then edit its name directly, or go to Base tab of the ComponentInstance in the Property View.

##### **(b) Add Stereotypes**

Right-click on the target ComponentInstance and select [Add Stereotype], or go to Stereotype tab in the Property View.



##### **(c) Stereotype Visibility**

The display/non-display settings for a Stereotype of a ComponentInstance can be selected from the Pop-up Menu.

## 14. Diagrams and Diagram Elements

### **(d) Name/Component Visibility**

The display/non-display settings for a ComponentInstance Name and a ComponentInstance Type can be selected from the Pop-up Menu using [Name Visibility] and [Component Visibility].

## 14. Diagrams and Diagram Elements

### 14.9. Composite Structure Diagrams













This section describes Composite Structure Diagrams and the Diagram Elements that they can contain.

#### 14.9.1. Creating Composite Structure Diagrams

















- i) Using [Diagram]-[Composite Structure Diagram] in the Main Menu.
- ii) Using the [Structure Tree] in the “Project View” (by right-clicking).

#### 14.9.2. Diagram Elements of Composite Structure Diagrams








Select		Mode for basic operations in the Diagram Editor.
Structured Class		Add Structured Classes.
Class		Add Classes.
Part		Add Parts.
External Part		Add External Parts.
Connector		Add Connectors
Port		Add Ports.
Interface		Add Interfaces with icon notation.
Interface (Normal)		Add Interface with normal notation.
Provided Interface		Add Provided Interfaces.
Required Interface		Add Required Interfaces.
Association		Add Associations. (Unspecified Association to Unspecified Association)

## 14. Diagrams and Diagram Elements

Association		Add Associations. (Unspecified Association to Navigable Association)
Association		Add Associations. (Non Navigable Association to Navigable Association)
Association		Add Associations. (Navigable Association to Navigable Association)
Aggregation		Add Aggregations. (Aggregation to Unspecified Association)
Aggregation		Add Aggregations. (Aggregation to Navigable Association)
Composition		Add Compositions. (Composition to Unspecified Association)
Composition		Add Compositions. (Composition to Navigable Association)
Generalization		Add Generalizations.
Dependency		Add Dependencies.
Realization		Add Realizations.
Usage Dependency		Add Usage Dependencies.
Nest		Add Nests.
Note		Add comments to Model Elements.
Note Anchor		Anchor Notes to Model Elements.
Text		Insert Text in Diagrams.
Rectangle		Draw Rectangles/Rounded Rectangles on Diagrams. For example, Rectangle can be used to enclose a semantic collection of Model Elements.
Line		Draw Lines on Diagrams.

## 14. Diagrams and Diagram Elements

Image		Paste Images.
Lock Selected Mode		Lock the selected mode on the Tool Palette.
Set Relation End to the center of the item		Place the ends of lines (e.g. Association) at the center of Model Elements.
Line Mode		Set the Line Mode (Line, Line (Right Angle), Curve, Curve (Right Angle)) to draw lines (e.g. Association) between Model Elements.
Depth Lock Mode		Lock the front and behind of Model Elements that are over each others.

### 14.9.3. Structured Class/ Class

#### a. Creating Structured Classes/Classes

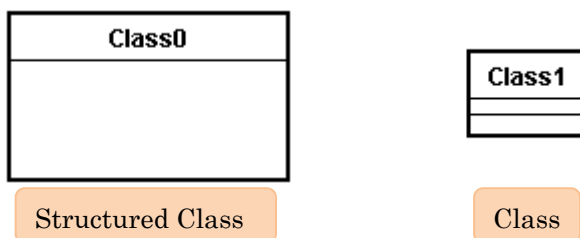
##### i) Using the Tool Palette.

To create a Structured Class, use  [Structured Class] on the Tool Palette.

To create a Class, use  [Class] on the Tool Palette.

##### (a) Using the [Structure Tree] in the “Project View”.

- Drag a class from the Structure Tree in the Project View.
- Drop it onto a Diagram in the Diagram Editor.
- Select Structured Class or Class and press [OK] in the Class Notation dialog.

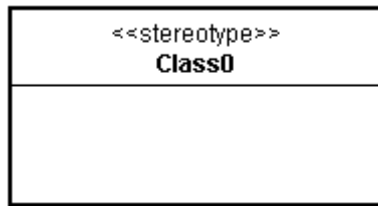


#### b. Editing Structured Classes

##### (a) Adding Stereotypes

Right-click on the target Structured Class and select [Add Stereotype], or go to Stereotype tab in the Property View.

## 14. Diagrams and Diagram Elements



### (b) Editing Structured Class Names

Double-click the name of the Structured Class in the Diagram Editor and then edit its name directly, or go to Base tab of the Structured Class in the Property View.

### (c) Notation of Classes/Structured Classes

#### i) Show as Class

Right-click on the target Structured Class and select [Show as Class].

In return, Right-clicking on a Class and selecting [Show as Structured Class] will change the class notation into a Structured Class.

#### ii) Show Related Elements

Right-click on the target Class / Structured Class and select [Show Related Elements].

All related classes with selected class appear including generalization, Realization, Dependency relationship.

#### iii) Showing Hidden Relationships

(1) Right-click on the target Class / Structure Class and select [Show Hidden Relationships].

(2) To show hidden relationships, select relationships (e.g. Generalization, Realization and Dependency) in Show Hidden Relationships dialog and click OK.

#### iv) Package Visibility

The Names of the Packages to which a Structured Class belongs can be displayed as part of the Class Name.

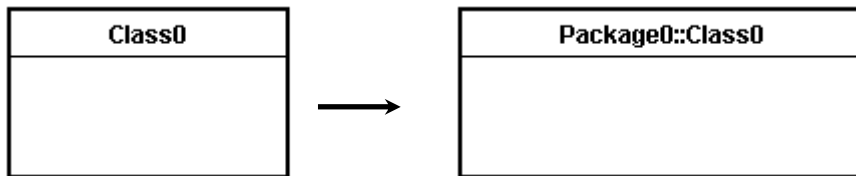
(1) Right-click on the Structured Class and select [Extended Visibility] - [Show/Hide Namespace].

(2) Select a display level.

None	None of parent package names will appear.
------	---

## 14. Diagrams and Diagram Elements

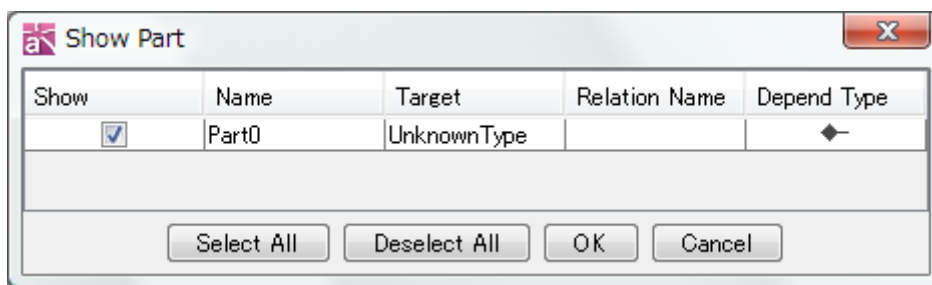
Show Parent	A direct parent package name will appear.
Show All Parents	All the parent package names will appear.



### iv) Show Part

The display/non-display settings for each Parts of a Class/Structured Class can be selected from the Pop-up Menu.

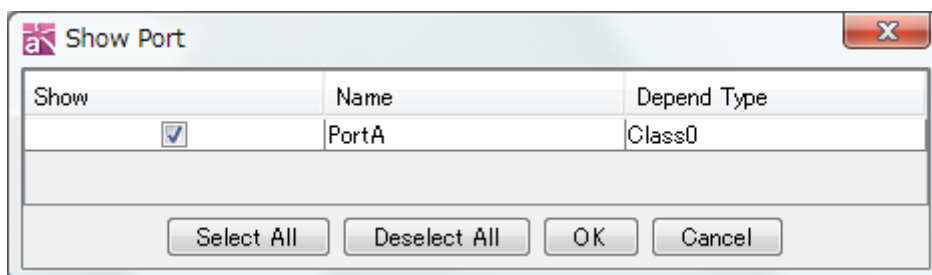
- 1) Right-click on the target Class/Structured Class and select [Show Part].
- 2) Check in the box of Parts to display then press [OK].



### v) Show Port

The display/non-display settings for each Ports of a Class/Structured Class can be selected from the Pop-up Menu.

- 1) Right-click on the target Class/Structured Class and select [Show Port].
- 2) Check in the box of Ports to display then press [OK].



### vi) Stereotype Visibility

The display/non-display settings for a Class Stereotype can be selected from the Pop-up Menu.



## 14. Diagrams and Diagram Elements

### **14.9.4. Part/External Part**

-> Please refer to the [Part/External Part of Component Diagram](#).

### **14.9.5. Connector**

-> Please refer to the [Connector of Component Diagram](#).

### **14.9.6. Port**

-> Please refer to the [Port of Component Diagram](#).

### **14.9.7. Interface/Required Interface/Provided Interface**

-> Please refer to the [Interface/Required Interface/Provided Interface of Class Diagram](#).

### **14.9.8. Dependency**

-> Please refer to the [Dependency of Class Diagram](#).

### **14.9.9. Template Binding**

-> Please refer to the [Template Binding of Class Diagram](#).

### **14.9.10. Realization**

-> Please refer to the [Realization of Class Diagram](#).

### **14.9.11. Usage**

-> Please refer to the [Usage of Class Diagram](#).

## 14. Diagrams and Diagram Elements














### 14. 10. Flowchart [P]

#### 14. 10. 1. Creating Flowcharts











- a. Using [Diagram]-[Flowchart]-[New Flowchart] or [Template Flowchart] in the Main Menu.
- b. Using the [Structure Tree] in the “Project View” (by right-clicking).

#### 14. 10. 2. Diagram Elements of Flowcharts





Select		Mode for basic operations in the Diagram Editor.
Transition (Solid Line)		Add Transitions (Solid, Arrow, and Double Arrow)
Transition (Dash Line 1)		Add Transitions (Solid, Arrow, and Double Arrow line)
Transition (Dash Line 2)		Add Transitions (Solid, Arrow, and Double Arrow line)
Transition (Railway)		Add Transitions (Railway)
Lane [Vertical]		Add Vertical Lanes.
Lane [Horizontal]		Add Horizontal Lanes.
Initial Node		Add Initial Nodes.
Final Node		Add Final Nodes.
Condition Judgement		Add Condition Judgements.
Fork		Add Fork.
Join		Add Joins.
Note		Add comments to Model Elements.

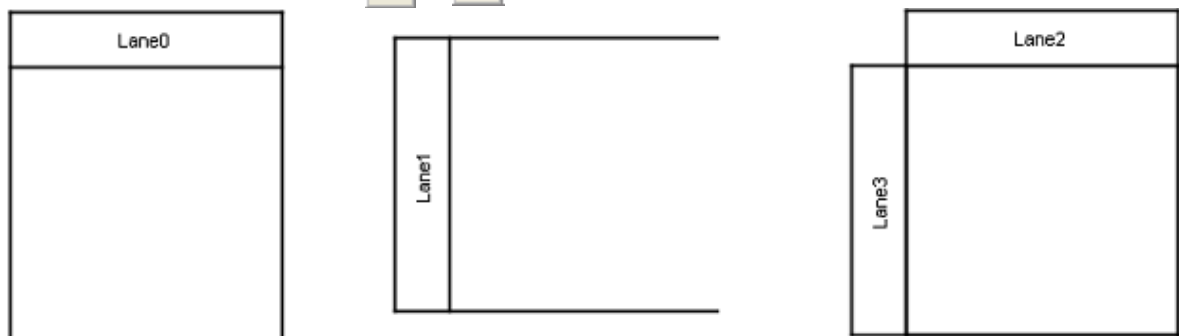
## 14. Diagrams and Diagram Elements

Note Anchor		Anchor Notes to related Model Elements.
Text		Insert Text in Diagrams.
Rectangle		Draw Rectangles/Rounded Rectangles on Diagrams. For example, Rectangle can be used to enclose a semantic collection of Model Elements.
Line		Draw Lines on Diagrams.
Image		Paste Images.
Lock Selected Mode		Lock the selected mode on the Tool Palette.
Set Relation End to the center of the item		Place the ends of lines (e.g. Associations, Generalizations, or Dependencies) at the center of Model Elements.
Line Mode		Set the Line Mode (Line, Line (Right Angle), Curve, Curve (Right Angle)) to draw lines (e.g. Association) between Model Elements.
Synchronization Bar - Independent Mode		Use this Mode to create Synchronization Bars independently from Partitions.
Depth Lock Mode		Lock the front and behind of Model Elements that are over each others.

### 14.10.3. Lanes

#### a. Creating Lanes

To create a Partition, use  or  [Lane] on the Tool Palette.



## 14. Diagrams and Diagram Elements

(1) Lane [Vertical]

(2) Lane [Horizontal]

(3) Lane

### b. Editing Lanes

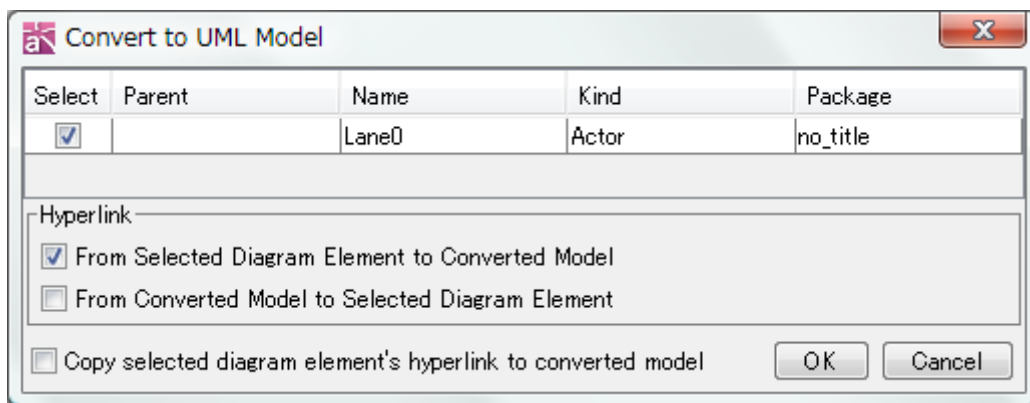
#### (a) Editing Lane Names

Double-click the Name of Lane in the Diagram Editor and then edit its name directly, or go to Base tab of the Lane in the Property View.

### c. Convert to Actor

(1) Right-Click on Lane and select [Convert to Actor].

(2) Check options and click on [OK] in [Convert to UML Model] dialog.



## 14.10.4. Transition

### a. Creating Transitions

To create Transitions, use     [Transition] on the Tool Palette.

## 14.10.5. Initial Nodes

### a. Creating Initial Nodes

To create an Initial Node, use  [Initial Node] on the Tool Palette.



## 14.10.6. Final Nodes

### a. Creating Final Nodes


To create a Final Node, use  [Final Node] on the Tool Palette.

## 14. Diagrams and Diagram Elements



### 14.10.7. ConditionJudgement



#### a. Creating ConditionJudgement

To create a ConditionJudgement,  use [ConditionJudgement] on the Tool Palette.



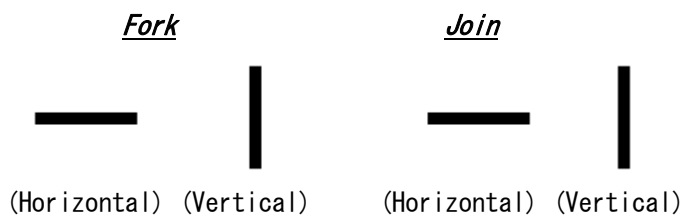
### 14.10.8. Fork/Join


#### a. Creating Fork /Join

To create a Fork, use  or  [Fork] on the Tool Palette.

To create a Join, use  or  [Join] on the Tool Palette.

They are also called "Synchronization Bars".



Note) To create a Synchronization Bar independently from Partitions, use [Synchronization Bar - Independent Mode]  on the Tool Palette.

### 14.10.9. Flowchart Template

Creates Templates of Flowchart and reuse them.

#### a. Importing Flowchart Templates

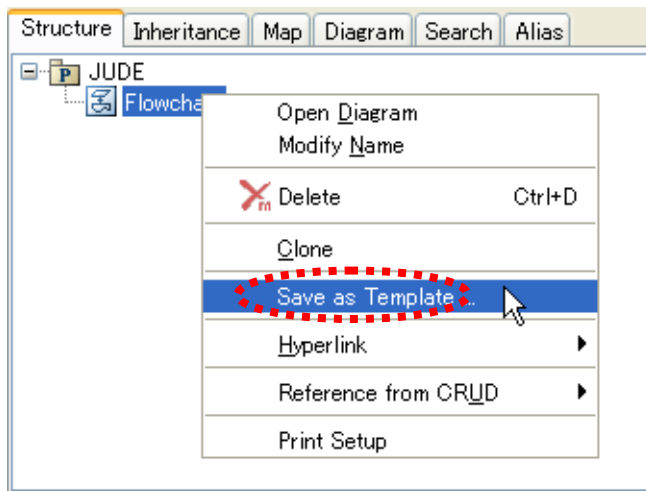
- (1) Using [Diagram]-[Flowchart]-[Template Flowchart] in the Main Menu.
- (2) Using the [Structure Tree] in the "Project View" (by right-clicking).

#### b. Creating Flowchart Templates

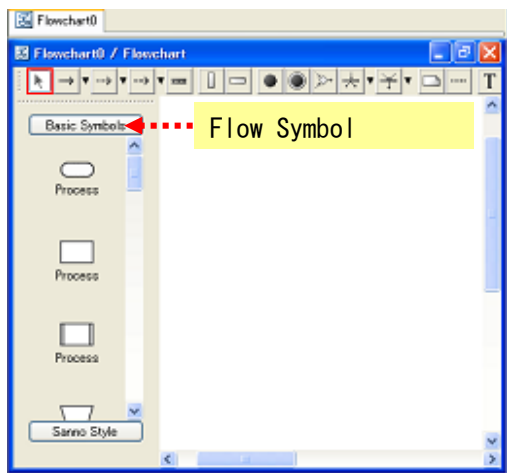
- (1) Select a Flowchart as a Template and select [Save as Template] from the Pop-Up Menu.

## 14. Diagrams and Diagram Elements

(2) Select the folder and name the template.



### 14. 10. 10. Flow Symbol Template



[Basic Symbols] and [Sanno Style] are default Flow Symbol Templates.

### 14. 10. 11. Using Flow Symbols

#### a. Draw Flow Symbols

Draw Flowchart using Flow Symbols in the Diagram Editor.

(1) Select Flow Symbol from the Flow Symbol Palette.

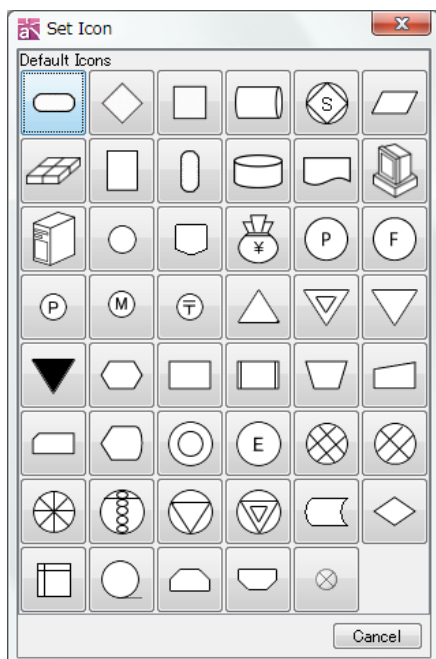
(2) Click on the Diagram Editor.

#### b. Set Icon for Flow Symbols

To set Icon for Flow symbols in the Diagram Editor.

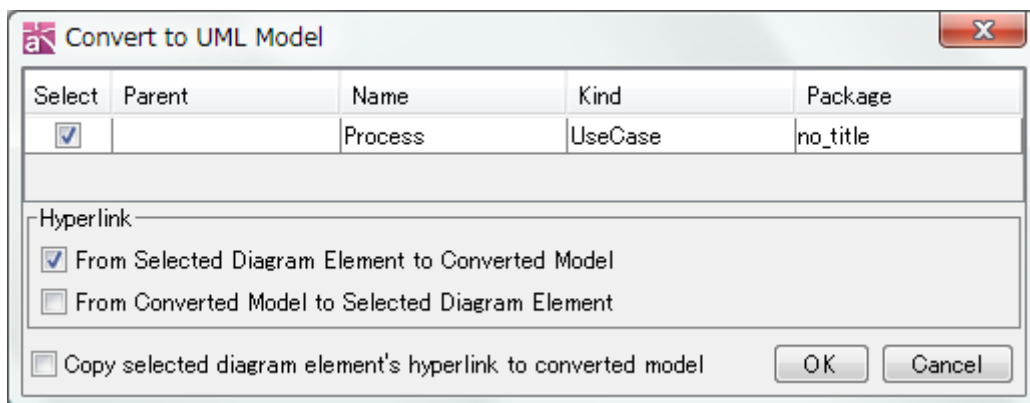
## 14. Diagrams and Diagram Elements

- (1) Right-click on Flow symbol and select [Set Icon].
- (2) Click on an icon in [Set Icon] dialog.



### c. Convert to UseCase

- (1) Right-click on target Flow symbol then click [Convert to UseCase].
- (2) Check options and click on [OK] in [Convert to UML Model] dialog.



## 14. Diagrams and Diagram Elements

### 14. 11. Data Flow Diagrams (DFD) [P]

#### 14. 11. 1. Creating Data Flow Diagrams

- i) Using [Diagram]-[Data Flow Diagram] in the Main Menu.
- ii) Using the [Structure Tree] in the “Project View” (by right-clicking).

#### 14. 11. 2. Notation of Data Flow Diagram

Data Flow Diagrams can be notated in two different notations, [DeMarco] or [Gane/Sarson].

##### i) Using the [Structure Tree]

- (1) Open the Pop-Up Menu of the Data Flow Diagram to switch the Notation.
- (2) Select [Diagram Notation] and select [DeMarco] or [Gane/Sarson].

##### ii) Using the Pop-Up Menu in Diagram Editor

- (1) Open the Data Flow Diagram then do right-clicking on the Diagram Editor.
- (2) Select [Diagram Notation] and select [DeMarco] or [Gane/Sarson].

##### iii) Using the [Property View]







#### 14. 11. 3. Diagram Elements of Data Flow Diagrams

(DeMarco)

















(Gane/Sarson)



Select		Mode for basic operations in the Diagram Editor.
External Entity	 	Add External Entities.
Process Box	 	Add Process Boxes.
Data Store		Add Data Stores.



## 14. Diagrams and Diagram Elements



		
Anchor		Add Anchors.
Dataflow		Add Dataflow.
Dataflow (Both Direction)		Add Dataflow.
Note		Add comments to Model Elements.
Note Anchor		Anchor Notes to Model Elements.
Text		Insert Text in Diagrams.
Rectangle		Draw Rectangles/Rounded Rectangles on Diagrams. For example, Rectangle can be used to enclose a semantic collection of Model Elements.
Line		Draw Lines on Diagrams.
Image		Paste Images.
Lock Selected Mode		Lock the selected mode on the Tool Palette.
Set Relation End to the center of the item		Place the ends of lines (e.g. Association) at the center of Model Elements.
Line		Set the Line Mode (Line, Line (Right Angle), Curve, Curve (Right Angle)) to draw lines (e.g. Association) between Model Elements.
Depth Lock Mode		Lock the front and behind of Model Elements that are over each others.

### 14.11.4. External Entity

#### a. Creating External Entity

##### i) Using [ExternalEntity] on the Tool Palette.

## 14. Diagrams and Diagram Elements

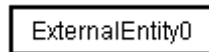
To create an ExternalEntity, use  /  [ExternalEntity] on the Tool Palette.

### ii) Using [Structure Tree].

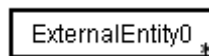
(1) Select an External Entity in the Structure Tree in the [Project Vies].

(2) Drag it and drop onto the Diagram Editor.

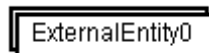
[DeMarco]



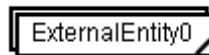
[DeMarco - Multiple Diagram Elements]



[Gane/Sarson]



[Gane/Sarson - Multiple Diagram Elements]



### b. Editing External Entity



#### (a) Editing External Entity Names

Double-click the name of the External Entity in the Diagram Editor and then edit its name directly, or go to Base tab of the External entity in the Property View.

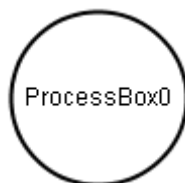
## 14.11.5. Process Box

### a. Creating Process Box

#### i) Using [ProcessBox] on the Tool Palette.

To create a Process Box, use  /  [ProcessBox] on the Tool Palette.

[DeMarco]



[Gane/Sarson]

## 14. Diagrams and Diagram Elements



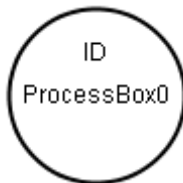
### **b. Editing Process Box**

#### **(a) Editing Process Box Names**

Double-click the name of Process Box in the Diagram Editor and then edit its name directly, or go to Base tab of the Process Box in the Property View.

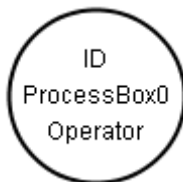
#### **(b) Adding Process Box ID**

Double-click on the top (ID area) of a Process Box. Or, input it from the Property View.



#### **(c) Adding Process Box Operator**

Double-click on the bottom (Operator area) of a Process Box. Or, input it from the Property View.



#### **(d) ID Visibility**

The display/non-display settings for the ID of a Process Box can be selected from the Pop-up Menu.

#### **(e) Operator Visibility**

The display/non-display settings for the Operator of a Process Box can be selected from the Pop-up Menu.

#### **(f) Creating a sub Data Flow Diagram**

Right-click on a Process Box and select [Create Data Flow Diagram], or double-click on the target Process Box. Also, use Data Flow Diagram tab of ProcessBox in the Property

## 14. Diagrams and Diagram Elements

View.

### **(g) Opening sub Data Flow Diagram**

Right-click on the target Process Box and select [Open Nested Diagram], or double-click on the target Process Box.

### **(h) Reference from CRUD**

To open the CRUD, right-click on the target Process Box and select [Reference from CRUD].

## **14. 11. 6. Data Store**

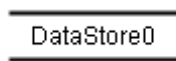
### **a. Creating Data Store**

#### **i) Using [DataStore] on the Tool Palette.**

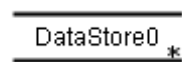
To create a Data Store, use  /  [DataStore] on the Tool Palette.

#### **ii) Using [Structure Tree] in the “Property View”**

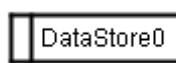
[DeMarco]



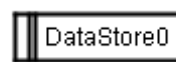
[DeMarco - if a same DataStore already exists in the Diagram Editor]



[Gane/Sarson]



[Gane/Sarson - if a same DataStore already exists in the Diagram Editor]



### **b. Editing Data Store**

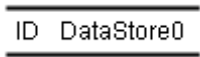
#### **(a) Editing Data Store Names**

Double-click the Name of the DataStore in the Diagram Editor and then edit its name directly, or go to Base tab of the Data Store in the Property View.

14. Diagrams and Diagram Elements

(b) Adding Data Store ID

Double-click on left (ID area) of a Data Store. Or, input it from the Property View.



(c) ID Visibility

The display/non-display settings for the ID of a Data Store can be selected from the Pop-up Menu.

14. 11. 7. Anchor

An Anchor is a symbol to connect to a Process in another Data Flow Diagram.

a. Creating Anchor

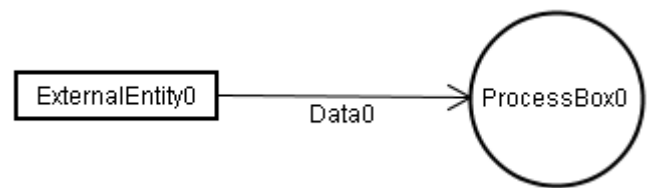
To create an Anchor, use  [Anchor] on the Tool Palette.



14. 11. 8. Data Flow

a. Creating Data Flow

To create a Data Flow, use  /  [DataFlow / DataFlow (Both Direction)] on the Tool Palette.





















14. 11. 9. Export DFD Hierarchy to Excel

Select [Export DFD Hierarchy to Excel] in the Data Flow Diagram Pop-up Menu on the Structure Tree.

	A	B	C	D	E
1	Data Flow	Diagram0			
2		Hierarchy0		Hierarchy1	
3		ID	Name	ID	Name
4			ProcessBox0		ProcessBox0
5			ProcessBox1		



## 14. Diagrams and Diagram Elements

Identifying Relationship (IDF1X/IE)	 	Add Identifying Relationships.
Non-Identifying Relationship (IDF1X/IE)	 	Add Non-Identifying Relationships.
Many-to-many Relationship (IDF1X/IE)	 	Add Many-to-many Relationships.
Subtype (IDF1X/IE)	 	Add Subtypes.
Note		Add comments to Model Elements.
Note Anchor		Anchor Notes to Model Elements.
Text		Insert Text in Diagrams.
Rectangle		Draw Rectangles/Rounded Rectangles on Diagrams. For example, Rectangle can be used to enclose a semantic collection of Model Elements.
Line		Draw Lines on Diagrams.
Image		Paste Images.
Lock Selected Mode		Lock the selected mode on the Tool Palette.
Set Relation End to the center of the item		Place the ends of lines (e.g. Association) at the center of Model Elements.
Line		Set the Line Mode (Line, Line (Right Angle), Curve, Curve (Right Angle)) to draw lines (e.g. Association) between Model Elements.
Depth Lock Mode		Lock the front and behind of Model Elements that are over each others.

## 14. Diagrams and Diagram Elements

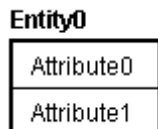
### 14.12.5. Entity

#### a. Creating Entity

##### i) Using [Entity] on the Tool Palette.

To create an Entity, use  [[Entity] on the Tool Palette.

##### ii) Using [Structure Tree] in the “Project View”



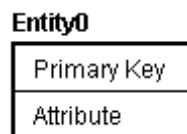
#### b. Editing Entity

##### (a) Adding Primary Keys/Attributes

##### i) Using the [Structure Tree] in the “Project View”.

##### ii) Using the Pop-up Menu.

Right-click on the target Entity and select [Add Primary Key] or [Add Attribute] on the Diagram Editor. Or, go to Attribute tab of EREntity in the Property View.



#### **Note) How to operate Primary keys/Attributes on Diagram Editor**

- Primary Keys/Attributes can be added continuously by pressing Enter key.
- Insert new Primary Keys/Attributes above the selected Primary Keys/Attributes by pressing [Shift + Enter].
- Primary Keys/Attributes are transferable between Entities in the Diagram Editor.
- These shortcut keys sort Primary Keys/Attributes.
  - [Ctrl + Upward Arrow cursor] to move up the target.
  - [Ctrl + Downward Arrow cursor] to move down the target.
- Primary Keys/Attributes can be copied & Paste by these shortcut keys.
  - [Ctrl + C] to copy
  - [Ctrl + V] to paste

##### (b) Deleting Primary Key / Attributes

##### i) Using the [Structure Tree] in the “Project View”.

##### ii) Using the Pop-up Menu.

- (1) Right-click on the target Entity and select [Delete Primary Key] or [Delete



## 14. Diagrams and Diagram Elements

Attribute].

(2) Select Primary Key / Attribute.

Or, go to Attribute tab of the EREntity in the Property View.

### **(c) Editing Entity Names**

Double-click name of the ER Entity in the Diagram Editor and then edit its name directly, or go to Base tab of ER Entity in the Property View.

### **(d) Showing Dependent Entities**

To show dependent entities, right-click on the target Entity and select [Show Dependent Entities].

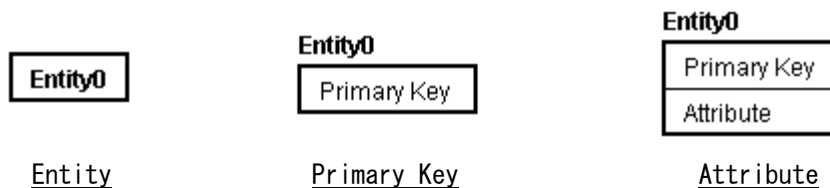
### **(e) Showing Hidden Relationships**

(1) Right-click on the target Entity and select [Show Hidden Relationships].

(2) To show hidden relationships, select relationships in Show Hidden Relationships dialog and click OK.

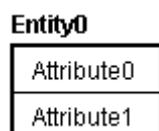
### **(f) Display Level**

Select [Display Level] on Entity's Popup Menu and select [Entity], [Primary Key] or [Attribute].



### **(g) Attribute Visibility**

The display/non-display settings for each Attribute of an Entity can be selected from the Pop-up Menu.



### **(h) Extended Visibility**

The following visibilities can be set.

## 14. Diagrams and Diagram Elements


- q. Type & Length
- r. Foreign Key Sign
- s. Alternate Key Sign
- t. Inversion Entry Sign
- u. Null Option

### (i) Reference from CRUD

To open the CRUD, right-click on the target Entity and select [Reference from CRUD].

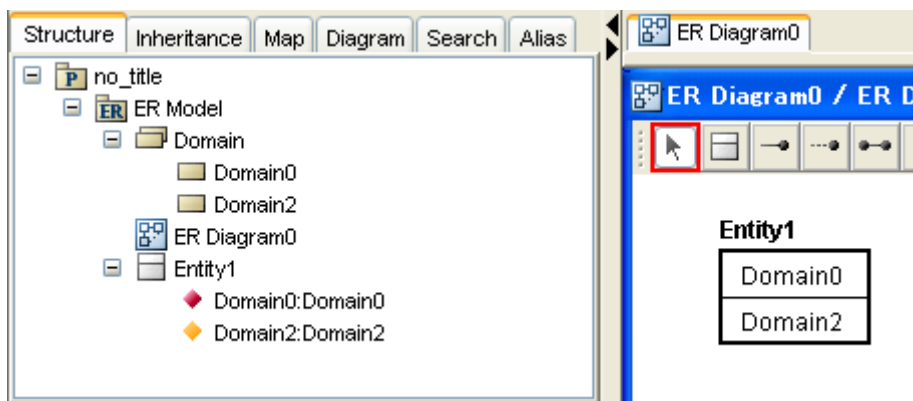
## 14. 12. 6. Domain

### a. Creating Domain

To create Domain, select  [Add Domain] from Domain Popup Menu in the Structure Tree.



### b. Adding Domain to Entity

To add a Domain to Entity, drag a Domain from the Structure Tree and drop it onto the top (as Primary Key) / bottom (as Attribute) part of the Entity in the Diagram Editor.

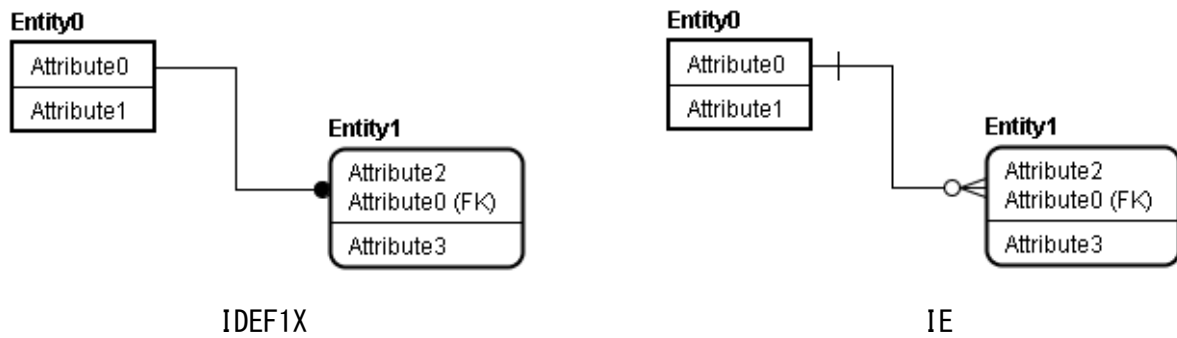


## 14. 12. 7. Identifying Relationship

### a. Creating Identifying Relationship

To create an Identifying Relationship. Use  (IDEF1X) /  (IE) on the Tool Palette.

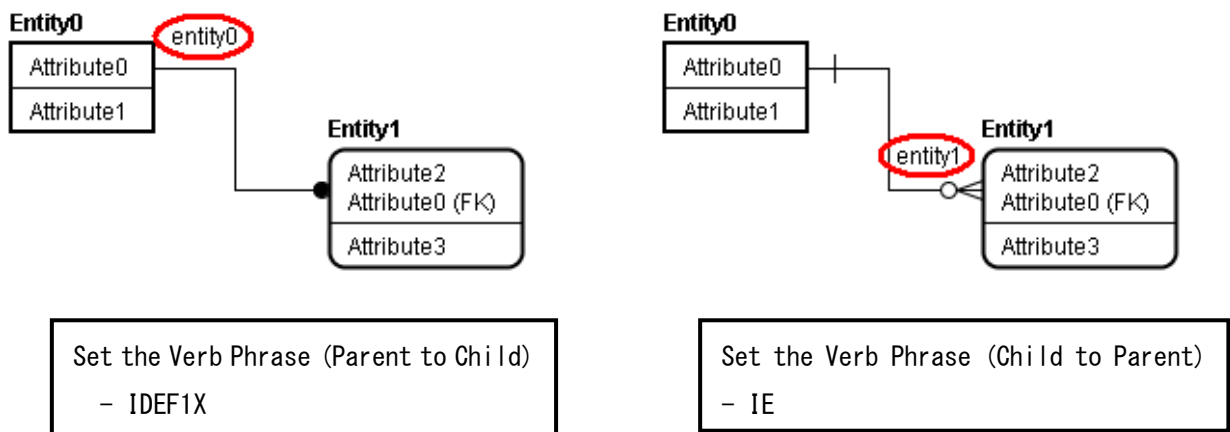
## 14. Diagrams and Diagram Elements



### b. Editing Identifying Relationship

#### (a) Specify the Verb Phrase

Select a [Verb Phrase (Parent to Child)] or [Verb Phrase (Child to Parent)] on the Pop Up Menu of Identifying Relationship. Or, go to Base tab of the Relationship in the Property View.



#### (b) Verb Phrase Visibility

Verb Phrase Visibility can be set on the Pop-Up Menu of Relationship.

#### (c) Cardinality Visibility

Cardinality Visibility can be set on the Pop-Up Menu of Relationship.

#### (d) Setting Type

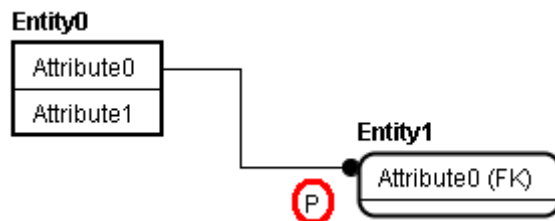
Right-click on the target Relationship and select [Type] - [Identifying] or [Non-Identifying]. Or, go to Base tab of Relationship in the Property View.

## 14. Diagrams and Diagram Elements

### (e) Set the Cardinality

Right-click on the target Relationship and select [Cardinality] - [0 or More], [1 or More], [0 or 1] or [Constant]. Or, go to Base tab of Relationship in the Property View.

**EX) Set the Cardinality to [1 or More] (IDEF1X)**





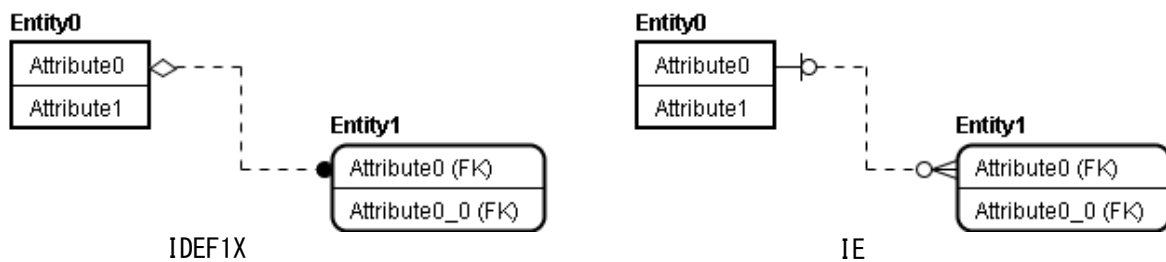
### (f) Line Style

-> Please refer to the [Line Styles](#).

## 14.12.8. Non-Identifying Relationship

### a. Creating Non-Identifying Relationship

To create a Non-Identifying Relationship, use  (IDEF1X)/  (IE) on Tool Palette.





### b. Editing Non-Identifying Relationship

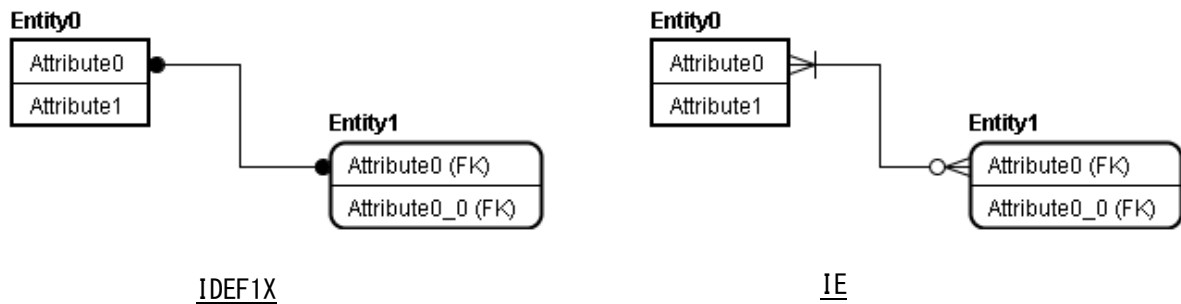
-> Please refer to the [Editing Identifying Relationship](#).

## 14.12.9. Many-to-many Relationship

### a. Creating Many-to-many Relationship

To create a Many-to-many Relationship, use  (IDEF1X) /  (IE) on the Tool Palette.

## 14. Diagrams and Diagram Elements



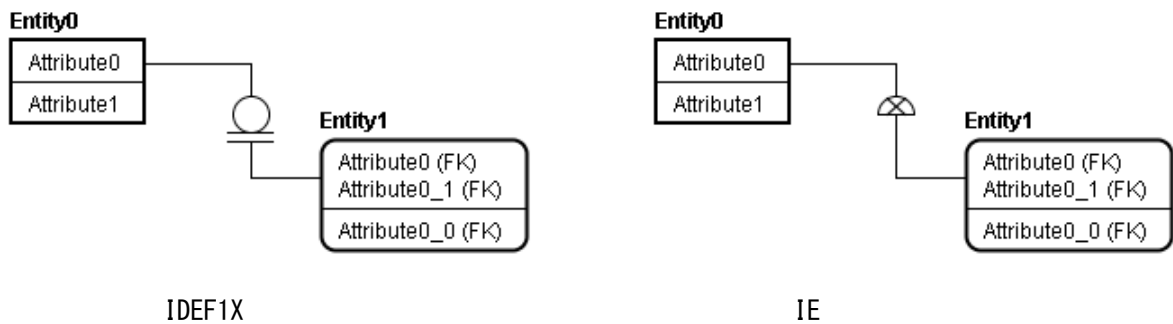
### b. Editing Non-Identifying Relationship

-> Please refer to the [Editing Identifying Relationship](#).

## 14. 12. 10. Subtype

### a. Creating Subtype

To create a Subtype, use  (IDEF1X) /  (IE) on the Tool Palette.

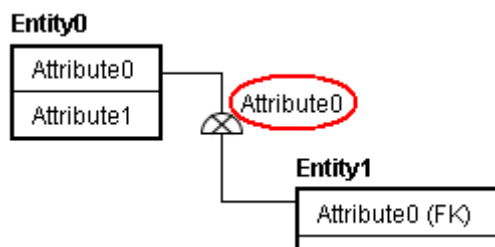


### b. Editing Subtype

#### (a) Set the Discriminator Attribute

Right-click the target Subtype and select [Set Discriminator Attribute]. And select Attribute from the list. Or, go to Base tab of Subtype in the Property View.

**EX) Set an Attribute0 as a discriminator Attribute. (IE)**



#### (a) Set Type

## 14. Diagrams and Diagram Elements

Right-click on the target Subtype and select [Set Type] - [Complete] or [Incomplete].

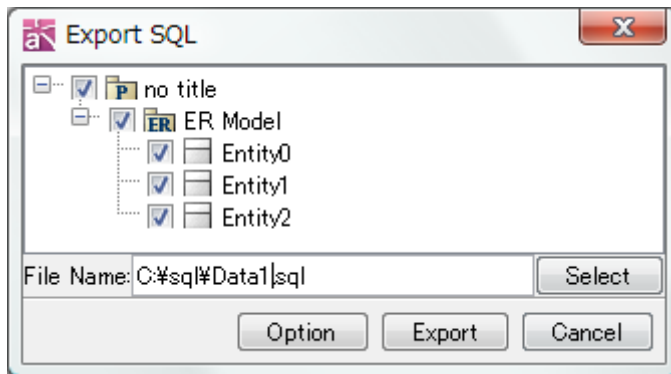
Or, go to the Base tab of the Subtype in the Property View.

### 14. 12. 11. Exporting SQL

Export SQL based on the ER Diagram.

#### a. Setting for SQL Export

Select [Tool]-[ER Diagram]-[Export Sql] in the Main Menu.



#### 1. Select Models in the Tree

Select models to export SQL in the Tree.

#### 2. Select a file

Select a file to export SQL.

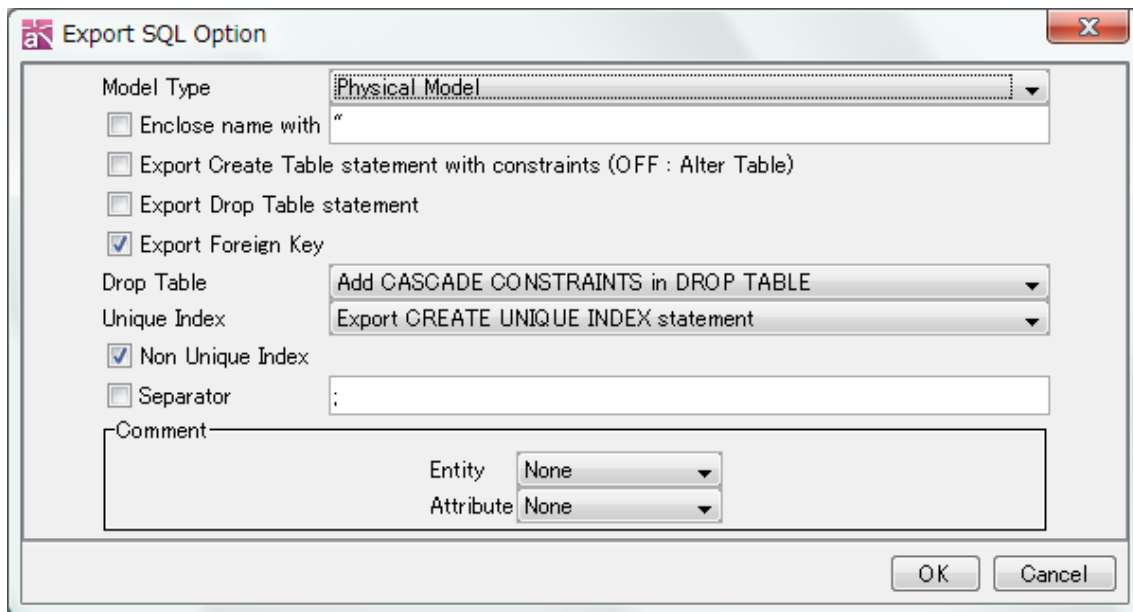
#### 3. Option

Click the Option button to set detailed setting of the SQL.

#### 4. Export

Click the Export button to export SQL.b. Export SQL Option

## 14. Diagrams and Diagram Elements



### (a) Model Type

Select which model type to export SQL.

**Default [Physical Model]**

### (b) Enclose name with...

Specify what to use to enclose the name.

**Default [OFF]**

### (c) Export Create Table statement with constraints (OFF : Alter Table)

Select if it exports the Create Table statement with constraints not.

**Default [OFF]**

### (d) Export Drop Table statement

Select if it exports Drop Table Statement or not.

**Default [OFF]**

### (e) Export Foreign Key

Select if it exports Foreign Key or not.

**Default [ON]**

### (f) Drop Table

Select the Drop Table.

### (g) Unique Index

Select the Unique Index.

### (h) Non Unique Index

Select if it exports Non Unique Index or not.

### (i) Separator

Select the separator.

## 14. Diagrams and Diagram Elements

### (j) Comment - Entity Definition

Select if it exports Entity Definition or not.

**Default [OFF]**

### (k) Comment - Entity/Attribute

Select how you want to export Comment.

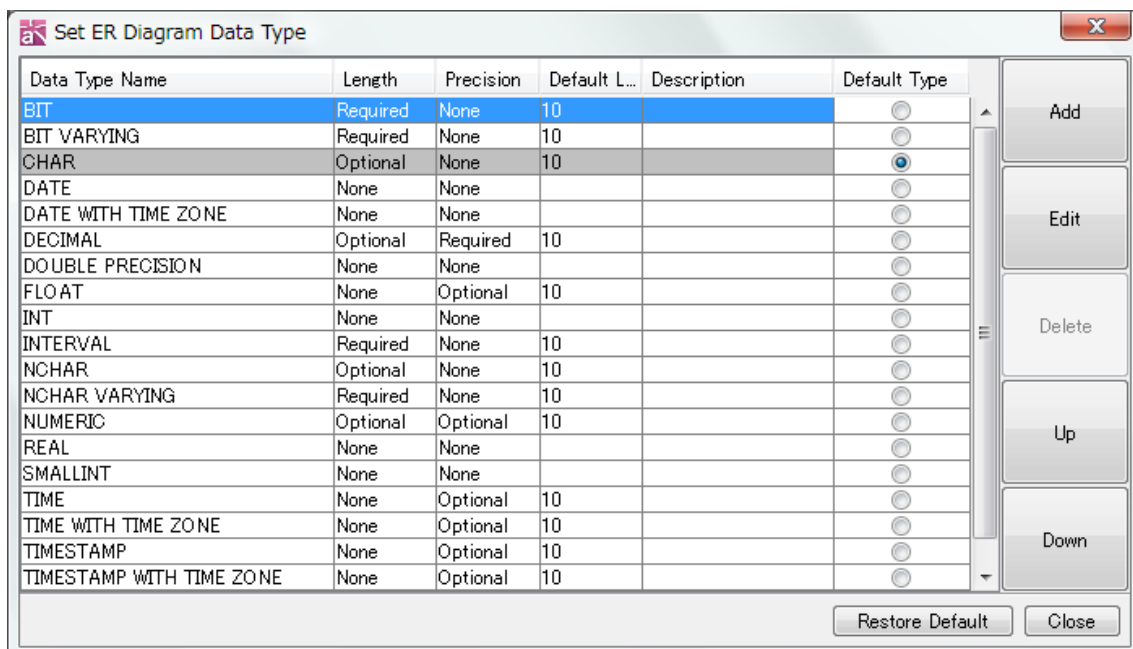
**Default [Logical Name]**

## 14.12.12. Set ER Datatype

There are two ways to set ER Datatype.

i) Using [Tool]-[ER Diagram]-[Set ER Datatype] in Main Menu

ii) Using Pop Up Menu of ER Model in Structure Tree View



Items of ER Datatype

- Data Type Name
- Length
- Precision
- Default
- Description
- Default Type

### a. Add ER Datatype

Click [Add] on [Set ER Diagram Datatype].



## 14. Diagrams and Diagram Elements

### b. Edit ER Datatype

Select Datatype to edit, and then click [Edit] button.

### c. Delete ER Datatype

Select Datatype to delete, and then click [Delete] button.

### d. Sort ER Datatype

Select Datatype and then sort by using [Up][Down] button.

### e. Set the Default Datatype

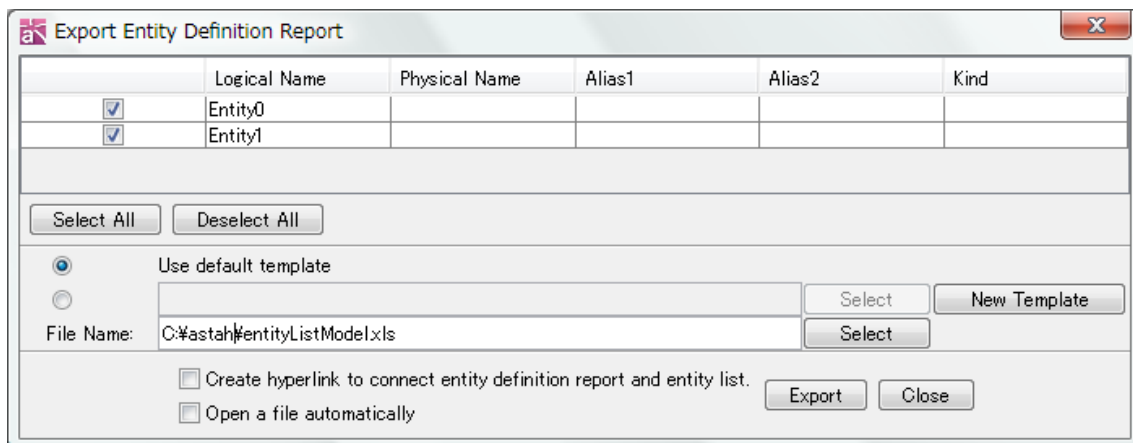
Open the [Set ER Diagram Datatype], and click on [Default Type] on the right lane.

## 14. 12. 13. Exporting Entity Definition Report

Export an Entity Definition Report from ER Diagrams.

### a. Exporting Entity Definition Report

Select [Tool] - [ER Diagram] - [Export Entity Definition Report] in the Main Menu.



#### (a) Select Models

Select models to export. Click [Select All] to select them all.

#### (b) Select a Template

Select a format to export the Entity Definition Report.

- (1) Use a default template
- (2) Select a saved template
- (3) Create a New Template

#### (c) Select a file

Select a file to export the Entity Definition Report.

#### (d) Create hyperlink connecting entity definition report and entity list

## 14. Diagrams and Diagram Elements

Check this option to add hyperlink between Entity Definition Report and Entity List.

### **(e) Open a file automatically**

Check this option to open the Entity Definition Report automatically.

### **(f) Export**

Click the Export button to export the Report.

### **Exporting Attribute on Entity List**

- Logical Name of Attribute - `$each.entity.each.attribute.logical_name`
- Physical Name of Attribute - `$each.entity.each.attribute.physical_name`
- Domain Name of Attribute - `$each.entity.each.attribute.domain`
- Primary Key Flag of Attribute - `$each.entity.each.attribute.pk`
- Foreign Key Flag of Attribute - `$each.entity.each.attribute.fk`
- NotNull Flag of Attribute - `$each.entity.each.attribute.notnull`
- Reference of Attribute - `$each.entity.each.attribute.ref`
- Datatype of Attribute - `$each.entity.each.attribute.type`
- Length/Precision of Attribute - `$each.entity.each.attribute.length_precision`
- Initial Value of Attribute - `$each.entity.each.attribute.initial_value`

### **Exporting TaggedValue of Attribute on Entity List**

- TaggedValue of Attribute - `$each.entity.each.attribute.each.taggedvalue`

## **14. 12. 14. Creating New Template for Entity Definition Report**

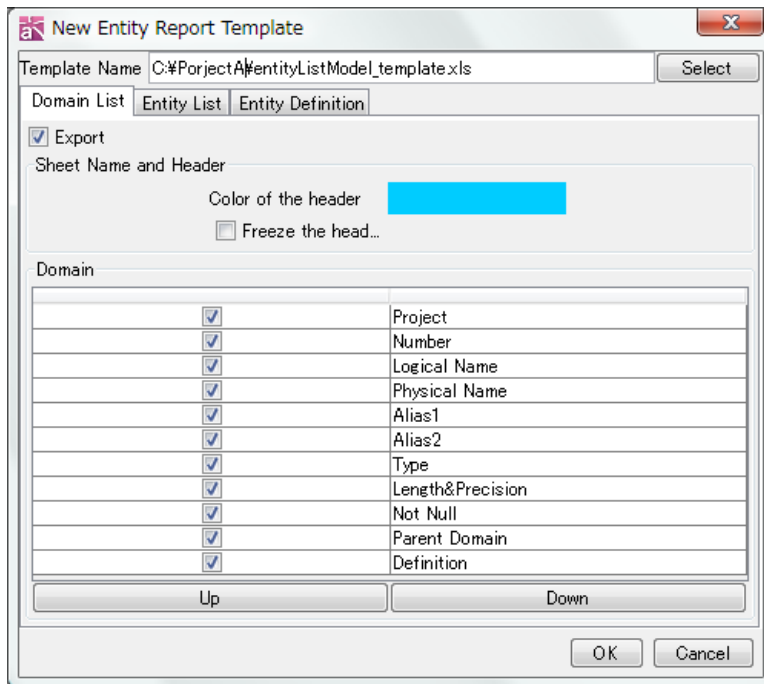
Select [Tool] - [ER Diagram] - [Export Entity Definition Report] in the Main menu, and select [New Template] button on dialog.

### **(a) Template Name**

Set a template name to save the template file.

## 14. Diagrams and Diagram Elements

### a. Domain List



#### (a) Export

Check this option to export the Domain List.

#### (b) Header setting

(1) Select the color of header from color box.

(2) Check [Freeze the header] option to lock up the Header.

#### (c) Domain

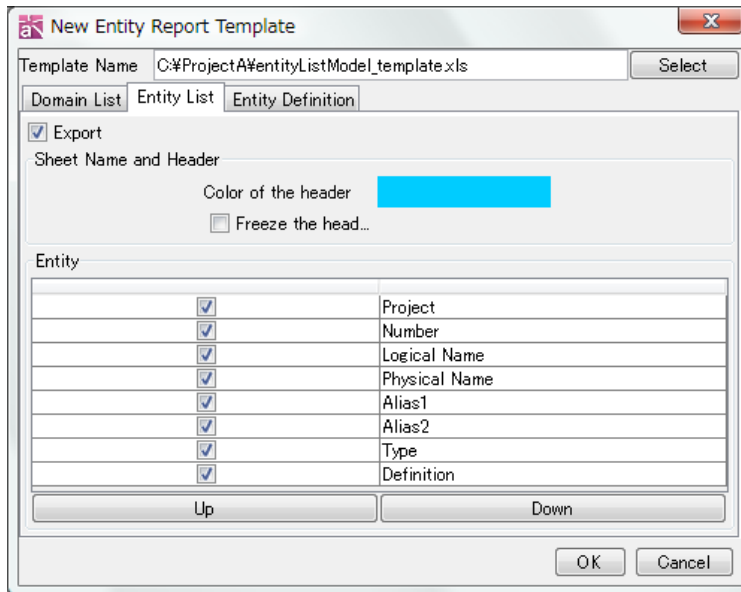
Check the option to export the following items:

- Project
- Number
- Logical Name
- Physical Name
- Alias1
- Alias2
- Type
- Length&Precision
- Not Null
- Parent Domain
- Definition

Note) The order of items can be changed by [Up]/[Down] button.

## 14. Diagrams and Diagram Elements

### b. Entity List



#### (a) Export

Check this option to export the Entity List.

#### (b) Header setting

(1) Select the color of header from color box.

(2) Check [Freeze the header] option to lock up the Header.

#### (c) Entity

Check the option to export the following items:

- Project
- Number
- Logical Name
- Physical Name
- Alias1
- Alias2
- Type
- Definition

Note) The order of items can be changed by [Up]/[Down] button.

## 14. Diagrams and Diagram Elements

### c. Entity Definition

**New Entity Report Template**

Template Name: C:\ProjectA\entityListModel\_template.xls Select

**Domain List** **Entity List** **Entity Definition**

☒ **Export**

Sheet Name and Header

Sheet Name: Logical Name

Color of the header:  

☐ Freeze the head...

**Entity**

<input checked="" type="checkbox"/>	Logical Name
<input checked="" type="checkbox"/>	Physical Name
<input checked="" type="checkbox"/>	Alias1
<input checked="" type="checkbox"/>	Alias2
<input checked="" type="checkbox"/>	Type

Up Down

**Attribute**

<input checked="" type="checkbox"/>	Number
<input checked="" type="checkbox"/>	Logical Name
<input checked="" type="checkbox"/>	Physical Name
<input checked="" type="checkbox"/>	Alias1
<input checked="" type="checkbox"/>	Alias2

Up Down

OK Cancel

#### (a) Export

Check this option to export the Domain List.

#### (b) Header setting

(1) Select Logical Name or Physical Name to display the sheet name.

(2) Select the color of header from color box.

(3) Check [Freeze the header] option to lock up the Header.

#### (c) Entity

Check the option to export the following items:

- Logical Name
- Physical Name
- Alias1
- Alias2
- Type
- Definition
- TaggedValue

Note) The order of items can be changed by [Up]/[Down] button.

#### (c) Attribute

Check the option to export the following items:

- Number

#### 14. Diagrams and Diagram Elements

- Logical Name
- Physical Name
- Alias1
- Alias2
- Domain
- Primary Key
- Foreign Key
- Alternate Key
- Inversion Entry
- Not Null
- Attribute Reference
- DataType
- Length&Precision
- Initial Value
- Definition

Note) The order of items can be changed by [Up]/[Down] button.

## 14. Diagrams and Diagram Elements

### 14.13. CRUD [P]

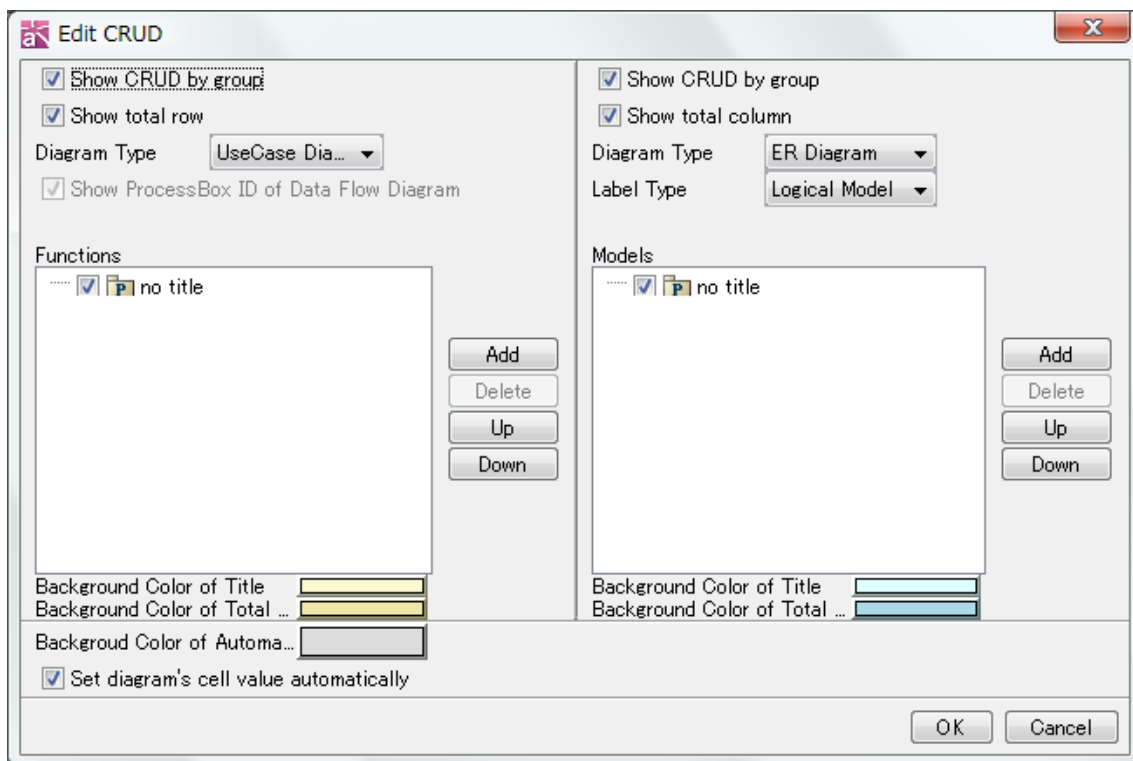
#### 14.13.1. Creating CRUD

- i) Using [Diagram]-[CRUD] in the Main Menu.
- ii) Using the [Structure Tree] in the “Project View”

#### 14.13.2. Setting CRUD

- i) Right-click on the CRUD in the Structure Tree and select [Edit CRUD].
- ii) Click [Edit CRUD] button on the CRUD Property View.

On [Edit CRUD] dialog, edit the functions on the left, Models in the right and common options at the bottom.



##### a. Set Functions

Set the following options of functions on the left of [Edit CRUD] dialog.

##### (a) Show Items by grouping by diagrams

Show diagram names and group items by diagrams that they belong.

Default [ON]

## 14. Diagrams and Diagram Elements

[ON]

CRUD0 / CRUD					
	ER Diagram0	Entity0	Entity1	Entity2	Total
Flowchart					
Process					
Machine					
Flowchart1					
Data					
Total					

[OFF]

CRUD0 / CRUD					
	ER Diagram0	Entity0	Entity1	Entity2	Total
Process					
Machine					
Data					
Total					

### (b) Show total Row

Show the Total at the bottom.

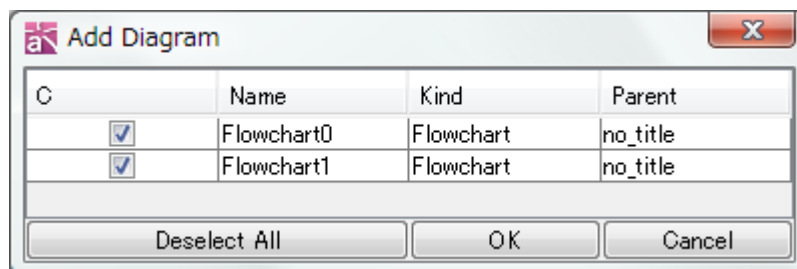
Default [ON]

### (c) Select Diagram Type to show

Specify diagram type (UseCase Diagram, Activity Diagram, Data Flow Diagram or Flowchart) to show in CRUD. There is only one diagram type to add in one CRUD.

### (d) Add Diagrams and Models

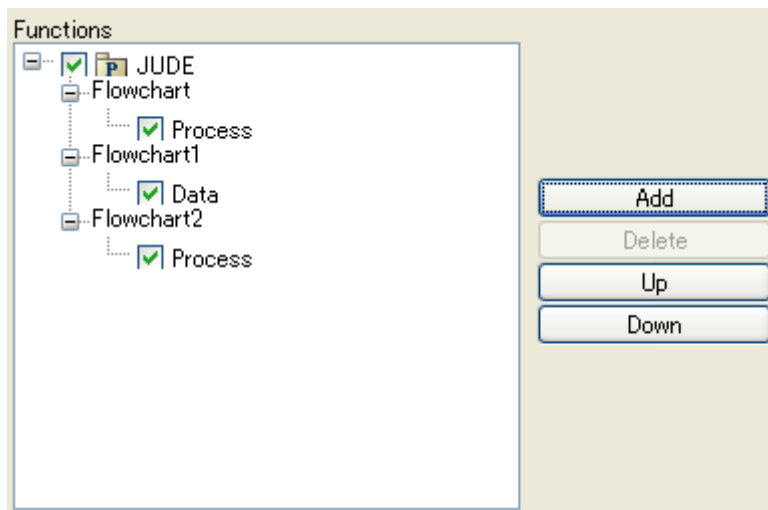
- (1) Click [Add] button beside the function column.



- (2) Click on the Diagram to show in CRUD then click [OK]. To select all, click on [Select All]. To deselect all, click on [Deselect All].
- (3) Selected Diagrams and all items in selected diagrams are shown in the Functions Column in Tree. Check items to show in CRUD.



## 14. Diagrams and Diagram Elements



### (e) Set order of Diagrams and Models

Select Diagram then sort the order by using UP/DOWN buttons on the right.

### How to remove the Diagrams...

To remove diagrams from the functions, select diagram to remove then click [Delete].

[Delete] button is available for diagrams only.

### (f) Set background color

Set background color of function table and the total row. Click on the color box at the bottom of [Edit CRUD] dialog, and select color in [Set color] dialog.

### b. Set Models

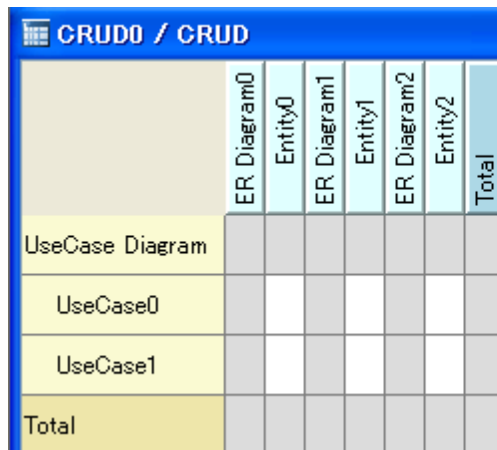
Set following options of Models on the right of [Edit CRUD] dialog.

#### (a) Show items by grouping by diagrams

Show diagram names and items by grouping by diagrams that they belong.

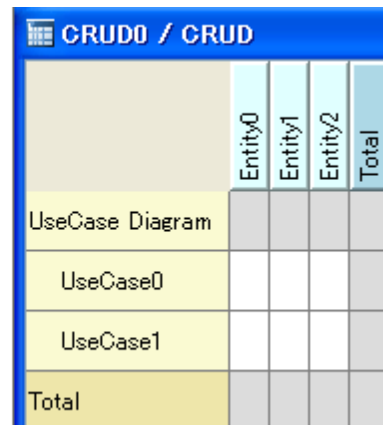
Default [ON]

## 14. Diagrams and Diagram Elements



	ER Diagram0	Entity0	ER Diagram1	Entity1	ER Diagram2	Entity2	Total
UseCase Diagram							
UseCase0							
UseCase1							
Total							

[ON]



	Entity0	Entity1	Entity2	Total
UseCase Diagram				
UseCase0				
UseCase1				
Total				

[OFF]

### (b) Show Total Column

Show the Total column at the right end.

Default [ON]

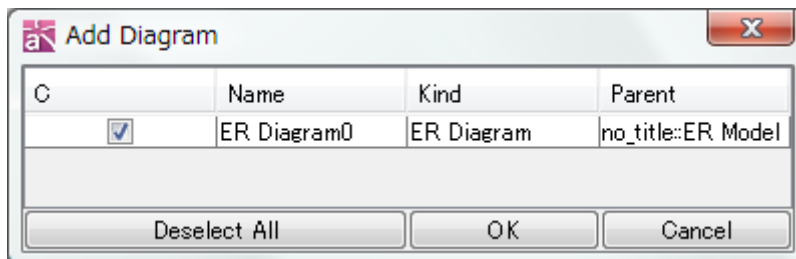
### (c) Label Type (Logical Model/Physical Model)

Select the label type from the dropdown list.

Default [Logical Model]

### (d) Add Diagrams and Models

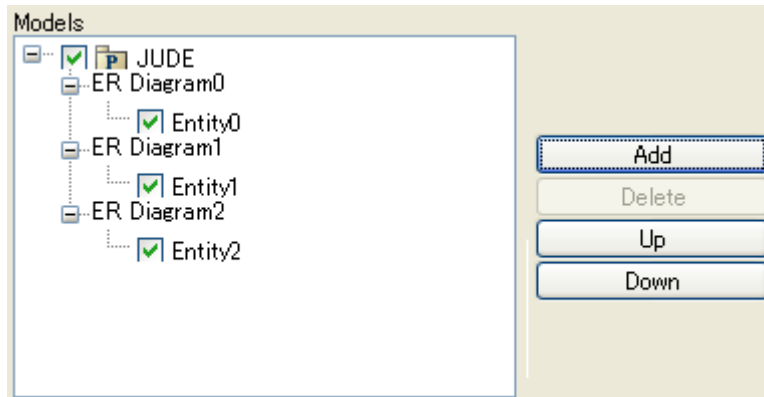
(1) Click [Add] button beside the Models column.



(2) Click on the diagram to show in CRUD then click [OK]. To select all, click on [Select All]. To deselect all, click on [Deselect All].

(3) Selected diagrams and all items in selected diagrams are shown in the Models Column in Tree. Check on the items to show in CRUD.

## 14. Diagrams and Diagram Elements



### (e) Set order of Diagrams and Models

Select Diagram then sort the order by using UP/DOWN buttons on the right.

### How to remove the Diagrams...

To remove diagrams from the Models, select diagram to remove then click [Delete]. [Delete] button is available for diagrams only.

### (f) Set background color

Set background color of Model table and total column. Click on the color box at the bottom of [Edit CRUD] dialog on the right, and select color.

### c. Set common options

#### (a) Background color of Automatic Value

Click on the color box to open the color chooser box for the color of Automatic Value Cell.

#### (b) Set diagram's cell value automatically.

It automatically inserts total values in Diagram row/column.

Default [ON]

CRUD0 / CRUD					
	ER Diagram0	Entity0	Entity1	Entity2	Total
UseCase Diagram	CR UD	C U	R	D	CR UD
UseCase0	CR	C	R		CR
UseCase1	UD	U		D	UD
Total	CR UD	C U	R	D	CR UD

CRUD0 / CRUD					
	ER Diagram0	Entity0	Entity1	Entity2	Total
UseCase Diagram					
UseCase0		C	R		CR
UseCase1		U		D	UD
Total		C U	R	D	CR UD

## 14. Diagrams and Diagram Elements

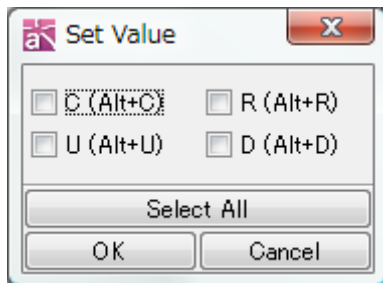
**[ON]**

**[OFF]**

### 14.13.3. Setting CRUD Value

#### a. Setting Value

- (1) Select cell then enter [C], [R], [U], and [D] keys to set CRUD value directly. Or double-click on the cell to insert value or right-click on the cell and select [Set CRUD Value].
- (2) Check the value. To select all, click on [Select All] and to deselect all, click on [Deselect All].



**Note)** Pressing down [Delete] Key deletes the all values in selected cell.

#### b. Setting color for cell

Double-click on the cell to set the color or right-click on the cell and select [Set Color].

#### c. Showing in Structure Tree

Right-click on Diagrams or Models in CRUD, and select [Show in Structure Tree].

#### e. Opening Diagram

Right-click on Diagrams/Models in CRUD, and select [Open Diagram].

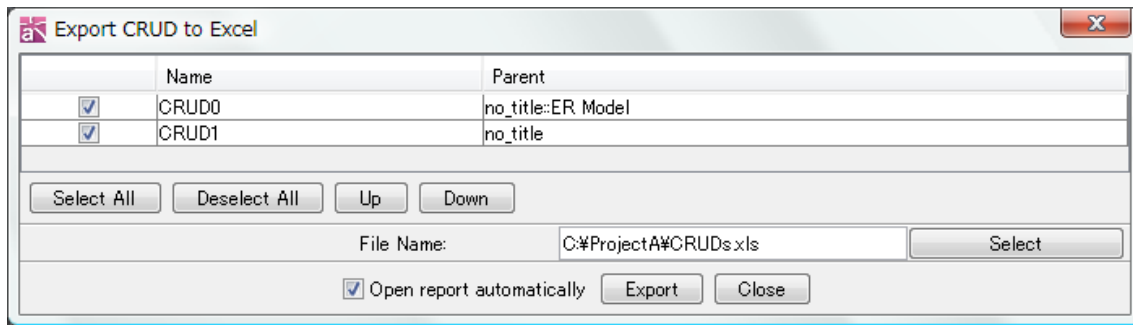
#### f. Adding Diagrams

Select the diagram to add in CRUD in the Structure Tree then drag and drop it onto the CRUD in the Diagram Editor. (UseCase Diagram, Activity Diagram, Flowcharts and ER Diagrams are available). Different type of Diagrams cannot be mixed in one CRUD.

### 14.13.4. Export CRUD to Excel

To export CRUD to Excel, go to [Tool] - [CRUD] - [Export CRUD to Excel] in the Main Menu.

## 14. Diagrams and Diagram Elements



### a. Select CRUDS to export

Check on target CRUDS to export.

### b. Sort the order of CRUD

Select CRUD then change the order by using [Up] [Down] button.

### c. File Name

Select file name to export CRUD to.

### d. Open report automatically

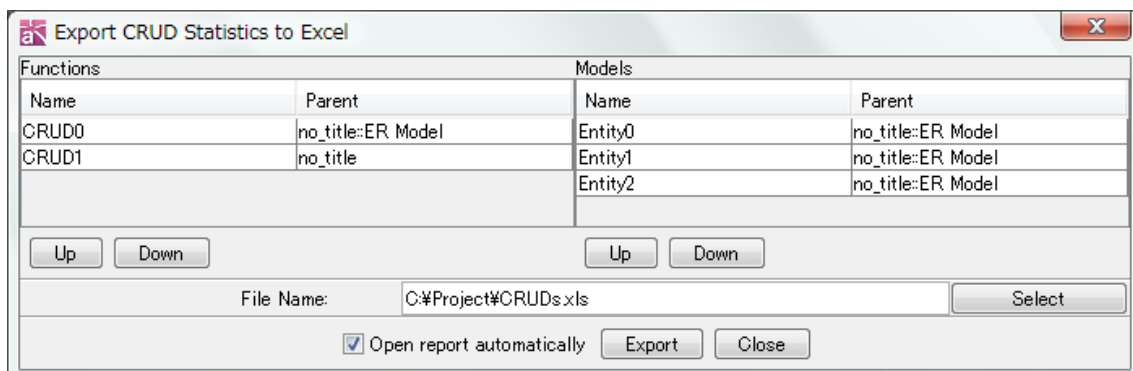
Check this option to open the exported CRUD automatically.

### e. Export

Click the Export button to export CRUD.

## 14.13.5. Export CRUD Statistics to Excel

Select [Tool] - [CRUD] - [Export CRUD Statistics to Excel] from Main Menu to export all CRUD statistics in the project file to Excel.



### a. Set order of items

Select models, and then change the order by using [Up] and [Down] buttons in each side (Functions and Models)

### b. File Name

Select a file to export CRUD Statistics to.

### c. Open report automatically

Check this option to open the CRUD Statistics automatically.

## 14. Diagrams and Diagram Elements

### d. Export

Click the Export button to export CRUD Statistics.

#### 14.13.6. Copying CRUD cells to Clipboard.

Select CRUD cells and right-click and select [Copy]. Copied contents can be pasted on Excel or text editors.

- a. Select CRUD cells and copy.      b. Paste to Excel.

CRUD0 / CRUD					
	ER Diagram0	Entity0	Entity1	Entity2	Total
UseCase Diagram	CR D	CR	R	D	CR D
UseCase0	CR	C	R		CR
UseCase1	R D	R		D	R D
Total	CR D	CR	R	D	CR D

	A	B	C	D	E
1	CRD	CR	R	D	CRD
2	CR	C	R		CR
3	RD	R		D	RD
4	CRD	CR	R	D	CRD
5					

## 14. Diagrams and Diagram Elements

### 14.14. Mindmaps

This section describes Mindmaps and the Diagram Elements that they can contain.



#### a. Mindmap

Mindmap refers to a method of thinking and of visualizing thoughts suggested by Tony Buzan, U.K. Its free and inspiring conventions help to extend ideas.

#### b. Root Topic

When a Mindmap is created, a Root Topic is automatically created. The Root Topic is the root of all other Topics. Root Topics cannot be deleted.

#### c. Child Topic

Child Topics always have a Parent Topic.

#### d. Edge

When a Child Topic is created, an Edge is automatically created. Edges cannot be created, deleted, or copied by themselves.

### 14.14.1. Creating Mindmaps

i) Using [Diagram]-[Mindmap] in the Main Menu.

ii) Using the [Structure Tree] in the “Project View” (by right-clicking).

### 14.14.2. Tool Buttons for Mind Map

There are Tool Buttons for Mind Map in Main Tool Bar.



Add Icon		Add Icons.
Open or Close Topic		Open or Close Topics in Mind Map.
Fork		Change the style of Topic into Fork style in Mind Map.
Bubble		Change the style of Topic into Bubble style in Mind Map.

## 14. Diagrams and Diagram Elements

### 14. 14. 3. Diagram Elements of Mind Map




Select		Mode for basic operations in the Diagram Editor.
Topic		Add Topics.
Link between Topics		Add Links between Topics.
Boundary		Add Boundaries.
Text		Insert Text in Diagrams.
Rectangle		Draw Rectangles/Rounded Rectangles on Diagrams. For example, Rectangle can be used to enclose a semantic collection of Model Elements.
Line		Draw Lines on Diagrams.
Image		Paste Images.
Lock Selected Mode		Lock the selected mode on the Tool Palette.
Depth Lock Mode		Lock the front and behind of Model Elements that are over each others.

### 14. 14. 4. Topics

#### a. Creating Topics

i) Creating a Child Topic using  the Tool Palette.

To create a Topic, use  [Topic] on the Tool Palette.



ii) Creating a Child Topic using the Pop-up Menu.

Right-click on the target Topic and select [Create Child Topic].



## 14. Diagrams and Diagram Elements



### iii) Creating a Parent Topic using the Pop-up Menu.[Shift + Insert]

Right-click on the target Topic and select [Create Parent Topic].



### iv) Creating a Brother Topic using the Pop-up Menu.[Enter]

Right-click on the target Topic and select [Create Brother Topic].



### v) Creating a Brother Topic upward using the Pop-up Menu.[Shift + Enter]

Right-click on the target Topic and select [Create Brother Topic upward].



## b. Editing Topics

### (a) Editing Topic Names

#### i) From the Topic Diagram Element.

Double-click the topic name in the Diagram Editor and then edit its name directly.

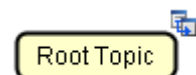
#### ii) Entering directly.

Select the target Topic and enter the Name. Then press the [Enter] key.

To insert a new line, press [Alt+Enter] or [Ctrl+Enter] keys.

### (b) Editing Hyperlinks

When a Hyperlink is added to a Topic, an icon is displayed.



#### i) Using the Pop-up Menu in the [Structure Tree].

Right-click on the target Topic in the Structure Tree and select [Hyperlink]-[Edit Hyperlink].

#### ii) Using the Pop-up Menu of the Diagram Element.

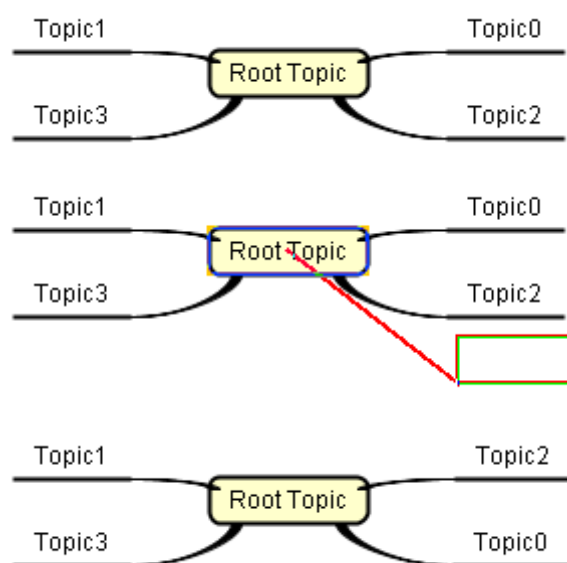
Right-click on the target Topic in the Diagram Editor and select [Hyperlink]-[Edit Hyperlink].

### (c) Switching Topic Positions [for Direct Child Topics of the Root Topic]

The positions of the Child Topics of the Root Topic can be moved from the right-side to the left-side by dragging.

### (d) Changing the order of Brother Topics

The order of Brother Topics can be changed by dragging.

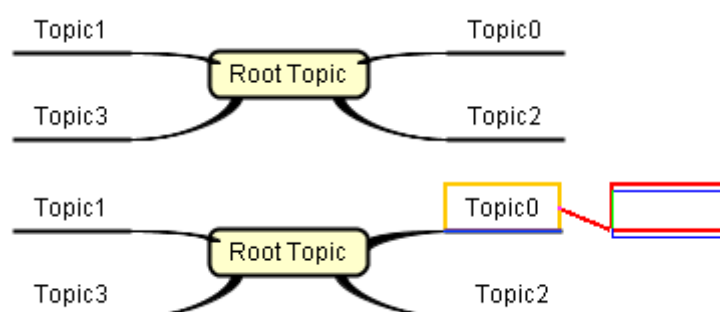


### (e) Shifting Topic

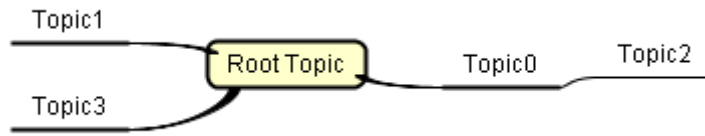
The Topics can be shifted by [Ctrl+ Left] / [Ctrl+ Right].

### (f) Changing the Parent Topic

The Parent Topic of a Topic can be changed by dragging.



## 14. Diagrams and Diagram Elements



### (g) Delete from Diagram [Delete]

Topics can be deleted by [Delete from Diagram] in the Topic Pop-Up menu. This can delete its Child Topics.

### (h) Delete Selected Topic

Selected Topics can be deleted by [Delete Selected Topic] in the Topic Pop-Up menu. This can delete only the selected Topic.

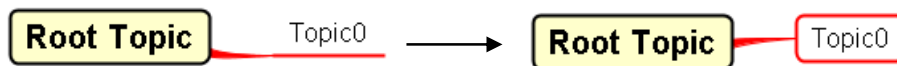
### (i) [Root Topic] Re-layout

Re-layout can be performed by using the Root Topic Pop-Up menu.

### (j) Changing Topic Styles

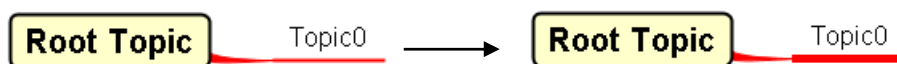
Right-click on the target topic and select [Set Style] - [Topic Style].

Or, click  [Fork] or  [Bubble] on Tool Bar.



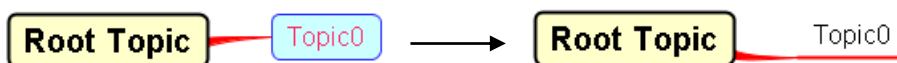
### (k) Changing Line Width

Right-click on the target Topic and select [Set Style] - [Line Width].



### (l) Restoring Default Styles

Topic Style, Background Color, Line Color, and Line Width can be restored to their default Styles. Right-click on the target Topic and select [Set Style] - [Restore Default Style].



### (m) Changing Background Color

Right-click on the target Topic and select [Set Style] - [Set Background Color].



**(n) Changing Line Color**

Right-click on the target Topic and select [Set Style] - [Set Line Color].



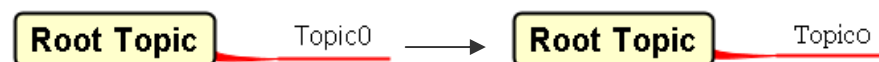
**(o) Changing Font Color**

Right-click on the target Topic and select [Set Style] - [Set Font Color].



**(p) Changing Font**

Right-click on the target Topic and select [Set Style] - [Set Font].




**(q) Boundary Visibility**

Right-click on the target Topic and select [Boundary Visibility].



**(r) Adding/Removing Icons**

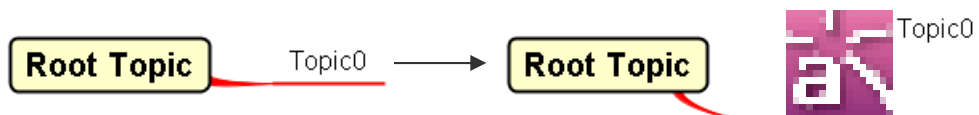
Right-click on the target Topic and select [Add Icon]/ [Remove Icon].

Or, click  [Add Icon] on Tool bar in Main Menu then select Icon to add.



**(s) Editing/Removing Icons**

Right-click on the target Topic and select [Edit Icon]/ [Remove Icon].



**c. Expanding/Collapsing Topics**


**(a) Expanding/Collapsing Topics**

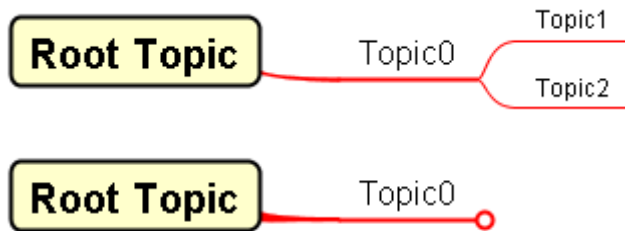
Topics with Child Topics can be expanded or collapsed (display/non-display).

Right-click on the target Topic and select [Open or Close Topic] ( [Alt+X]).

## 14. Diagrams and Diagram Elements

Double-click the connector of the Topic.

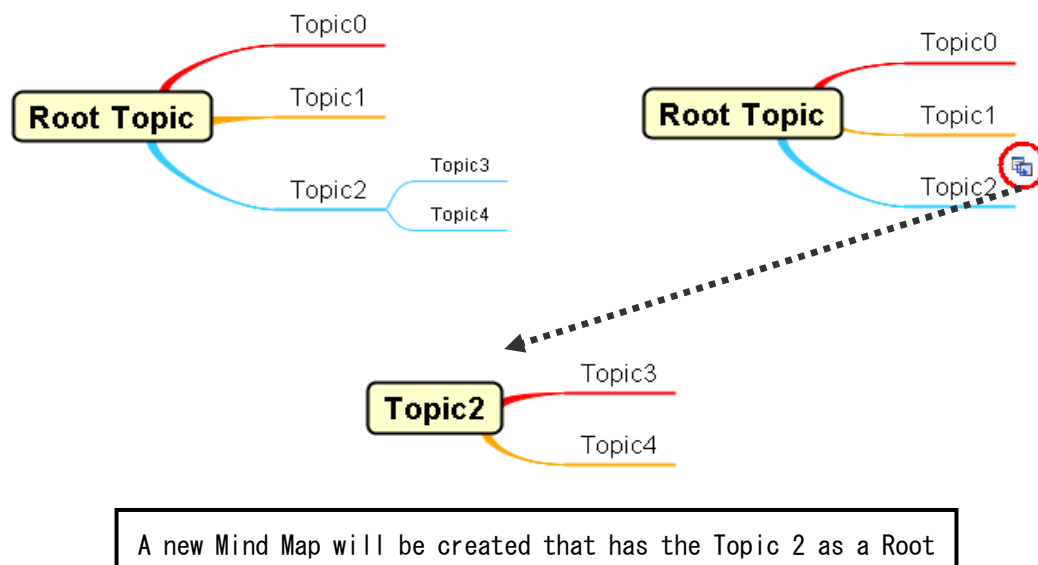
Or, click  [Open or Close Topic] on the Tool Bar.



### d. Split Topics to a new Mind Map

Select [Split Topic to a new Mind Map] on a Pop-Up Menu of a Topic. All child topics of the selected topic will be extracted and a new Mind Map will be created. A hyperlink of the new Mind Map will be added on the selected Topic.

EX) Select [Split Topic to a new Mind Map] on Topic 2.



### e. Converting Topics

#### (a) Converting Topics to UML Models

##### ii) By Pop-Up menu

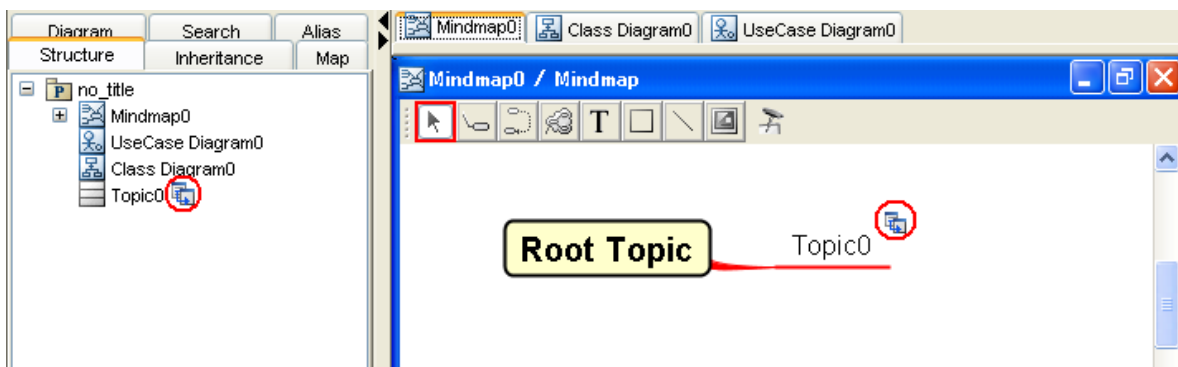
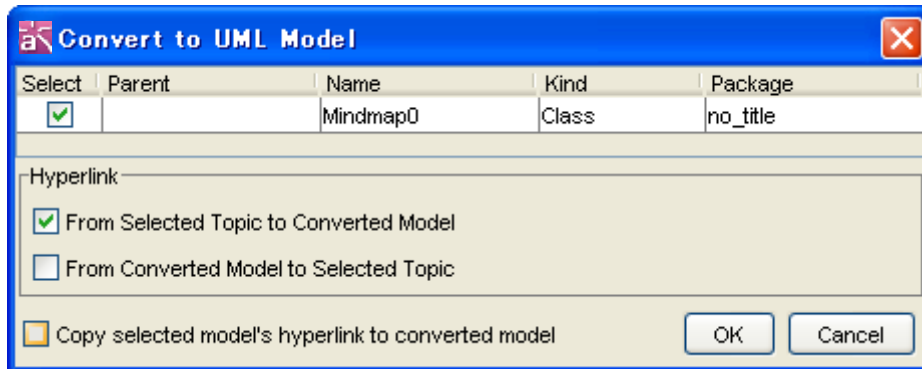
Right-click on the target Topic and select [Convert to UML Model] on the Diagram Editor or on the Structure Tree. Topics can be converted to Classes, Interfaces, Actors, and UseCases.

If other UML Models with the same name as the target Topics already exist in the Package, the Topics are not converted to UML Models.

## 14. Diagrams and Diagram Elements

Hyperlinks are added based to the options in the convert dialog.

- (1) From the source Topic to the converted UML Models.
- (2) From the converted UML Models to the source Topic.
- (3) Copy the source Topic's hyperlink to the converted UML Models.



### ii) By dragging and dropping.

Select the target Topics in the Structure Tree and drag them to another Diagram (except Mindmap). When the Topics are dropped in the Diagram Editor, [Convert UML Model Dialog] appears.

#### (1) Select

Topics that are checked in the [Select] column are converted.

#### (2) Parent

The Parent Topics of the target Topics are displayed in the [Parent] column.

#### (3) Name

The Names of the Target Topics are displayed in the [Name] column.

## 14. Diagrams and Diagram Elements

### (4) Kind

Select the UML Model Type to convert in the [Kind] column.

[Class Diagram]	Class, Interface, Package, Subsystem, Instance Specification, Note
[UseCase Diagram]	UseCase, Actor, Package, Subsystem, Note
[Statemachine Diagram]	State, Note
[Activity Diagram]	Action, Note
[Sequence Diagram]	Lifeline, Note
[Communication Diagram]	Lifeline, Note
[Component Diagram]	Component, Classifier, Artifact, Note
[Deployment Diagram]	Node, Component, instance Specification, Note
[Composite Structure Diagram]	Structure Class, Class, Interface, Note
[Flowchart]	Flow Element, Note
[Data Flow Diagram]	ProcessBox, Data Store, External Entity, Anchor, Note
[ER Diagram]	ER Entity, Note
[Mindmap]	N/A
[Requirement Diagram]	Requirement, TestCasem, Note

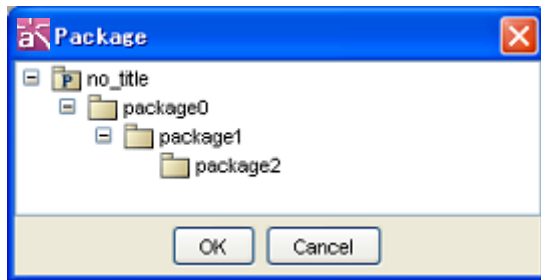
### (5) Package

In the [Package] column, select the Package where the UML Models should be created.

Double-click the item and set the Package.

The [Package] column cannot be set for some Model Types.

## 14. Diagrams and Diagram Elements



### (6) Hyperlink Target

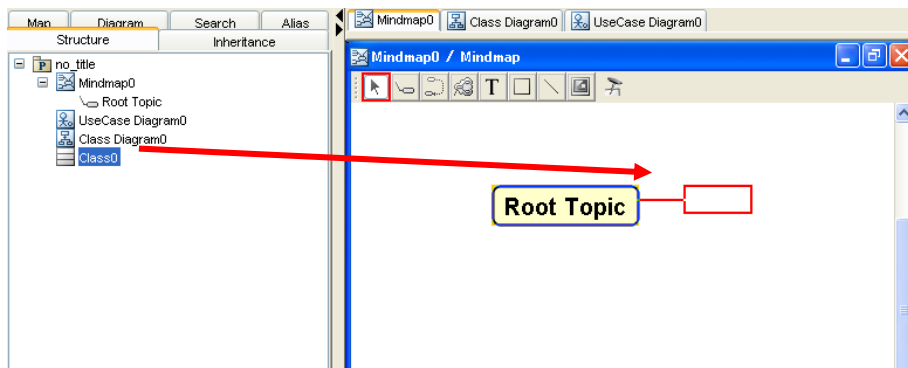
Select which type of Hyperlinks to add.

- (1) From the source Topic to the converted UML Models.
- (2) From the source Topic to the converted Diagram Elements.
- (2) From the converted UML Models / Diagram Elements to the source Topic.
- (3) Copy the source Topic's hyperlink to the converted UML Models.

### (b) Converting UML Models to Topics

#### i) By dragging and dropping

Select the target Model on the Structure Tree, and then drag it onto Mind Map in the Diagram Editor.



Hyperlinks to the original Models are added to the converted Topics and hyperlinks to the converted Topics are added to the original Models.

### f. Copying the Text of Topics and Pasting it into other Applications

Right-click on the Topic and select [Copy]. The Text of Topics in Mindmap can be copied and pasted into other applications as follows:

- (1) Text
- (2) Excel
- (3) MindManager™
- (4) Free Mind™



## 14. Diagrams and Diagram Elements

*For (3) and (4), Styles such as Color or Form cannot be copied.*

Topic Text can be pasted into a Text Editor.

```
Root Topic↓
  Topic0↓
    Topic1↓
      Topic2|
```

Topic text can be pasted into Excel™.

	A	B	C	D
1	Root Topic			
2		Topic0		
3			Topic1	
4				Topic2
5				

### 14.14.5. Edges

#### a. Creating Edges

Edges are automatically created when Child Topics are created. Edges cannot be created by themselves.

#### b. Editing Edges

##### (a) Changing Styles

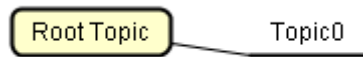
Right-click on the target Edge and select [Edge Style].



##### (b) Changing Line Width

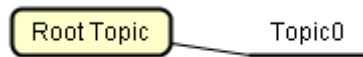
Right-click on the target Edge and select [Line Width].

## 14. Diagrams and Diagram Elements



### (c) Restoring Default Styles

Settings such as Edge Style, Line Color, and Line Width, can be restored to their default Styles. Right-click on the target Edge and select [Restore Default Style].



### (d) Changing Line Colors

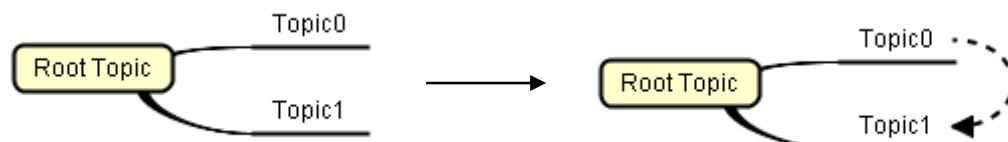
The Line Colors of Edges can be changed by using the Pop-up Menu. Right-click on the target Edge and select [Set Line Color].



## 14. 14. 6. Link between Topics

### a. Creating Links between Topics

To create a Link between Topics, use  [Link between Topics] on the Tool Palette.



### b. Setting a name for Links between Topics

Right-click on the link line between topics then select [Set Name] and enter its name. Note) To insert a new line in a topic line name, press the [Shift+Enter] or [Alt+Enter].

## 14. 14. 7. Boundary

### a. Creating Boundaries

#### i) Creating a Boundary using the Pop-up Menu.

To create a Boundary, use  [Boundary] on the Tool Palette.

#### ii) Showing/Hiding a Boundary using the Pop-up Menu.

## 14. Diagrams and Diagram Elements

Right-click on the target Topic and select [Boundary Visibility].

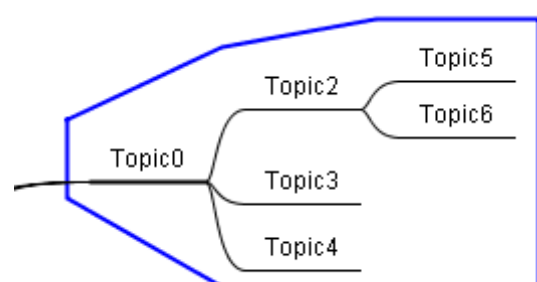


### b. Editing Boundaries

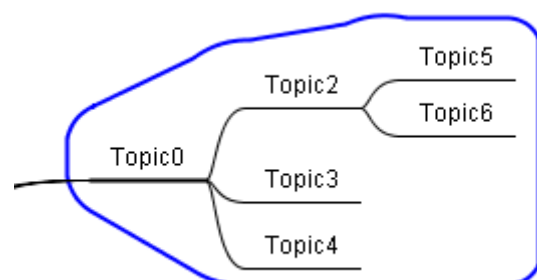
#### (a) Changing Boundary Styles

##### i) Using the Pop-up Menu.

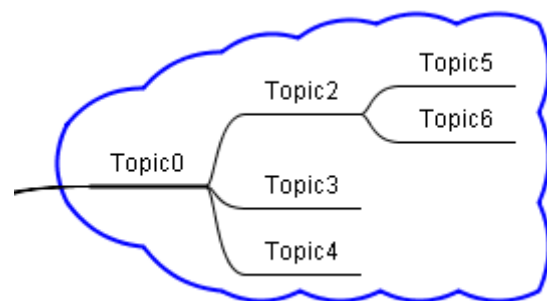
Right-click on the target Topic on the Diagram Editor and select [Boundary Style].



[Straight Line]



[Rounded Line]



[Cloud]

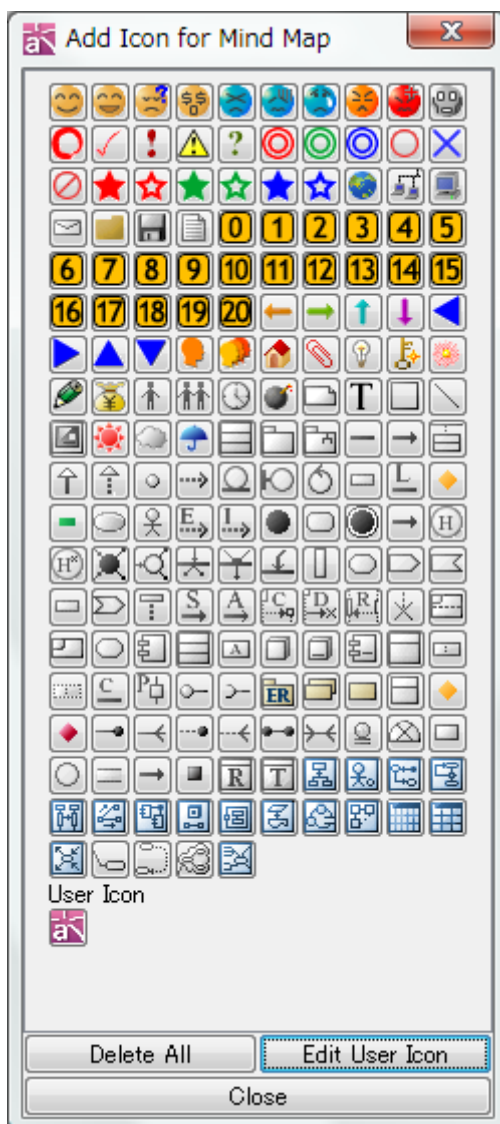
## 14. Diagrams and Diagram Elements

### 14.14.8. Using User Icons

Icons can be added into Mind Map Topics.

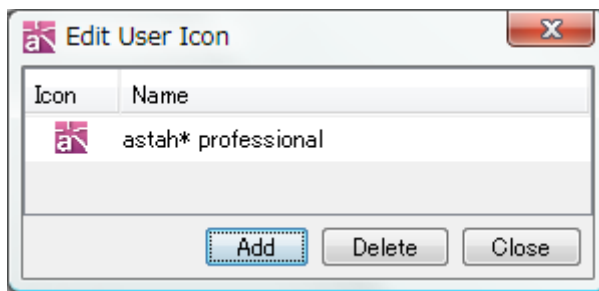
#### a. Adding User Icons

- (1) Right-click on the target Topic and select [Add Icon] - [From Icon List].
- (2) Click [Edit User Icon] button on [Add icon for Mind Map].



- (3) Press [Add] button on the [Edit User Icon] dialog and select an image file. Name can be set.

## 14. Diagrams and Diagram Elements



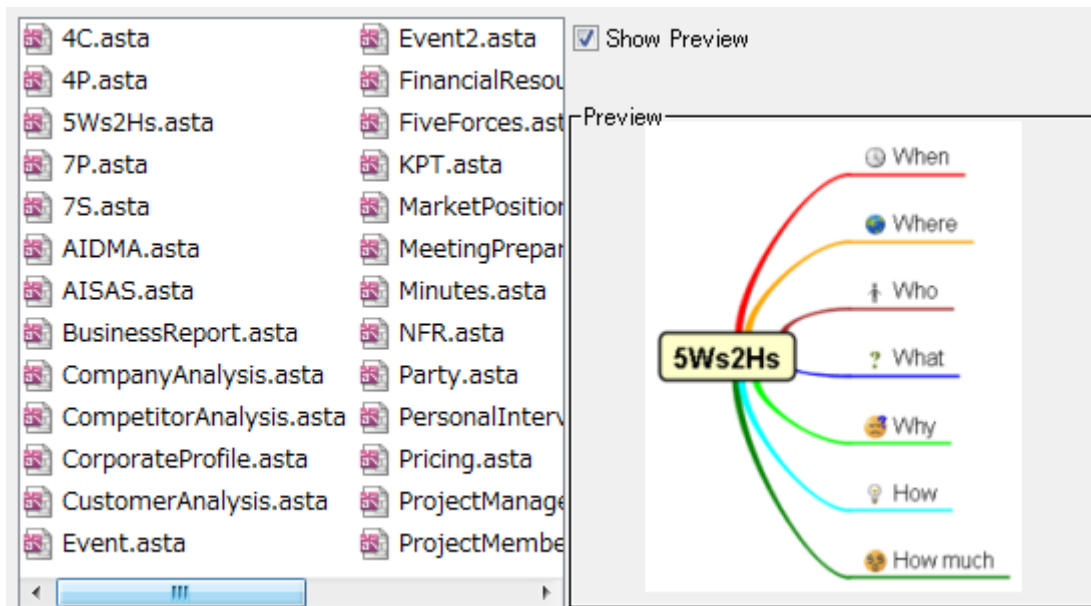
### b. Deleting User Icons

- (1) Open the [Edit User Icon] dialog
- (2) Select an User Icon and press [Delete]

## 14. 14. 9. Template Mindmap

### a. Template Mindmap

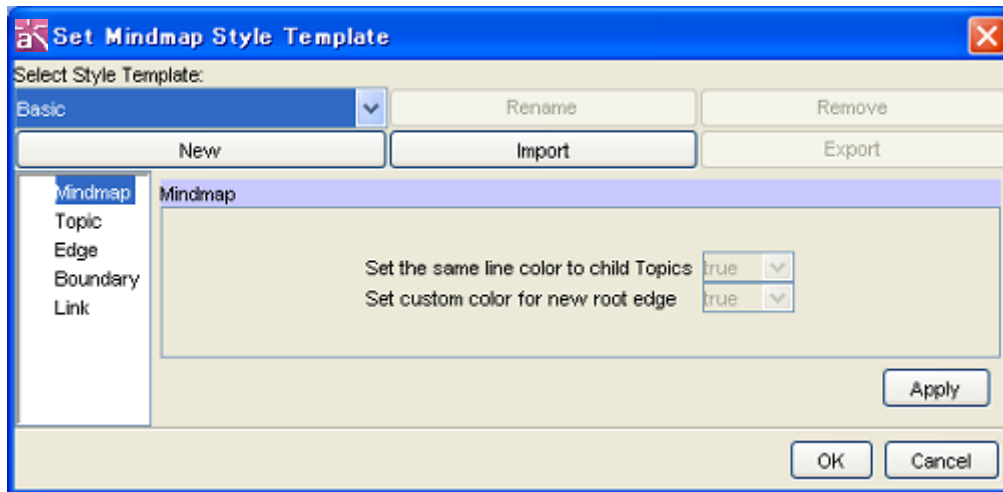
To open a template Mindmap, go to [Diagram] - [Mindmap] - [Template Mindmap]. It imports an existing Mindmap in a project.



## 14. 14. 10. Setting Mindmap Style Template

Mindmap style templates can be customized from [Tool] - [Set Template] - [Mindmap Style]. This Mindmap style template can be selected from the Mind map Pop-Up menu.

## 14. Diagrams and Diagram Elements

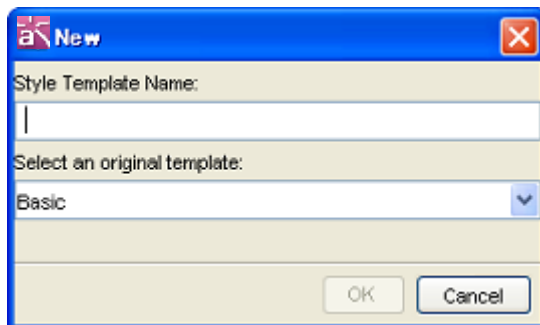


### a. Selecting Style Template

Select default or added style templates.

### b. Adding Style Template

Create a new style template.



#### (a) Style Template Name

Input a style template name.

#### (b) Select an original template

Select an original template.

### c. Renaming Style Template

Rename style templates.

#### (a) Style Template Name

Input the new style template name.

### d. Removing Style Template

Delete the style template selected in “Select Style Template” dropdown list. The default style templates cannot be removed.

## 14. Diagrams and Diagram Elements

### e. Importing Style Templates

Import style templates (.properties) for Mind Map.

### f. Exporting Style Template

Export style templates (.properties) for Mind Map.

### g. Setting Mind Map Style

Set Mind Map style.

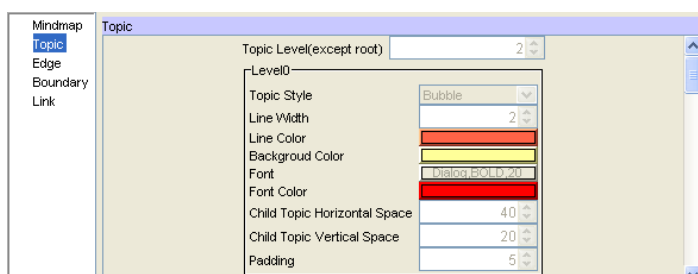


#### (a) Set the same line color to child Topics

To set the same line color to child Topics, select “True”.

Default [true]

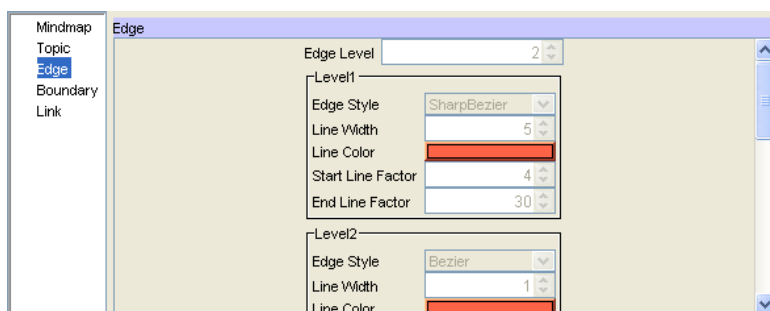
#### (b) Set custom color for new root edge



Default [true]

### h. Topic

Set the Topic style.



## 14. Diagrams and Diagram Elements

### (a) Topic Level (except root)

To set the Topic level, set the number of level.

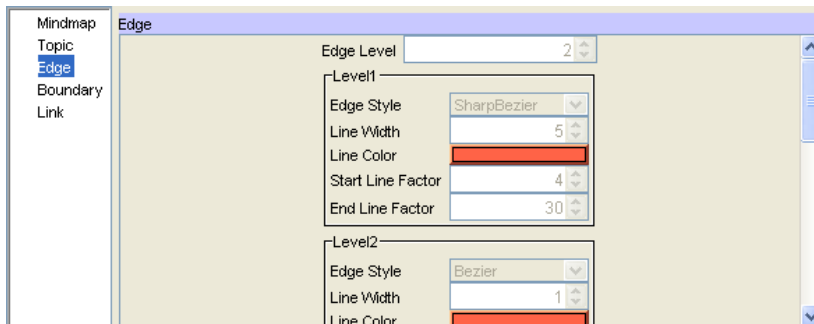
**Default [2]**

*Please select the following items for each Topic level.*

- (1) Topic Style
- (2) Line Width
- (3) Line Color
- (4) Background Color
- (5) Font
- (6) Font Color
- (7) Child Topic Horizontal Space
- (8) Child Topic Vertical Space
- (9) Padding

### i. Edge

Set the Edge style.



### (a) Edge Level

To set the Edge level, set the number of level.

**Default [2]**

*Please set the following items for each edge.*

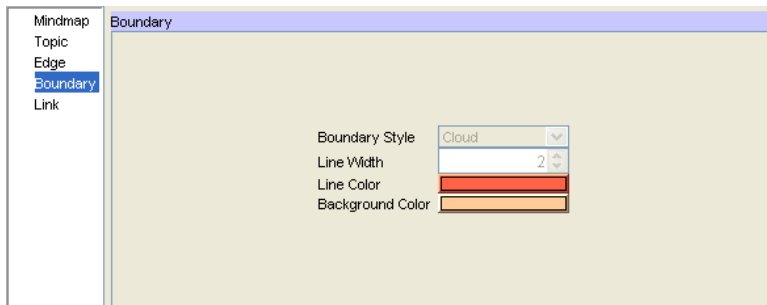
- (1) Edge Style
- (2) Line Width
- (3) Line Color
- (4) Start Line Factor
- (5) End Line Factor

### j. Boundary

Set the Boundary style.



## 14. Diagrams and Diagram Elements



### (a) Boundary Style

To set the Boundary Style, select from [Cloud]/ [Straight Line]/ [Rounded Line]

**Default [Cloud]**

### (b) Line Width

To set the line width, set the number of width.

**Default [2]**

### (c) Line Color

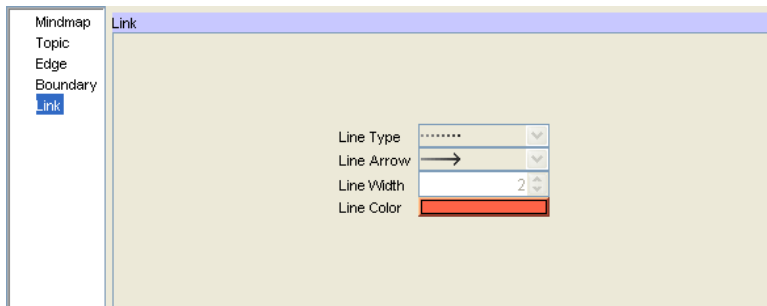
To set the Boundary line color, select the color.

### (d) Background Color

To set the Boundary background color, select the color.

## k. Link between Topics.

Set the Link between Topics.



### (a) Line Type

Select the Line type.

### (b) Line Arrow

Select the Line arrow.

### (c) Line Width

Set the Link Line width.

**Default [2]**

### (4) Line Color

Set the Line color.

## 14. Diagrams and Diagram Elements

### **14. 14. 11. Setting Mindmap Style**

Set the Mind Map Style in the Mind Map property view or the Pop-Up Menu of the Mindmap in the Structure Tree.

This setting does not affect to the style contents that is changed manually on the Diagram Editor. Please see the [Setting Mindmap Style Template](#) for more detail.

## 14. Diagrams and Diagram Elements












### 14.15. Requirement Diagram 【P】

#### 14.15.1. Creating Requirement Diagram











- a. Using [Diagram]-[Requirement Diagram] in the Main Menu
- b. Using the [Structure Tree] in the “Project View” (by right-clicking)

#### 14.15.2. Diagram Elements of Requirement Diagrams




Select		Mode for basic operations in the Diagram Editor.
Requirement		Add Requirements
TestCase		Add TestCases
Package		Add Packages
Nest		Add Nests
Derive		Add Derives
Copy		Add Copies
Satisfy		Add Satisfy
Verify		Add Verify
Refine		Add Refines
Trace		Add Traces

## 14. Diagrams and Diagram Elements

Note		Add comments to Model Elements.
Note Anchor		Anchor Notes to related Model Elements.
Text		Insert Text in Diagrams.
Rectangle		Draw Rectangles/Rounded Rectangles on Diagrams. For example, Rectangle can be used to enclose a semantic collection of Model Elements.
Line		Draw Lines on Diagrams.
Image		Paste Images.
Lock Selected Mode		Lock the selected mode on the Tool Palette.
Set Relation End to the center of the item		Place the ends of lines (e.g. Associations, Generalizations, or Dependencies) at the center of Model Elements.
Line Mode		Set the Line Mode (Line, Line (Right Angle), Curve, Curve (Right Angle)) to draw lines (e.g. Association) between Model Elements.
Synchronization Bar Independent Mode		Use this Mode to create Synchronization Bars independently from Partitions.

### 14.15.3. Requirement

#### a. Creating Requirements

- (a) Using  [Requirement] on the Tool Palette.
- (b) Using the [Structure Tree] in the “Project View”.

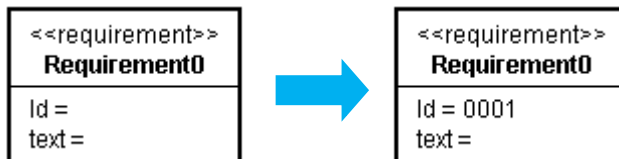
## 14. Diagrams and Diagram Elements

### b. Editing Requirements

Refer to [Class Diagrams – b. Editing Classes](#)

#### (a) Adding IDs

Right-click on the target Requirement and select [Add ID], or go to [Base] tab of Requirement property in the Property View.

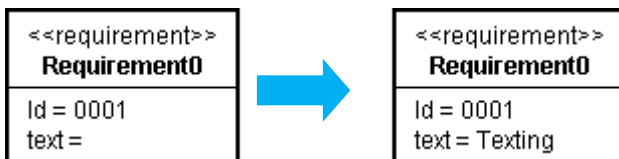


#### (b) Adding Texts

##### i) Adding it directly in the Diagram Editor

Double-click on the text= of Requirement and insert the text directly.

##### ii) Using the “Property View” ([Base] tab of Requirement Property)



#### (c) Visibility of ID/Texts

You can choose whether you want to show IDs/Texts on Requirements or not from its Pop-up menu.

## 14.15.4. TestCase

### a. Creating TestCases

(a) Using  [TestCase] on the Tool Palette.

(b) Using the [Structure Tree] in the “Project View”.

### b. Editing TestCases

Refer to [Class Diagrams – b. Editing Requirements](#)

## 14. Diagrams and Diagram Elements

### (a) Adding IDs

Go to [Base] tab of TestCase property in the Property View.

#### 14. 15. 5. Derive, Copy, Satisfy, Verify, Refine and Trace

##### a. Creating Derive, Copy, Satisfy, Verify, Refine and Trace

Use  [Derive] on the Tool Palette to create a Derive.

Use  [Copy] on the Tool Palette to create a Copy.

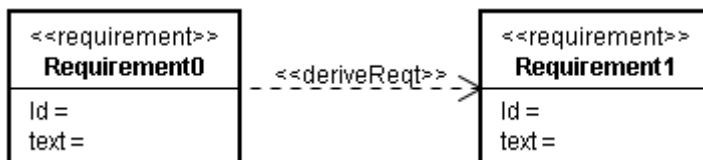
Use  [Satisfy] on the Tool Palette to create a Satisfy.

Use  [Verify] on the Tool Palette to create a Verify.

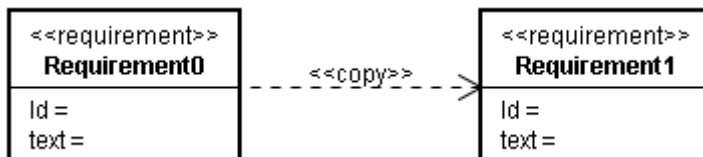
Use  [Refine] on the Tool Palette to create a Refine.

Use  [Trace] on the Tool Palette to create a Trace.

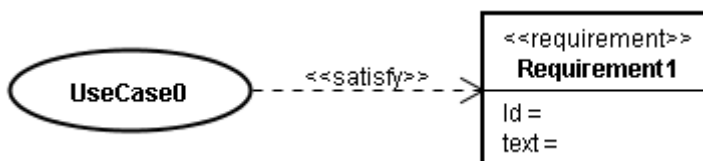
Derive will be shown as below in the Diagram.



Copy will be shown as below in the Diagram.

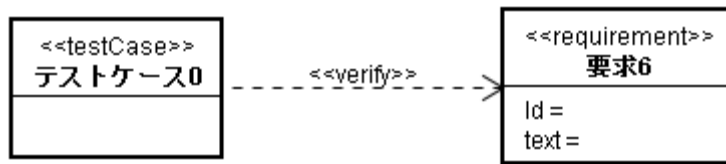


Satisfy will be shown as below in the Diagram.

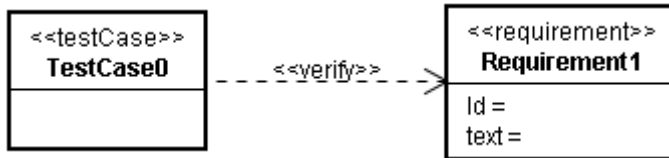


Verify will be shown as below in the Diagram.

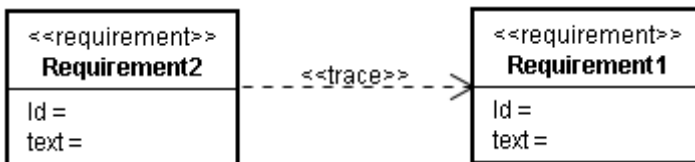
## 14. Diagrams and Diagram Elements



Refine will be shown as below in the Diagram.



Trace will be shown as below in the Diagram.



## 14. Diagrams and Diagram Elements

### 14.16. Requirement Table [P]

#### 14.16.1. Creating Requirement Table

Requirement Table is a table to list Requirement ID, Name and Text.

One Requirement Table can be created to each Project, Package, Model, Subsystem and Requirement.

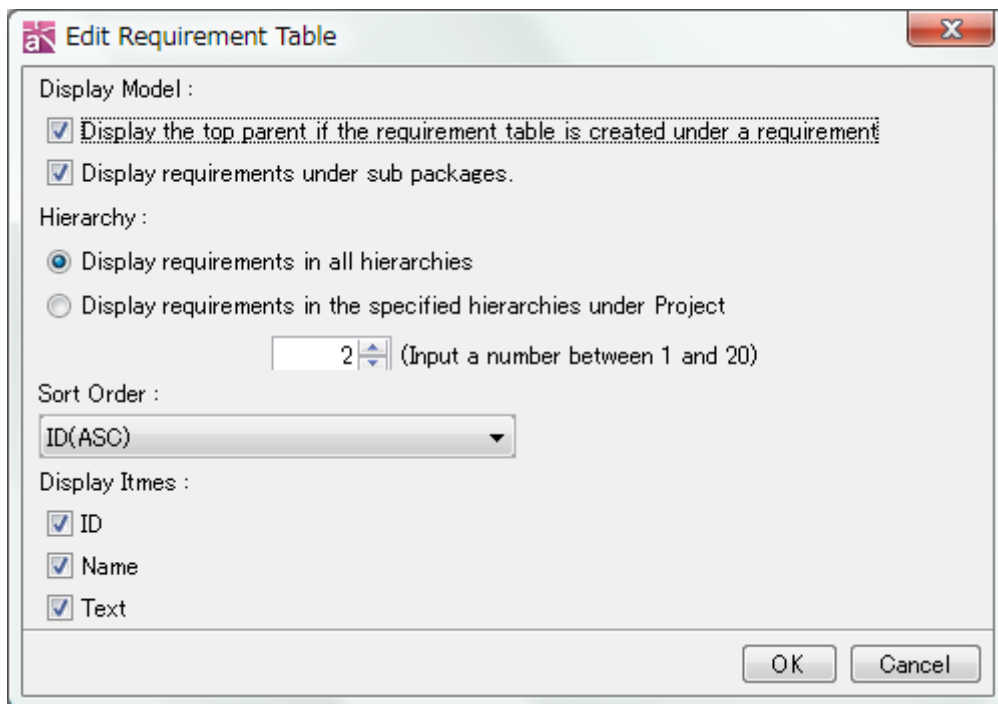
i) Using [Diagram]-[Requirement Table] in the Main Menu.

ii) Using the [Structure Tree] in the “Project View”

#### 14.16.2. Setting Requirement Table

i) Right-click on the Requirement Table in the Structure Tree and select [Edit Requirement Table].

ii) Click [Edit Requirement Table] button on the Requirement Table Property View.



##### a. Display Model

(a) Display the top parent if the requirement table is created under a requirement

Show the top parent if the Requirement is created under a Requirement.

Default [ON]

(b) Display requirements under sub packages.

Show the requirements under sub packages.



## 14. Diagrams and Diagram Elements

**Default [ON]**

### **b. Hierarchy**

#### **(a) Display requirements in all hierarchies**

Show Requirements in all hierarchies under the parent.

**Default [ON]**

#### **(b) Display requirements in the specified hierarchies under Project**

Show Requirements from the parent of the Requirement Table to the specified hierarchy. Models under the Project are counted as the first hierarchy. Set from 1 to 20 in the combo box.

**Default [OFF]**

### **c. Sort Order**

Set the sort order of Requirements.

ID (ASC) / ID (DESC) / Name (ASC) / Name (DESC) / Text (ASC) / Text (DESC)

**Default [ID (ASC)]**

### **d. Display Items**

Set the visibility of ID / Name / Text in the Requirement Table.

**Default [ON]**

## **14.16.3. Editing Requirement Table**

### **a. Editing Value**

Double-click on the ID / Name / Text cell on the Requirement Table. Text cell can be input with multiple lines.

### **b. Sorting**

Click on the header of the Requirement Table. ID / Name / Text can be sorted in the ascending / descending order.

### **c. Adding Requirement**

Right-click on the Requirement Table if there are no records on it. And, select [Add

## 14. Diagrams and Diagram Elements

Requirement].

### **d. Adding Child Requirement**

Right-click on a Requirement on the Requirement Table and select [Add Child Requirement]. A child Requirement is created under the selected Requirement.

### **e. Adding Brother Requirement**

Right-click on a Requirement on the Requirement Table and select [Add Brother Requirement]. A brother Requirement is created to the selected Requirement.

### **f. Editing Client**

Right-click on the Requirement on the Requirement Table and select [Edit Client].

Please refer to the [Requirement Table - Client](#) section.

### **g. Editing Supplier**

Right-click on the Requirement on the Requirement Table and select [Edit Supplier].

Please refer to the [Requirement Table - Supplier](#) section.

### **h. Converting to UseCase**

Right-click on the requirement on the Requirement Table and select [Convert to UseCase].

### **i. Deleting Requirement**

Right-click on the Requirement on the Requirement Table and select [Delete from Model].

### **j. Reference from Requirement Table**

To open a Requirement Table which refers to the selected Requirement, right-click on the Requirement on the Requirement Table and select [Reference from Requirement Table].

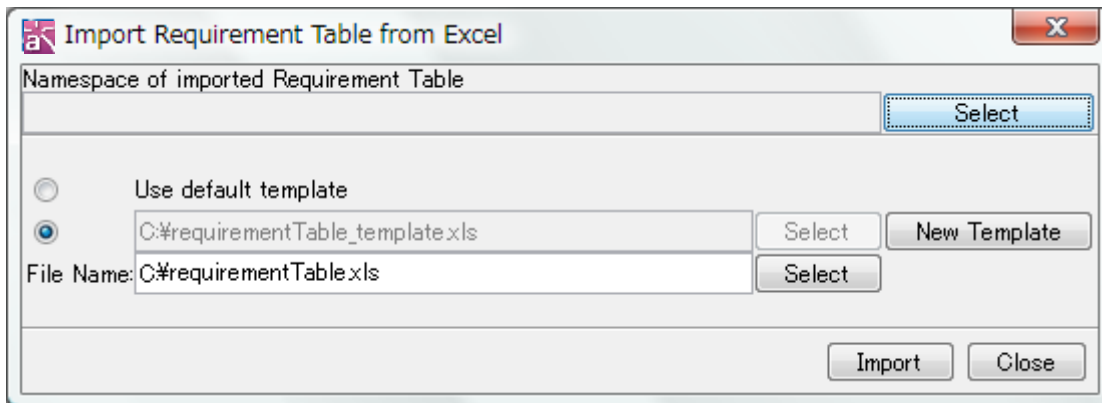
## 14. Diagrams and Diagram Elements

### a. Showing in Structure Tree

Right-click on the Requirement on the Requirement Table and select [Show in Structure Tree].

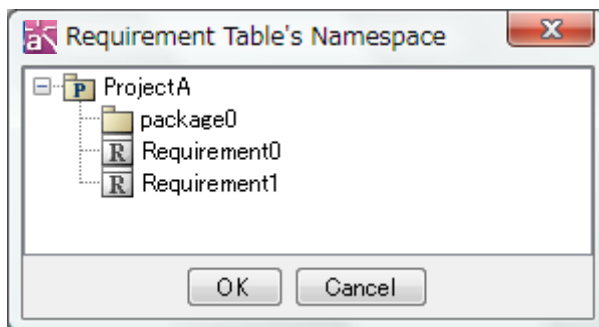
### 14.16.4. Import Requirement Table from Excel

To import a Requirement Table from Excel, go to [Tool] - [Requirement] - [Import Requirement Table from Excel] in the Main Menu.



### a. Requirement Table

Click on the Select button and specify a Namespace.



### b. Select Template

Select a Template:

- Use default template.
- Select an existing template.
- Create a new template.

Please refer to the [Requirement Table Template](#) section.

### e. Import

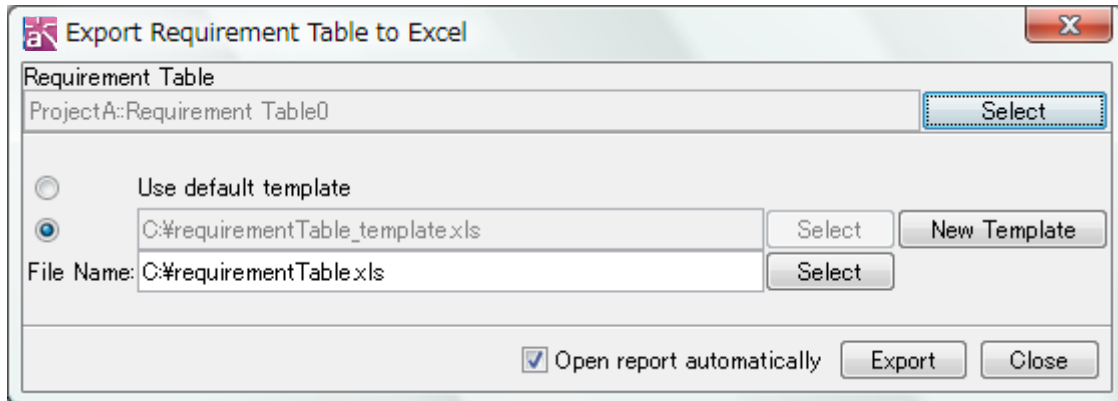
Click the Import button to import Requirement Table.

If there are conflicts between the working project and the imported Requirement Table, the latter Requirement Table has priority over the working Requirement Table.

## 14. Diagrams and Diagram Elements

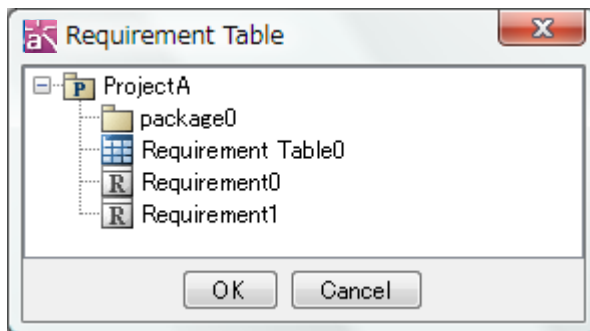
### 14.16.5. Export Requirement Table to Excel

To export a Requirement Table, go to [Tool] - [Requirement] - [Export Requirement Table to Excel] in the Main Menu.



#### a. Requirement Table

Click on the Select button and specify a Requirement Table.



#### b. Select Template

Select a Template:

- Use default template.
- Select an existing template.
- Create a new template.

Please refer to the [Requirement Table Template](#) section.

#### c. Open report automatically

Check this option to open the exported Requirement Table automatically.

#### e. Export

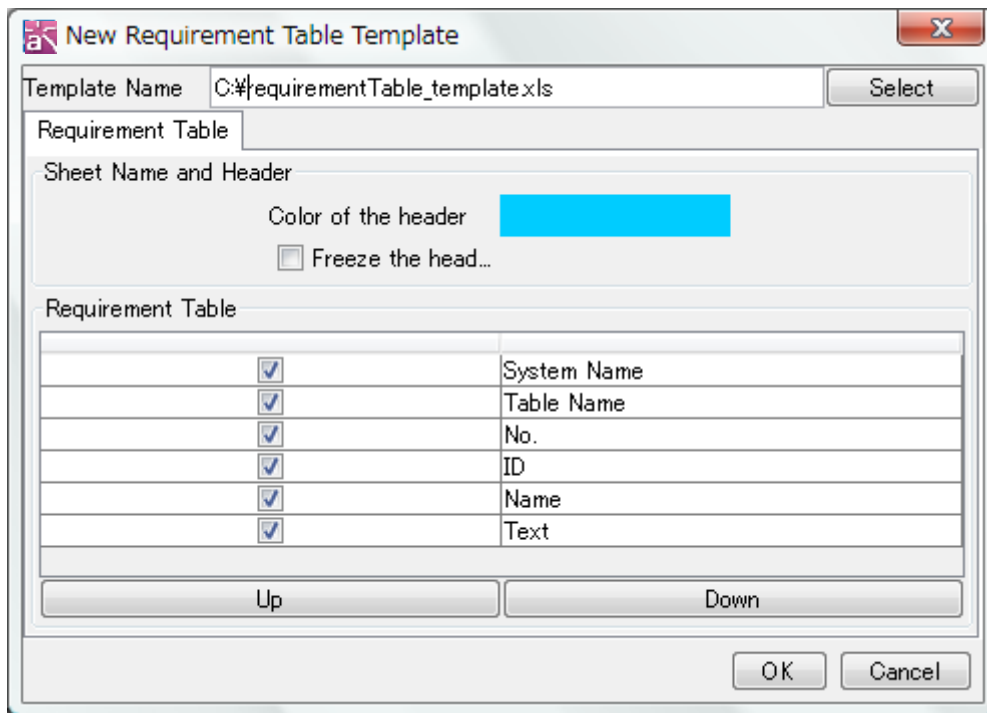
Click the Export button to export Requirement Table.

### 14.16.6. Requirement Table Template

To create a Requirement Table template, go to [Tool] - [Requirement] - [Import

## 14. Diagrams and Diagram Elements

Requirement Table from Excel / Export Requirement Table to Excel] in the Main Menu and click on the [New Template] button.



### a. Template Name

Set the template name.

### b. Requirement Table

#### (a) Header Color

Specify the header color.

#### (b) Freeze the header

Freeze the header position.

#### (c) Requirement Table

The following items can be set in a template.

- System Name
- Table Name
- No.
- ID
- Name
- Text

#### (d) Up/Down

## 14. Diagrams and Diagram Elements

Up and Down items order.

### Output Items of Requirement Table

ID – \$each.requirement.id

Name – \$each.requirement.name

Text – \$each.requirement.text

*Note) Header, footer and other items can be set to a template file (Excel) of a Requirement Table.*

### 14. 16. 7. Copying Requirement Table cells to Clipboard.

Select Requirement Table cells and right-click and select [Copy]. Copied contents can be pasted on Excel or text editors.

- a. Select Requirement table and copy

Requirement Table01 / Requirement Table		
ID	Name	Text
A-1	Requirement1	AAA
A-1-1	Requirement1-1	
A-1-2	Requirement1-2	
B-1	Requirement1	BBB

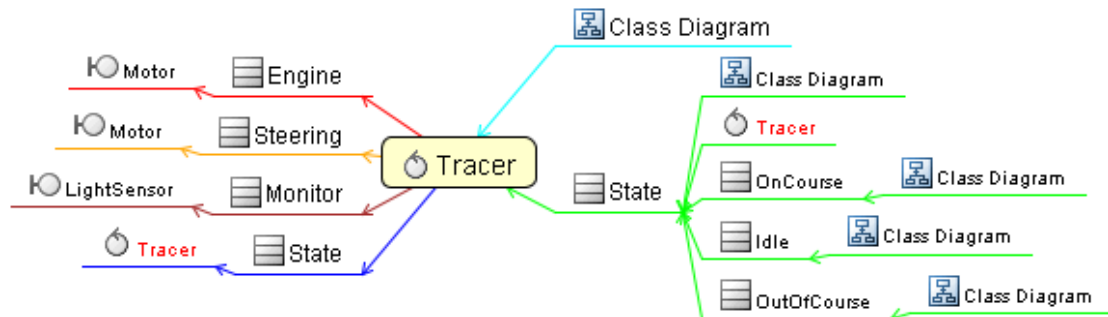
- b. Paste to Excel

	A	B	C
1	A-1	Requirement1	AAA
2	A-1-1	Requirement1-1	
3	A-1-2	Requirement1-2	
4	B-1	Requirement1	BBB

## 14. Diagrams and Diagram Elements

### 14.17. Traceability Map [P]

Traceability Map shows the relationships between models with Mind Map format.



#### 14.17.1. Creating Traceability Maps

##### a. Models for Traceability Map

Traceability Map can be created under the following models:

Package, Model, Subsystem, Class, UseCase, Component, Artifact, Node, External Entity, Data Store, ER Entity, Requirement, TestCase

##### b. Relationships for Traceability Map

###### (a) Related Models

The following relationships can be displayed in the Traceability Map:

Association, AssociationClass, Generalization, Realization, Dependency, Usage, Template Binding, Extend, Include, Identifying Relationship, Non-Identifying Relationship, Many-to-Many Relationship

###### (b) Related Reference

- Type Reference  
(Attribute Type, Operation Return Value, Base Class of Instance Specification, Lifeline, Object Node, Component Instance, Node Incentance)
- Dependencies of Requirements and TestCases
- Diagrams displayed the diagram elements of the models.

##### c. Creating Traceability Maps

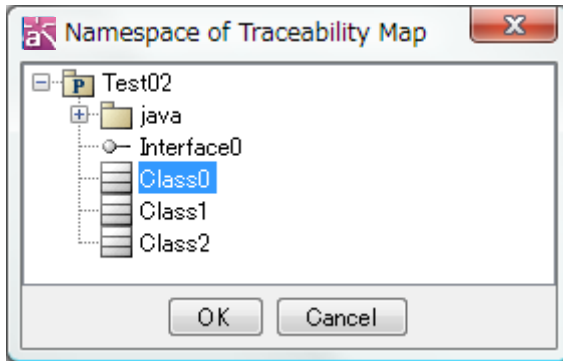
###### i). Using the [Structure Tree] in the “Project View”

Select [Open Traceability Map] in the target model on the Structure Tree. If the Traceability Map exists, it is updated and opened.

## 14. Diagrams and Diagram Elements

### ii) Using [Open Traceability Map] in the Main Menu

Select [Tool] - [Traceability Map] - [Open Traceability Map] in the Main Menu and select the target model in [Namespace of Traceability Map] dialog. If the Traceability Map exists, it is updated and opened.



## 14.17.2. Operating on Traceability Map

### a. Relationships and Types

Traceability Map can be created under the following models:

Package, Model, Subsystem, Class, UseCase, Component, Artifact, Node, External Entity, Data Store, ER Entity, Requirement, TestCase

### b. Open Diagram

Traceability Map can be created under the following models:

Package, Model, Subsystem, Class, UseCase, Component, Artifact, Node, External Entity, Data Store, ER Entity, Requirement, TestCase

### c. Open Traceability Map

Traceability Map can be created under the following models:

Package, Model, Subsystem, Class, UseCase, Component, Artifact, Node, External Entity, Data Store, ER Entity, Requirement, TestCase

### d. Showing in Structure Tree

Right-click on Diagrams or Models in Traceability Map, and select [Show in Structure Tree].




## 14. Diagrams and Diagram Elements

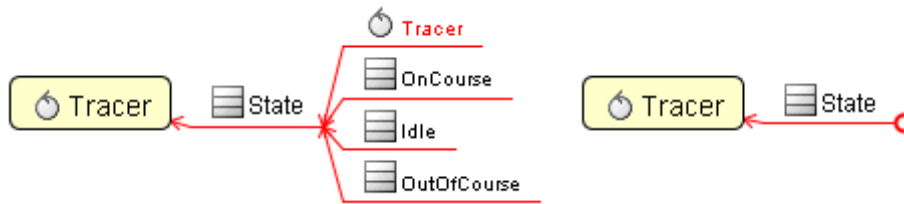
### e. Expanding /Collapsing Topics

Topics with Child Topics can be expanded or collapsed (display/non-display).

Right-click on the target Topic and select [Open or Close Topic] ( [Alt+X]).

Double-click the connector of the Topic.

Or ,click  [Open or Close Topic] on the Tool Bar.



### 14. 17. 3. Updating Traceability Maps

To update the Traceability Map, the following operations are required.

#### a. Updating Traceability Maps

##### i) Updating a Traceability View using the Tool Palette.

To update a Traceability Map, use  [Update] on the Tool Palette.

##### ii). Using the [Structure Tree] in the “Project View”

Right-click on the target Traceability Map in the Structure Tree and select [Update Traceability Map].

#### b. Updating All Traceability Maps

##### i) Using the [Structure Tree] in the “Project View”

Right-click on the project in the Structure Tree and select [Update All Traceability Maps].

##### ii). Using the [Update All Traceability Maps] in the Main Menu.

Select [Tool] - [Traceability Map] - [Update All Traceability Maps] in the Main Menu.

### 14. 17. 4. Deleting Traceability Maps

#### a. Deleting Traceability Maps

##### i). Using the [Structure Tree] in the “Project View”

Right-click on the target Traceability Map in the Structure Tree and select [Delete]..

## 14. Diagrams and Diagram Elements

### **b. Updating All Traceability Maps**

#### **i) Using the [Structure Tree] in the “Project View”**

Right-click on the project in the Structure Tree and select [Update All Traceability Maps].

#### **ii). Using the [Delete All Traceability Maps] in the Main Menu.**

Select [Tool] - [Traceability Map] - [Delete All Traceability Maps] in the Main Menu.

## 14. Diagrams and Diagram Elements

### **14. 18. Converting Models (UML Models, DFD Models, Flowchart, ER Models) [P]**

#### **14. 18. 1. Converting Models**

UML Models, DFD Models, Flowchart elements and ER Models can be converted in astah\*.

##### **a. Convert from UML Models to ER Models**

Model	Source	Target	Pop-Up Menu on Structure Tree	Drag & Drop from Tree to Diagram	Pop-Up Menu on Diagram Editor
UML Model	Class	ER Entity	OK	OK	-
	Interface	ER Entity	OK	OK	-
	Entity	ER Entity	OK	OK	-
	Boundary	ER Entity	OK	OK	-
	Control	ER Entity	OK	OK	-
	Actor	ER Entity	OK	OK	-
	Association Class	ER Entity	OK	OK	-

##### **b. Convert from UML Models to DFD Models**

Model	Source	Target	Pop-Up Menu on Structure Tree	Drag & Drop from Tree to Diagram	Pop-Up Menu on Diagram Editor
UML Model	Actor	External Entity	OK	OK	-
	UseCase	Process Box	-	OK	-

##### **c. Convert From DFD Models to UML Models and ER Models**

Model	Source	Target	Pop-Up Menu on Structure Tree	Drag & Drop from Tree to Diagram	Pop-Up Menu on Diagram Editor
-------	--------	--------	-------------------------------	----------------------------------	-------------------------------

#### 14. Diagrams and Diagram Elements

DFD Model	Process Box	UseCase	-	-	OK
	External Entity	Actor	OK	OK	-
	Data Store	ER Entity	OK	OK	-
	Dataflow	ER Entity	-	-	OK

##### d. Convert From Flowchart Elements to UML Models

Model	Source	Target	Pop-Up Menu on Structure Tree	Drag & Drop from Tree to Diagram	Pop-Up Menu on Diagram Editor
Flowchart	Flowchart Element	UseCase	-	-	OK
	Lane	Actor	-	-	OK

##### e. Convert From ER Models to UML Models and DFD Models.

Model	Source	Target	Pop-Up Menu on Structure Tree	Drag & Drop from Tree to Diagram	Pop-Up Menu on Diagram Editor
ER Model	ER Entity	Class	OK	OK	-
	ER Entity	Data Store	OK	OK	-

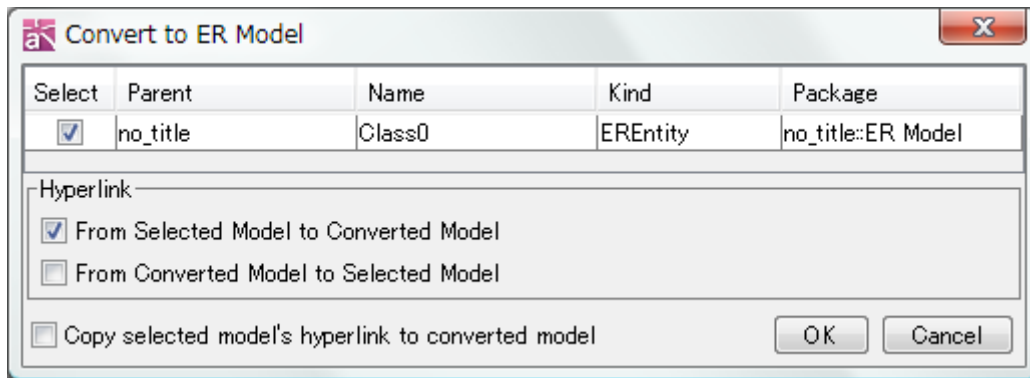
##### i) Using the [Structure Tree]

Right-click the source model and select [Convert] in the Structure Tree.

Hyperlinks are added based to the options in the convert dialog.

- (1) From the source Model to the converted Model.
- (2) From the converted Model to the source Model.
- (3) Copy the source Model's hyperlink to the converted Model.

## 14. Diagrams and Diagram Elements

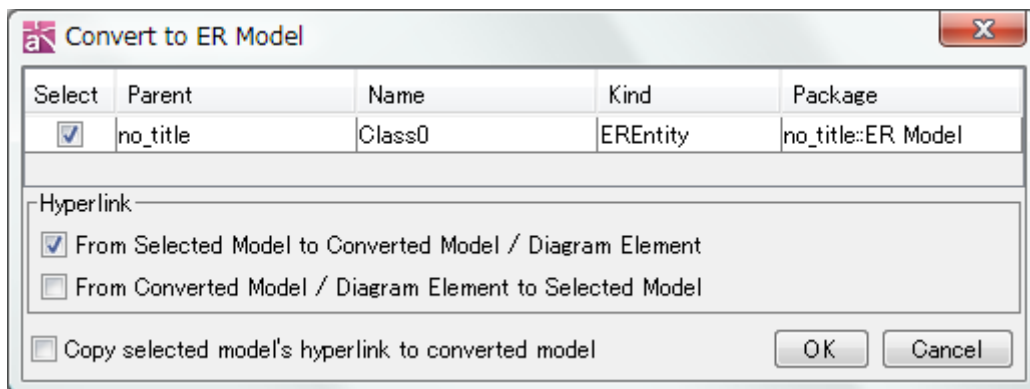


### ii) By dragging and dropping.

- (1) Select the source Models to convert in the Structure Tree.
- (2) Drag and drop them onto the target Diagram who is currently open in the Diagram Editor.

Hyperlinks are added based to the options in the convert dialog.

- (1) From the source Models to the converted Models / Diagram Elements.
- (2) From the converted Models / Diagram Elements to the source Models.
- (3) Copy the source Model's hyperlink to the converted Model.



### iii) Using the Pop-Up Menu in Diagram Editor

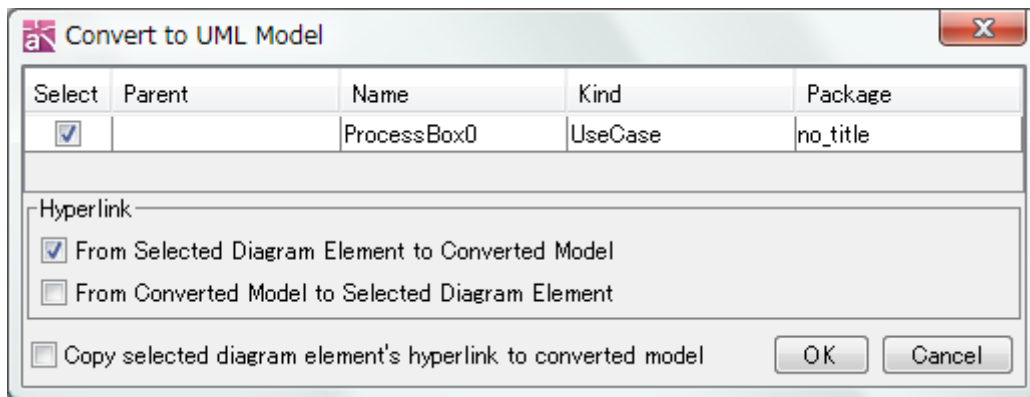
- (1) Open the Diagram then do right-clicking the source Diagram Element on the Diagram Editor.
- (2) Select [Convert] in the Pop Up Menu.

Hyperlinks are added based to the options in the convert dialog.

- (1) From the source Diagram Element to the converted Model.
- (2) From the converted Model to the source Diagram Element.

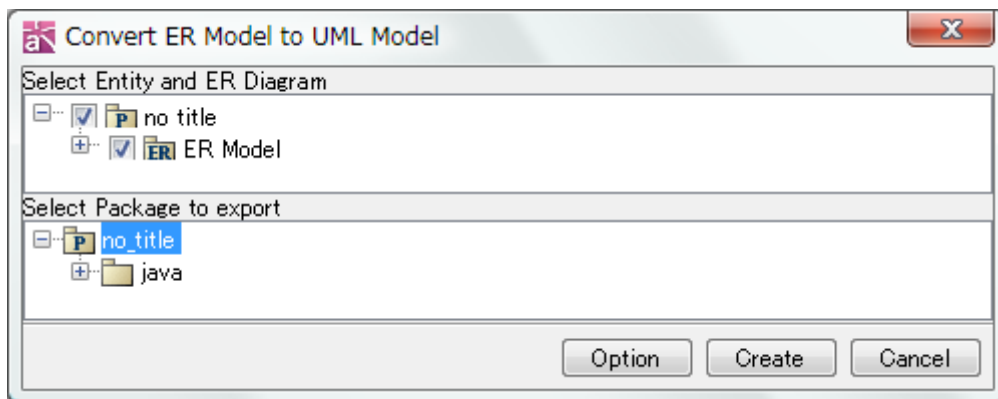
## 14. Diagrams and Diagram Elements

(3) Copy the source Diagram Element's hyperlink to the converted Model.



### 14.18.2. Converting ER Model to UML Model

i) Select [Tool] - [ER Diagram] - [Convert ER Model to UML Model]



#### 1. Select Models

Select ER models to convert into UML Model from the top tree.

#### 2. Select a Package

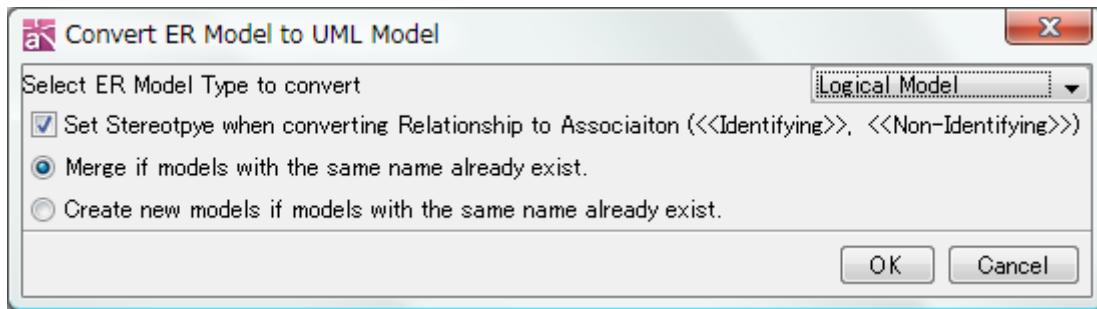
Select a package to export converted Models into.

#### 3. Option

Set the option.

- (1) ER Model Type (Physical Model or Logical Model)
- (2) Check the box to set Stereotype of <<Identifying>> or <<Non-Identifying>> to the Association to converted models
- (3) Merge or create new models if models with the same name already exist.

## 14. Diagrams and Diagram Elements



### 4. Create

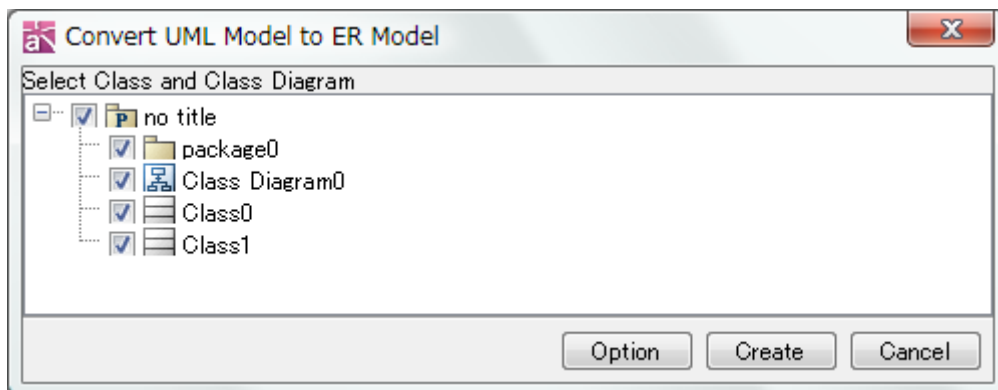
Convert the selected ER Model to UML Model.

#### i) Using the Pop-Up Menu in the Structure Tree.

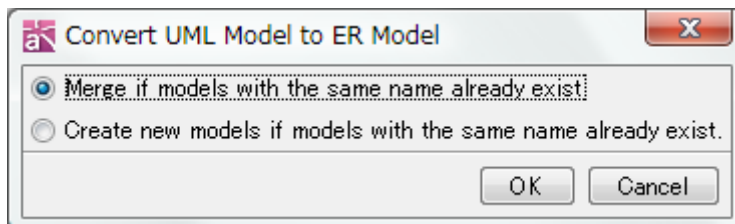
- (1) Select ER Entity in the Structure Tree then select [Convert to Class] on its Pop-Up Menu.
- (2) Select ER Diagram in the Structure Tree then select [Convert to Class Diagram] on its Pop-Up Menu.

#### ii) Drag ER Entities from the Structure Tree and drop them onto Class Diagram in the Diagram Editor.

### 14.18.3. Converting UML Model to ER Model



#### i) Select [Tool] - [ER Diagram] - [Convert UML Model to ER Model]



#### Options:

- Merge if models with the same name already exist.

## 14. Diagrams and Diagram Elements

- Create new models if models with the same name already exist.

### ii) Using the Pop-Up Menu in the Structure Tree.

- (1) Select Class in the Structure Tree, and select [Convert to ER Entity] on its Pop-Up Menu.
- (2) Select Class Diagram in the Structure Tree, and select [Convert to ER Diagram] on its Pop-Up Menu.

### 14. 18. 4. Converting Text to Model

Text in Clipboard can be converted to Models. Text with new lines are converted multiple Models.

Diagram	Converted Model (*) Default
Class Diagram	Class (*) Interface Package Subsystem Instance Specification Note
UseCase Diagram	UseCase (*) Actor Package Subsystem Note
Statemachine Diagram	State (*) Note
Activity Diagram	Action (*) Note
Sequence Diagram	Lifeline (*) Note
Communication Diagram	Lifeline (*) Note
Component Diagram	Component (*) Classifier Artifact Note

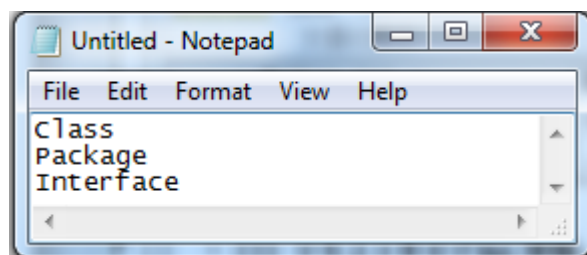


## 14. Diagrams and Diagram Elements

Deployment Diagram	Node (*) Component Instance Specification Note
Composite Structure Diagram	Structured Class (*) Class Interface Note
Flowcart 【P】	Flow Element (*) Note
Data Flow Diagram 【P】	Process (*) Data Store External Entity Anchor Note
ER Diagram 【P】	ER Entity (*) Note
Mindmap	Topic (*)
Requirement Diagram 【P】	Requirement (*) TestCase, Note

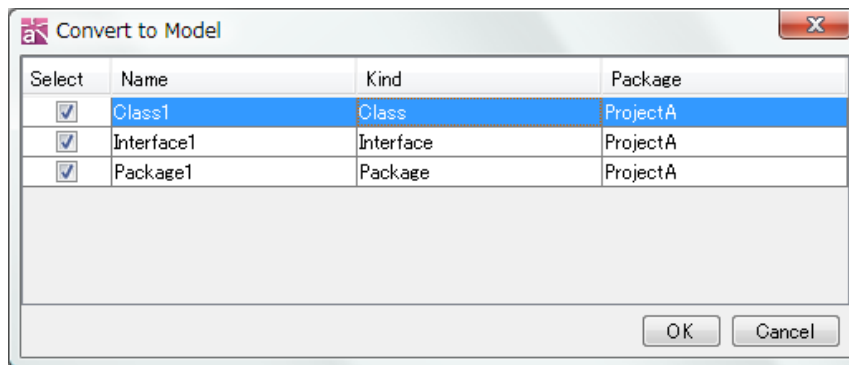
### i) Convert Text to Model

- (1) Copy Text into Clipboard.



- (2) Open a diagram and select [Paste] Pop-Up Menu.
- (3) Set options in Convert to Model dialog and click OK.











## 14. Diagrams and Diagram Elements



## 14. Diagrams and Diagram Elements

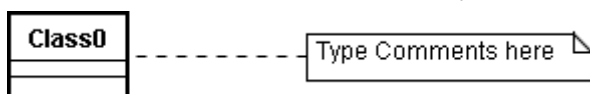
### 14.19. Common Diagram Elements for All Diagram Types



Note		Add comments to Model Elements.
Note Anchor		Anchor Notes to related Model Elements.
Text		Insert Text in Diagrams.
Rectangle		Draw Rectangles/Rounded Rectangles on Diagrams. For example, Rectangle can be used to enclose a semantic collection of Model Elements.
Line		Draw Lines on Diagrams.
Image		Paste Images.
Lock Mode		Lock the selected mode on the Tool Palette.
Set Relation End to the center of the item		Place the ends of lines (e.g. Associations, Generalizations, or Dependencies) at the center of Model Elements. (except Sequence Diagram)
Line Mode		Set the Line Mode (Line, Line (Right Angle), Curve, Curve (Right Angle)) to draw lines (e.g. Association) between Model Elements.
Depth Lock Mode		Lock the front and behind of Model Elements that are over each others.

#### 14.19.1. Notes and Note Anchors

Notes can be used to add comments to Model Elements. Note Anchors bind Notes to Model Elements. Press [Enter] to fix the Text. To insert a new line in a Note, press the [Shift+Enter] or [Alt+Enter] keys.



## 14. Diagrams and Diagram Elements

### a. Editing Notes

#### (a) Adding Stereotypes

Right-click on the target Note and select [Add Stereotype], or go to Stereotype tab of Note in the Property View.

#### (b) Stereotype Visibility

The display/non-display settings for a Note Stereotype can be selected from the Pop-up Menu.

### 14.19.2. Text

Text can be added to Diagrams.

Press [Enter] to add or modify Text. To insert a new line, press the [Shift+Enter] or [Alt+Enter] keys.

### 14.19.3. Rectangles

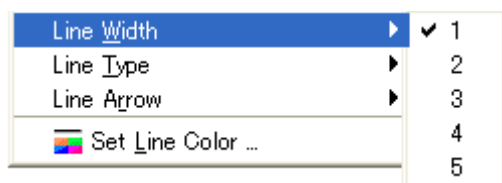
Rectangles or Rounded Rectangles can be created in diagrams.

### 14.19.4. Lines

Lines can be created in diagrams.

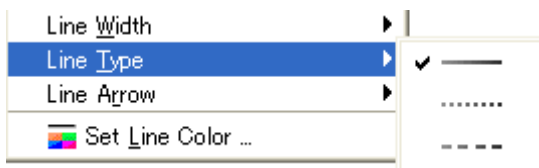
#### *Changing the Line Width*

To change a Line Width, right-click on the target Line and select [Line Width].



#### *Changing the Line Type*

To change a Line Type, right-click on the target Line and select [Line Type].



#### *Changing a Line to an Arrow*

To change a Line to an arrow, right-click on the target Line and select [Line Arrow].

## 14. Diagrams and Diagram Elements



### *Drawing horizontal/vertical Lines*

To draw a horizontal or a vertical Line, press the [Shift] key while creating the Line.

#### 14.19.5. Images

(1) Select  [Image] on the Tool Palette and click on the Diagram.

-> The Selection Dialog appears.

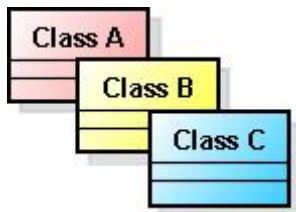
(2) Select the Image to insert and click [Open].

#### 14.19.6. Depth Lock Mode

"Depth Lock" option locks the layer of objects and can be used for rearranging the sort of overlapped objects.

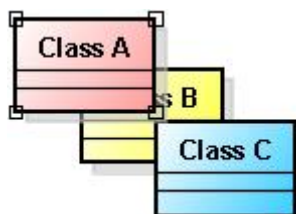
When the [Depth Lock Model] option is off, the object you click the last will always come up the front, and when it is ON, you can select the object without changing the layers, so no matter what you click on, the layer of objects won't change.

For example, there are three classes in layers like this.



and you are going to click **Class A**.

- In case [Depth Lock Mode] is OFF :**Class A will come up the front.**

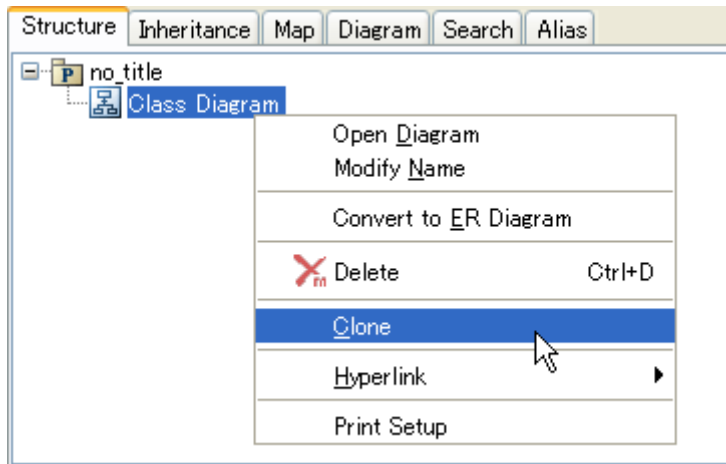


## 15. Cloning Diagrams

### 15. Cloning Diagrams

To clone diagrams, right-click on the target diagram in the Structure Tree and select [Clone]. The result is the same as selecting all, copying, and pasting.

When cloning Classes or UseCases, models are shared with the original diagram.



## 16. Generating Diagrams

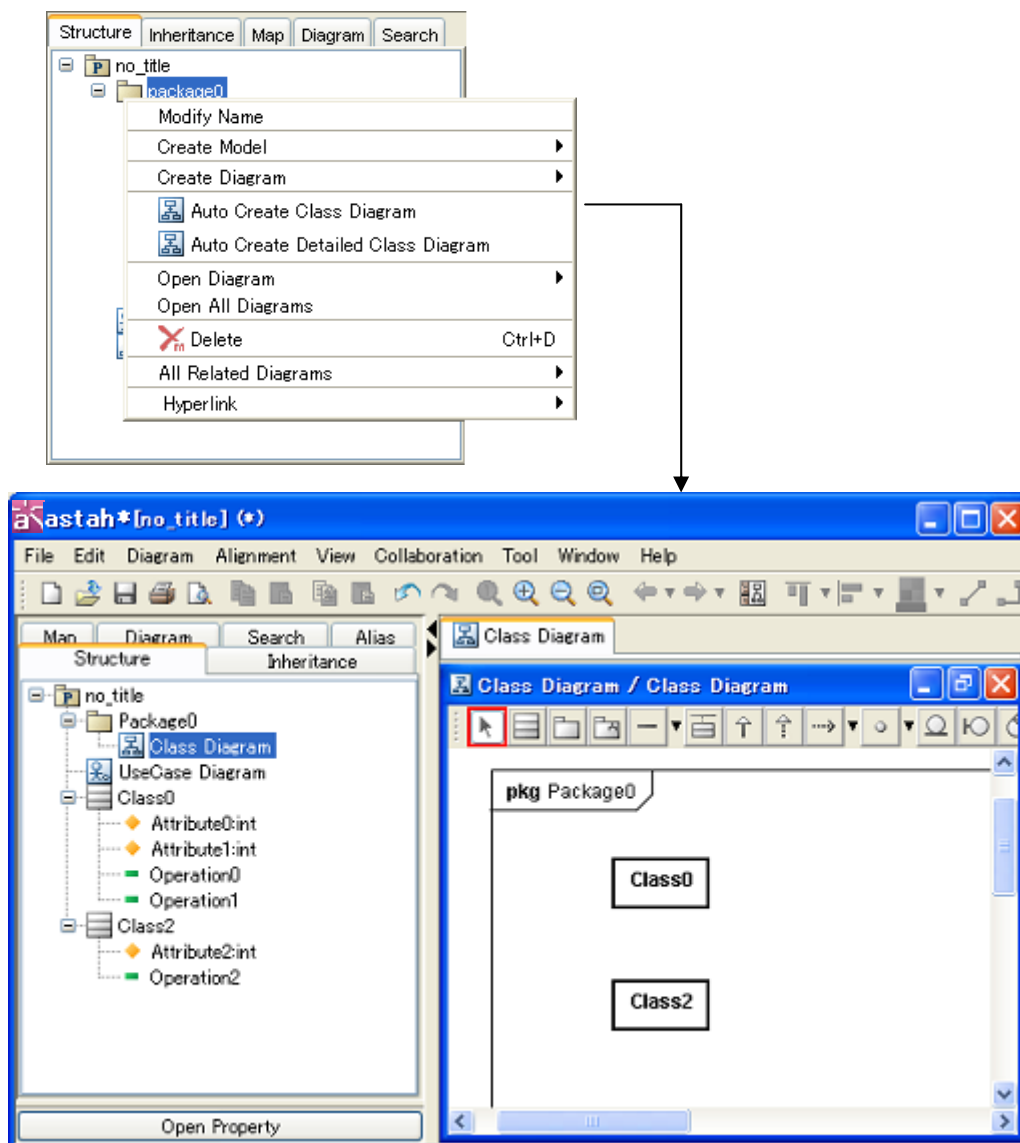
### 16. Generating Diagrams

This section describes generating functions for Class Diagrams.

#### 16.1. Generating Class Diagrams

Right-click on the target Package (Model or Subsystem) in the Structure Tree in the “Project View” and select [Auto Create Class Diagram]. The Class Diagram for the Package (Model, Subsystem) is generated and opened in the Diagram Editor.

**Note)** An Attribute partition and an Operation partition are not displayed for the generated Classes.



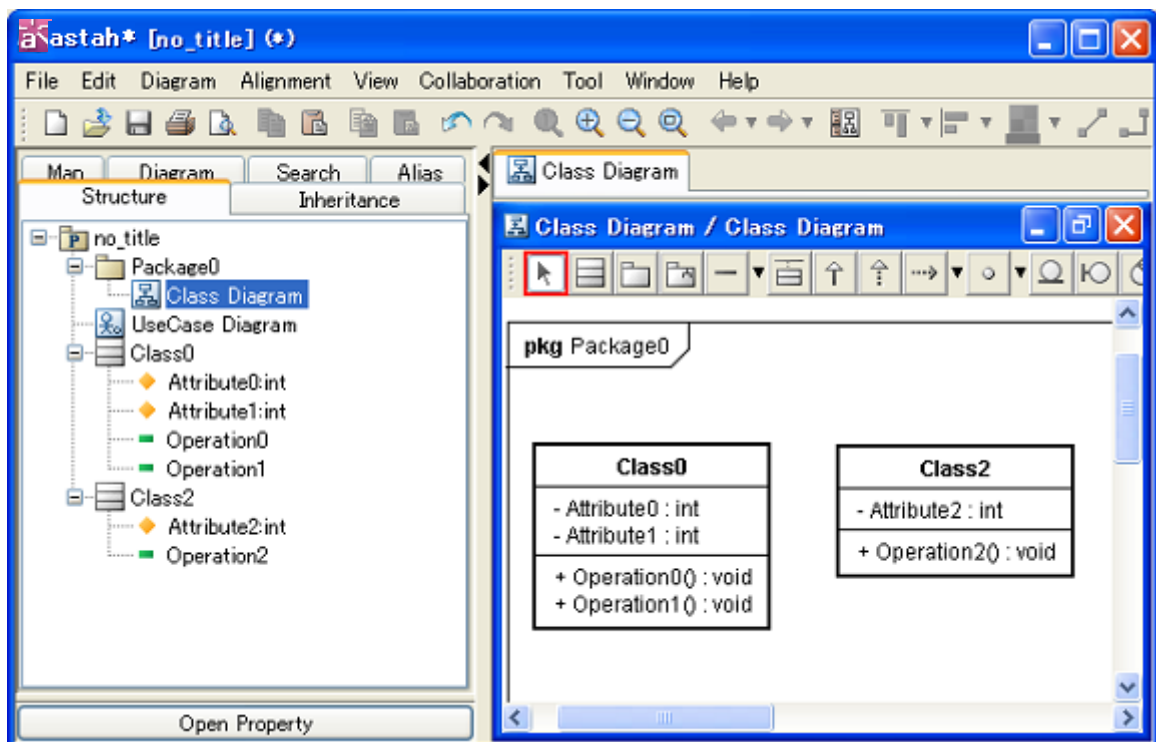
## 16. Generating Diagrams

### 16.2. Generating Detailed Class Diagrams

Right-click on the target Package (Model or Subsystem) in the Structure Tree in the “Project View” and select [Auto Create Detailed Class Diagram]. The Detailed Class Diagram for the Package (Model, Subsystem) is generated and opened in the Diagram Editor.

**Note)** Partitions of attributes and operations appear for generated classes.

**Note)** The display/non-display settings of Partitions of attributes and operations can be changed in System Properties.



### 16.3. Generating ER Diagrams [P]

Right-click on the target ER Model in the Structure Tree in the “Project View” and select [Auto Create ER Diagram]. The ER Diagram is generated and opened in the Diagram Editor.



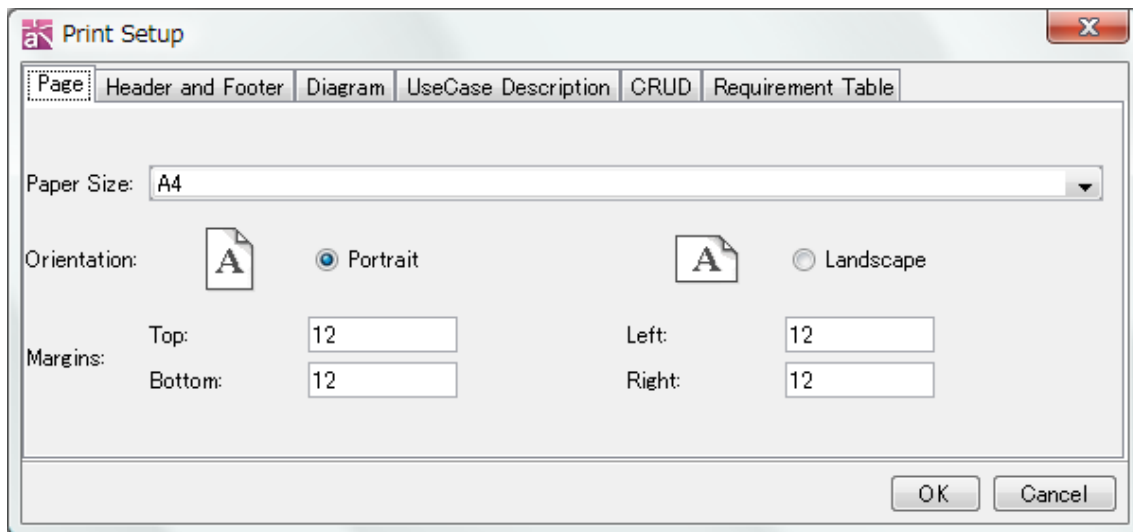
## 17. Printing

## 17. Printing

### 17.1. Print Setup (Project)

This setting is used to set the Printing options of diagrams, UseCase Descriptions, CRUDs [P], Requirement Tables [P], pages, Headers and Footers. The configuration will be saved per project file.

#### 17.1.1. Page



##### a. Page Size

Set a Page size of printed documents

##### b. Orientation

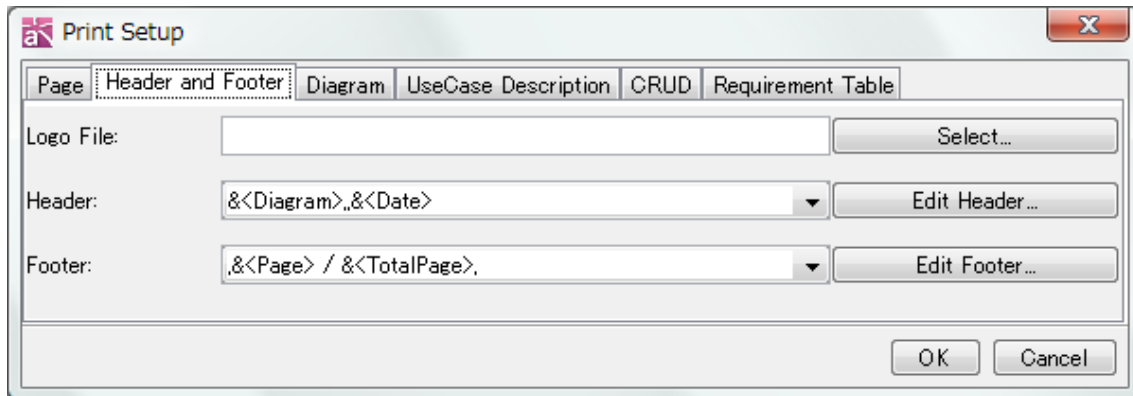
Select an Orientation

##### c. Margins

Set Margins (Top/Bottom/Left/Right)

## 17. Printing

### 17.1.2. Header and Footer



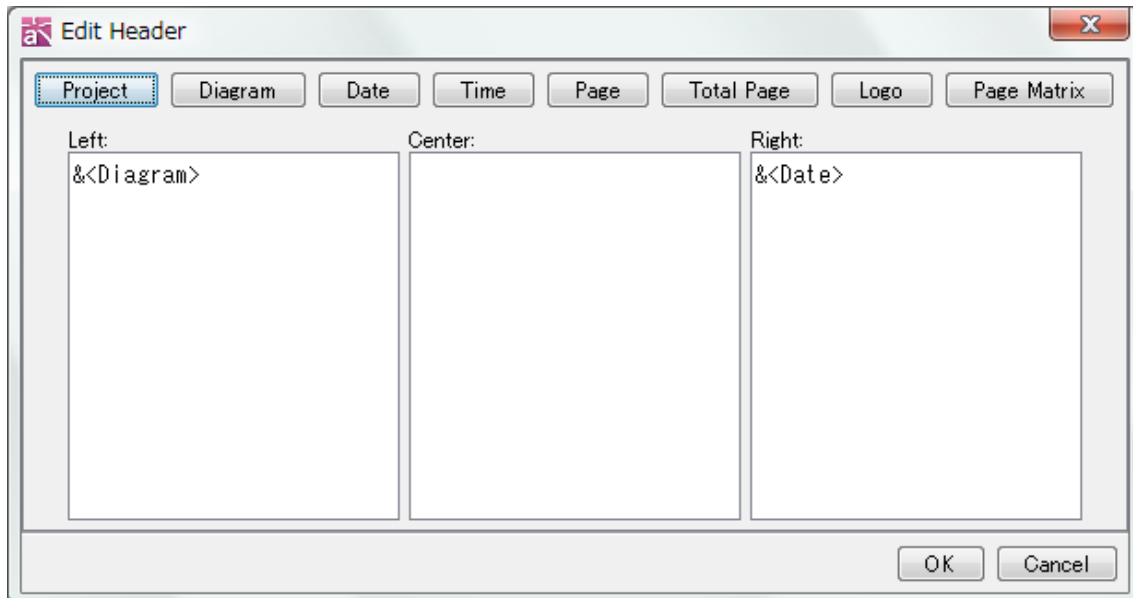
Options for Header/Footer of printouts can be selected. In Header/Footer, a Logo file, Project Name, diagram name, date, time, page number, total page number, and printing position (left, center, or right) can be configured.

#### a. Logo File

Click on [Select...] to select a file to be used for the Logo. JPG, GIF, and PNG format images are supported.

#### b. Header

Select the target information to be printed from the drop down list. Alternatively, click on [Edit Header...] and edit the target information to be printed in the Header.

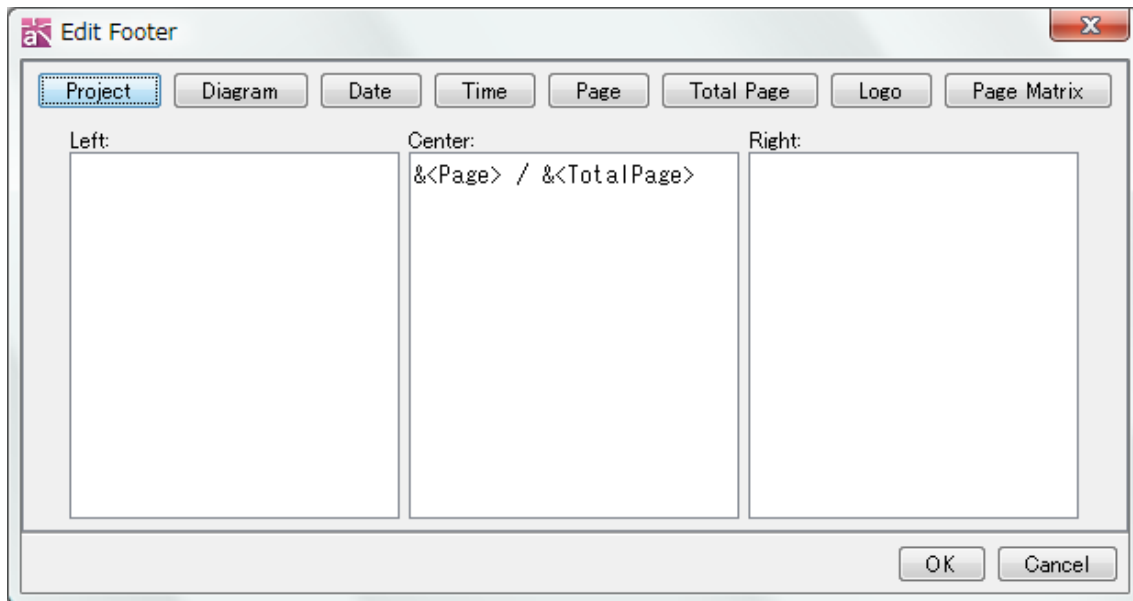


#### c. Footer

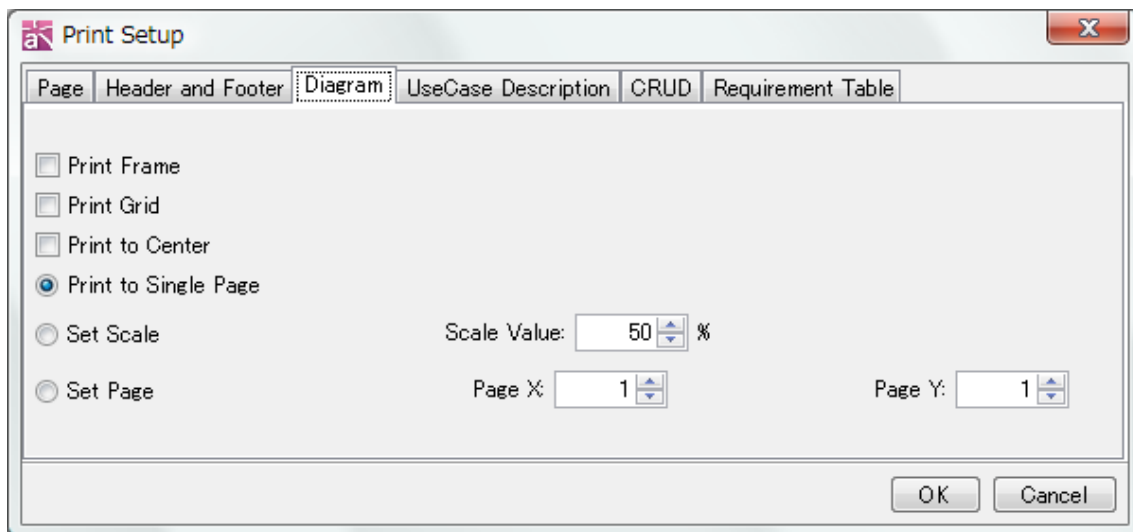
Select the target information to be printed from the drop down list. Alternatively, click

## 17. Printing

on [Edit Footer...] and edit the target information to be printed in the Footer.



### 17.1.3. Diagram



#### a. Print Frame

Check this option to print with a frame.

#### b. Print Grid

Check this option to print with Grid Lines.

#### c. Print to Center

Check this option to print placing the diagram in center.

## 17. Printing

### d. Print to Single-Page

Select this option to adjust the scale when printing, so that the Diagram fits onto one page.

### e. Set Scale

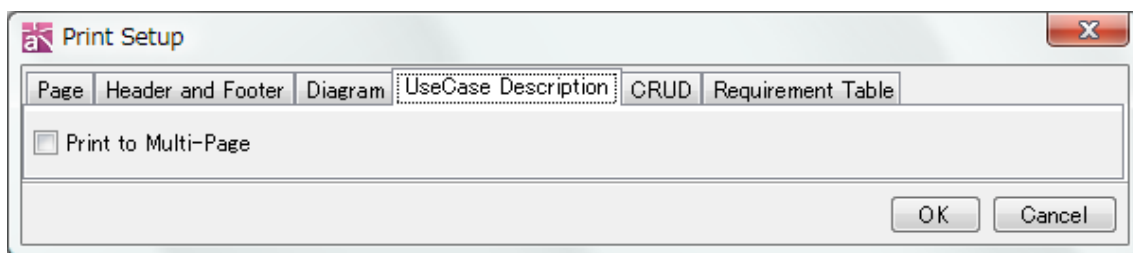
Use this option to specify the scale of Diagrams when printing.

### f. Set Page

A Diagram can be separated over a number of pages when printing. This option can be used to choose how the diagram is divided, horizontally and vertically, between the pages. Page X specifies the maximum number of times that a diagram can be divided horizontally. Page Y specifies the maximum number of times that a Diagram can be divided vertically.

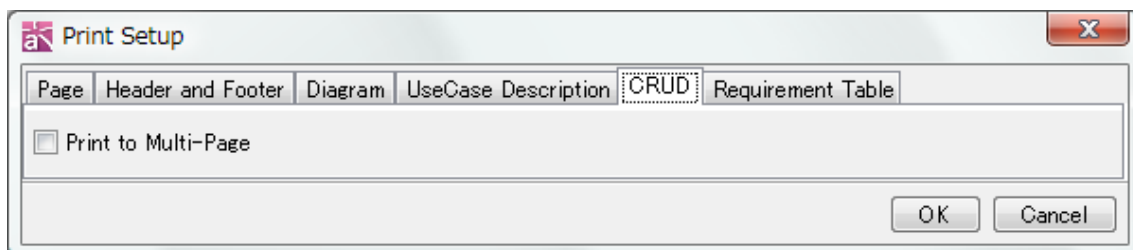
### 17. 1. 4. UseCase Description

Check this option to print UseCase Descriptions on multiple pages. If this is unchecked, UseCase Descriptions are printed on one printout with the scale adjusted accordingly.



### 17. 1. 5. CRUD Description [P]

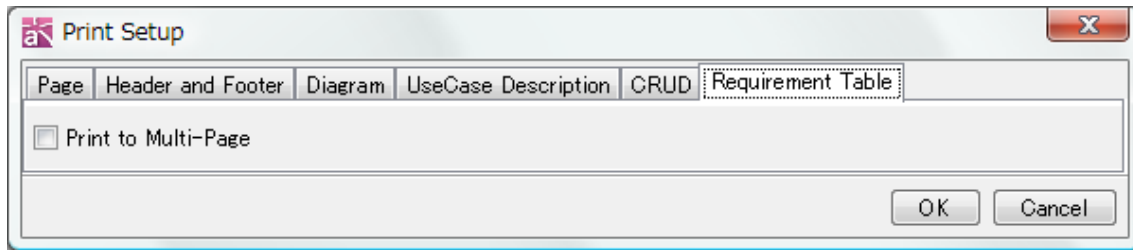
Check this option to print CRUD on multiple pages. If this is unchecked, CRUDs are printed on one printout with the scale adjusted accordingly.



### 17. 1. 6. Requirement Table [P]

Check this option to print Requirement Table on multiple pages. If this is unchecked, Requirement Tables are printed on one printout with the scale adjusted accordingly.

## 17. Printing



### 17.2. Print Setup (Diagram)

This setting is used to set the printing options for Page, Headers, Footers and Diagram (or UseCase Description). This configuration will be saved per Diagrams. To print in the same setting, check on **[Print by using the print setting for the project]**.

### 17.3. Printing Diagrams [Ctrl+P]

The Diagram that is currently opened in the Diagram Editor is printed.

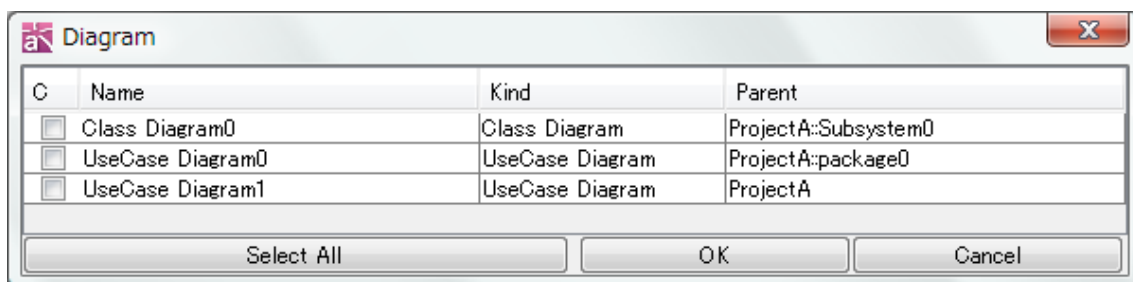
### 17.4. Print Multi

Multiple diagrams in the Project can be printed using this function.

- Select the target diagrams to print using the diagram dialog.
- Click [Select All] / [Deselect All] to select/deselect target diagrams.

#### *The Order of Printing*

Diagrams would be printed in the order as listed in the diagram dialog. To change the order, click on [Name], [Kind], or [Parent] respectively.

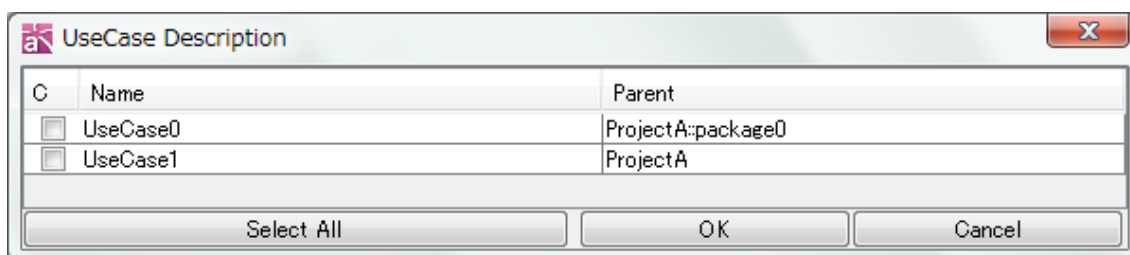


### 17.5. Print Multiple UseCase Descriptions

Multiple “UseCase Descriptions” in the Project can be printed using this function.

- Select the target UseCase Descriptions to print using the UseCase Description Dialog.
- b. Click [Select All] / [Deselect All] to select/deselect target UseCase Descriptions.

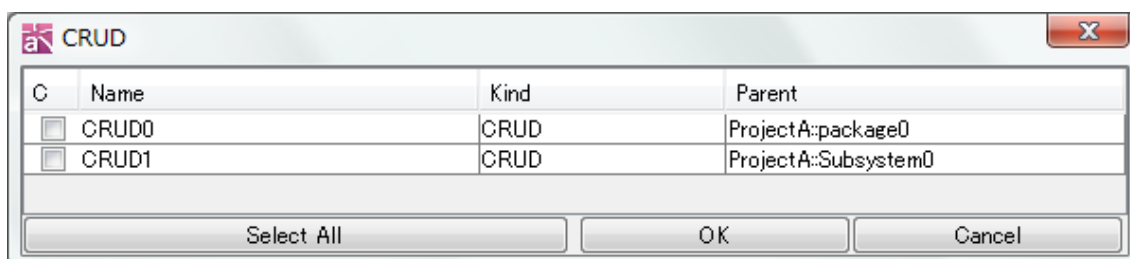
## 17. Printing



### 17. 6. Print Multiple CRUDs [P]

Multiple “CRUDs” in the Project can be printed using this function.

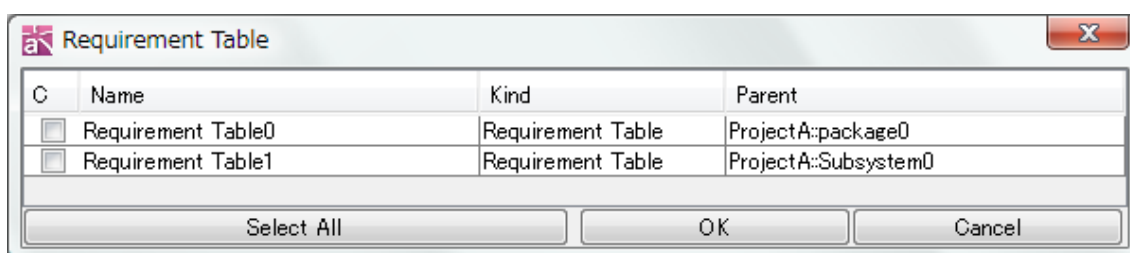
- Select the target CRUDs to print using the CRUD Dialog.
- Click [Select All] / [Deselect All] to select/deselect target CRUDs.



### 17. 7. Print Multiple Requirement Table [P]

Multiple “Requirement Tables” in the Project can be printed using this function.

- Select the target Requirement Tables to print using the Requirement Tables Dialog.
- Click [Select All] / [Deselect All] to select/deselect target Requirement Tables.



## 18. Print Preview

### 18. Print Preview

Print Preview is used to view the Print Previews of diagrams, UseCase Descriptions, CRUDs and Requirement Tables.

#### 18. 1. Print Preview

The Diagram that is displayed in the Diagram Editor is viewed by Print Preview.

##### a. Print

Click [Print] to begin printing.

##### b. Display Size

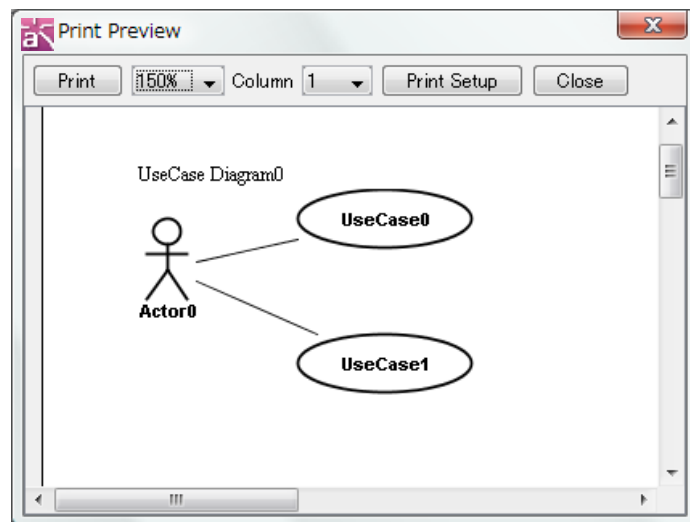
Use this option to change the scale of the display.

##### c. Column

Use this option to change the number of columns.

##### d. Print Setup

-> Please refer to the [Print Setup](#) section for more details.

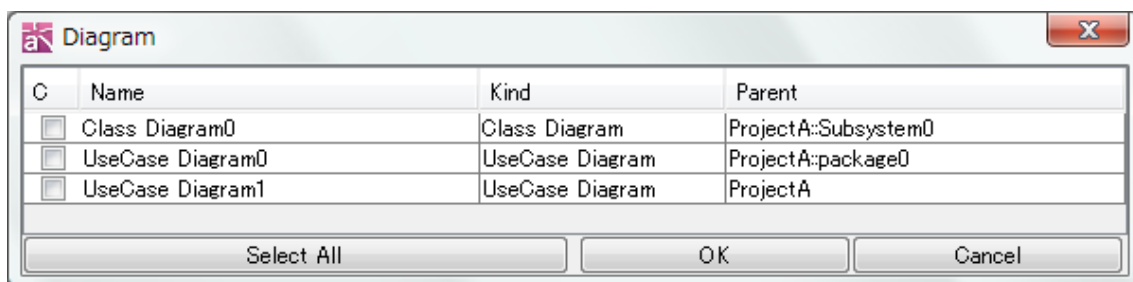


#### 18. 2. Preview Multi

“Preview Multi” is used to view the Print Previews of multiple diagrams in the Project.

a. Select diagrams to preview in the diagram dialog.

b. Click [Select All] / [Deselect All] to select/deselect target diagrams.



#### *Print Preview Order*

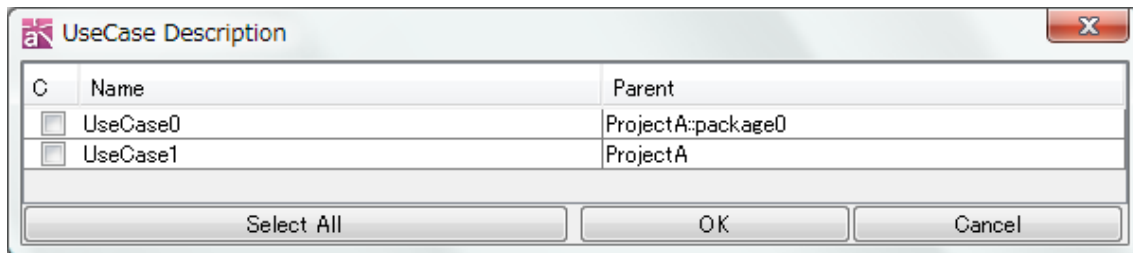
Diagrams would appear in the order in which they are listed in the diagram dialog. To change the order, click on [Name], [Kind], or [Parent], respectively.

## 18. Print Preview

### 18.3. Print Preview Multi-UseCase Description

This function is used to view the Print Previews of multiple UseCase Descriptions, CRUD, Requirement Tables in the Project.

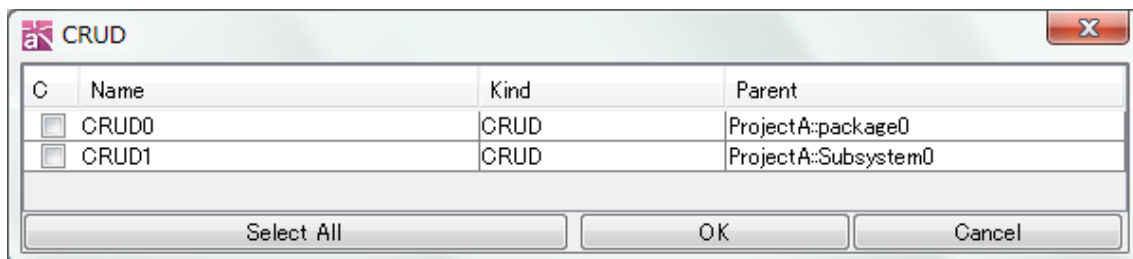
- Select the UseCase Descriptions to Preview in the UseCase Description Dialog.
- Click [Select All] / [Deselect All] to select/deselect target UseCase Description.



### 18.4. Print Preview Multi-CRUD

This function is used to view the Print Previews of multiple “CRUDs” in the Project.

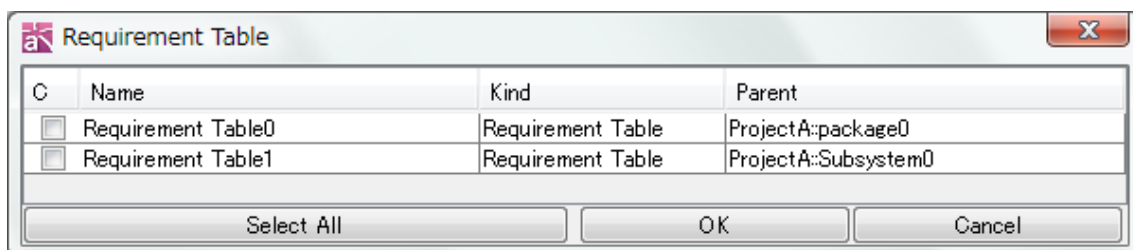
- Select CRUDs to Preview in the CRUD Dialog.
- Click [Select All] / [Deselect All] to select/deselect target CRUDs.



### 18.5. Print Preview Multi-Requirement Table

This function is used to view the Print Previews of multiple “Requirement Tables” in the Project.

- Select Requirement Tables to Preview in the Requirement Table Dialog.
- Click [Select All] / [Deselect All] to select/deselect target Requirement Tables.





## 19. Merging projects

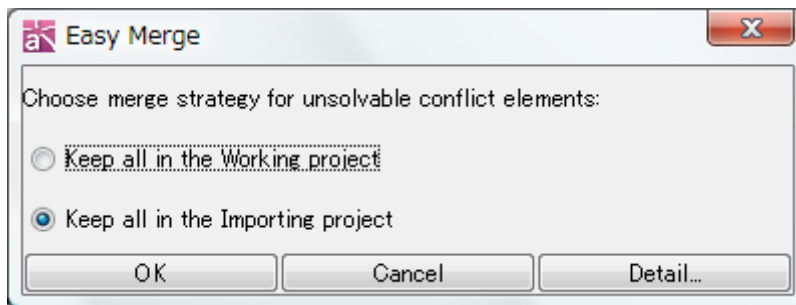
### 19. Merging Projects

Projects can be merged into the working Project as follows:

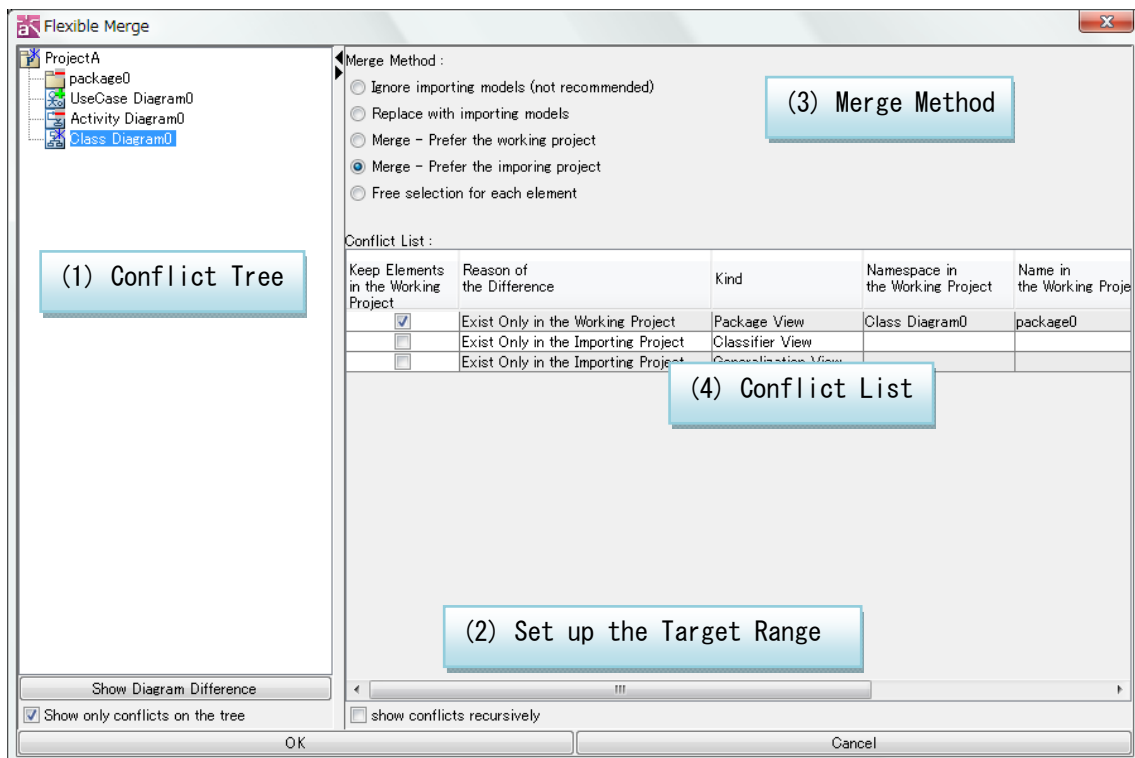
- Click on [File]-[Merge Project].
- Select the target Project and click on [Open].
- The “Easy Merge” dialog is displayed.
- Click [Detail] on the “Easy Merge” dialog to display the “Flexible Merge” dialog.

#### 19. 1. Easy Merge Dialog

Using the “Easy Merge” dialog, Elements that only exist in either the working Project or the importing Project can be merged. For conflicted elements from the working Project or the importing Project can be prioritized.






#### 19. 2. Flexible Merge



## 19. Merging projects

### 19.2.1. Conflict Tree

The differences between the working Project and the importing Project are displayed in the Conflict Tree.

Icons	Description
	Models that exist only in the working Project
	Models that exist only in the compared Project
	Models that exist both Projects

#### a. Show Diagram Difference [P]

To compare diagrams between the working Project and the importing Project, double-click the selected diagram in the Conflict Tree, or click [Show Diagram Difference] button.

-> Please refer to the [Compare Diagram](#) section.

#### b. Show Only Conflicts in the Conflict Tree

Check this option to display only the conflicts in the Conflict Tree.

**Default [ON]**

### 19.2.2. Setting the Target Range

#### a. Show Conflicts Recursively

Check this option to display the conflicts of Elements that are selected in the Conflict Tree, in the Conflict List. Elements in the subdirectory are included.

**Default [OFF]**

### 19.2.3. Merge Method

Merge Methods can be chosen for each Model selected in the Tree.

If multiple Models, whose Merge Method options differ, are selected in the Conflict Tree, all the options are displayed.

#### a. Ignore importing Models

If this option is selected, importing models are not included in the merged Project.

#### b. Replacing with importing Models

If the importing Project is empty, the merged Models will be deleted.

## 19. Merging projects

After merging, Models are replaced with those in the merged Project. If the importing project is empty, all Models will be deleted

### **c. Merge - Prefer the Working Project**

Using this option, Elements that exist only in either the working Project or the importing Project are merged.

For other Elements, the working Project is prioritized.

### **d. Merge - Prefer the Importing Project**

Using this option, Elements that exist only in either the working Project or the importing Project are merged.

For other Elements, the importing Project is prioritized.

### **e. Free Selection for each Element**

Using this option, Elements are merged according to the selection in the checkbox [Keep Elements in the Working] in the Conflict List.

## **19.2.4. Conflict List**

The Conflict List displays a list of the conflicts and details of selected Elements.

The prioritized Model (working or importing) for conflicts can be selected for each Element.

### **a. Working Project**

Check this option to prioritize the working Elements.

### **b. Reason**

In this column, the Types of conflicts between the working Project and the importing Project are displayed.

#### **(a) Exist Only in the Working Project**

The Element exists only in the working Project but not in the importing Project.

#### **(b) Exist Only in the Importing Project**

The Element exists only in the importing Project but not in the working Project.

#### **(c) Different Namespaces**

The Element exists in both the working Project and the importing Project, but their Namespaces are different.

#### **(d) Different Attributes**

The Element exists in both the working Project and the importing Project, but their Attributes (e.g., the visibility) are different.

#### **(e) Different Association Ends**

## 19. Merging projects

The Element exists in both the working Project and the importing Project, but either one or both Ends of the Elements (Association or Link) are different.

### (f) Different Diagram IDs

This reason is always given when Statemachine, Activity, Sequence, and Communication Diagrams are drawn, so that they can be selected from the working Project or the importing Project.

### (g) Same Name but Different Models

This reason is given when a user creates the same Models with the same name in the same Namespace.

### c. Type

In this column, Element Types are displayed.

### d. Namespace in the Working Project/Namespace in the Importing Project

In this column, the Namespaces of Elements are displayed. The Namespace of the topmost Element is empty.

### e. Name in the Working Project/Name in the Importing Project

In this column, the Names of Elements are displayed. If the Element has no Name, the column is empty.

## 19.3. Restrictions

- It is not possible to merge the contents of Sequence Diagrams, Communication Diagrams, Statemachine Diagrams, Activity Diagrams, Flowcharts, Data Flow Diagrams, CRUDs and Mindmaps. Please select either the working Diagram or the importing Diagram.
- Sequence Diagrams, Communication Diagrams, Statemachine Diagrams, Activity Diagrams, Flowcharts, Data Flow Diagrams, CRUDs and Mindmaps are always displayed in the Conflict Dialog even if there is no change.

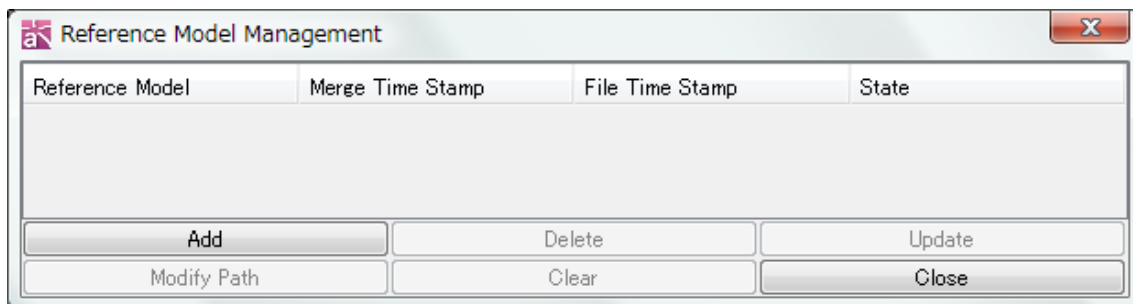
### 20. Reference Model Management [P]

Projects can be imported into current Project as read-only. This option is very useful for a team development to work on shared projects.

#### 20.1. Adding Reference Model

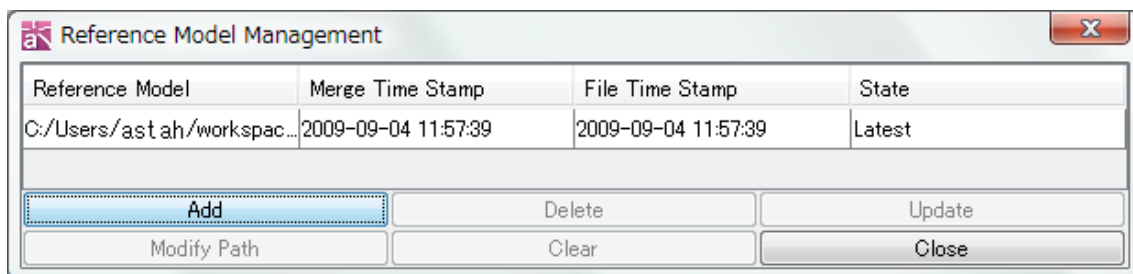
(1) Select [File] - [Reference Model Management] from Main Menu.

(2) [Reference Model Management] dialog comes up, click [Add].

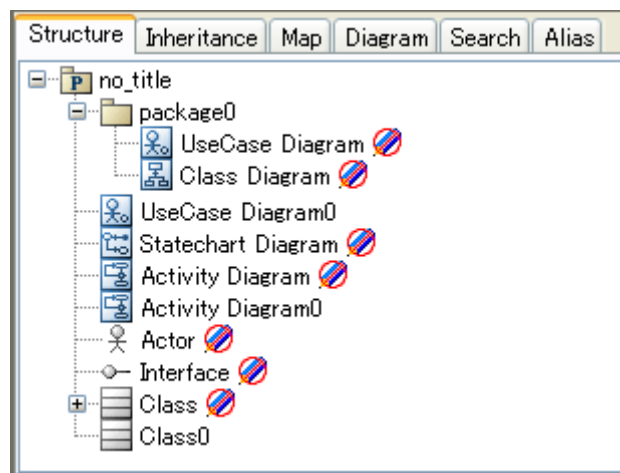


(3) Select the Path Type (Absolute Path or Relative Path) then select the project file to import.

(4) It adds the project file.



Reference models have an Icon in the Structure Tree view and cannot be edited.



## 20. Reference Model Management

### **20. 2. Updating Reference Model**

- (1) Select the Reference Model to update then click [Update] button.
- (2) Once update of the reference model completes, both [Merge Time Stamp] and [File Time Stamp] fields are updated to the latest information.

### **20. 3. Total Merge Utility**

It updates Reference models by using Command line a bat file or sh file.

#### **20. 3. 1. Updates Certain Reference Models from .bat file**

Use following commands to look for Reference models that need to be updated in all \*.asta files inside the selected directory then updates them.

##### For Windows

call astah-run.bat "astah\_directory\_path" update-all

##### For Linux

astah-run.sh "astah\_directory\_path" update-all

Note) put the directory in "astah\_directory\_path"

- It exports log files as yyyyMMdd\_HHmm\_astah\_convert\_command.log in the directory
- astah-run.bat or astah-run.sh files are stored in astah\* Install Folder
- "use-builtin-timestamp" (ubt) option can be used to update by model time stamp, not the file time stamp.

Windows	call astah-run.bat "C:¥¥Program Files¥¥astah-professional" update-all
Linux	astah-run.sh "/home/aaa/astah-professional" update-all

#### **20. 3. 2. Update all Reference Models from .bat file**

Use following commands to all reference models in all \*.asta files inside the selected directory then updates them.

##### For Windows

call astah-run.bat "astah\_directory\_path" update-all-force

## 20. Reference Model Management

### For Linux

astah-run.sh "astah\_directory\_path" update-all-force

Note) put the directory in "astah\_directory\_path"

- It exports log files as yyyyMMdd\_HHmm\_astah\_convert\_command.log in the directory
- astah-run.bat or astah-run.sh files are stored in astah\* Install Folder

Windows	call astah-run.bat "C:\Program Files\astah-professional" update-all-force
Linux	astah-run.sh "/home/aaa/astah-professional" update-all-force

Please refer to **[total-merge-utilities.html](#)** for more detail in astah\* Install folder.

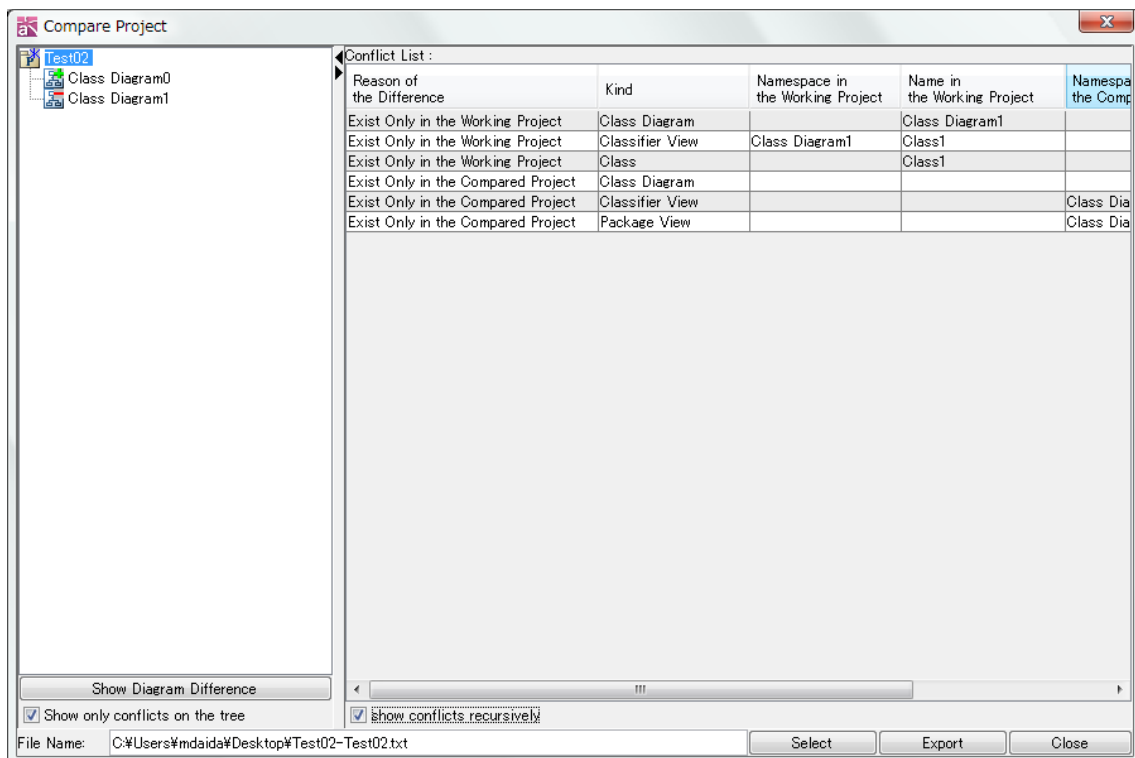
## 21. Compare Projects

### 21. Compare Projects [P]

A Project can be compared with the working Project as follows:




- Click on [File]-[Compare Project].
- Select the target Project and click on [Open].
- The “Compare Project” dialog is displayed.

#### 21. 1. Compare Project



##### 21. 1. 1. Conflict Tree

The differences between the working Project and the compared Project are displayed in the Conflict Tree.

Icons	Description
	Models that exist only in the working Project
	Models that exist only in the compared Project
	Models that exist both Projects

##### a. Show Only Conflicts in the Tree

Check this option to display only the conflicts in the Conflict Tree.



## 21. Compare Projects

**Default [ON]**

### **21. 1. 2. Setting the Target Range**

#### **a. Show Conflicts Recursively**

Check this option to display the conflicts of Elements that are selected in the Conflict Tree, in the Conflict List. Elements in the subdirectory are included.

**Default [OFF]**

### **21. 1. 3. Conflict List**

The Conflict list displays a list of the conflicts and details of selected elements.

The prioritized Model (working or importing) for conflicts can be selected for each element.

#### **a. Reason of the Difference**

In this column, types of conflicts between the working Project and the importing Project are displayed.

##### **(a) Exist Only in the Working Project**

The element exists only in the working Project but not in the compared Project.

##### **(b) Exist Only in the Importing Project**

The element exists only in the compared Project but not in the working Project.

##### **(c) Different Namespaces**

The element exists in both the working Project and the compared Project, but their namespaces are different.

##### **(d) Different Diagram**

The diagram exists in both the working Project and the compared Project, but models drawn in the diagram are different.

##### **(e) Different Relation**

The element exists in both the working Project and the compared Project, but either one or both Ends of the elements (Association or Link) are different.

##### **(f) Same Diagram**

This reason is given when Statemachine, Activity, Sequence, and Communication Diagrams, Flowcharts, Data Flow Diagrams, CRUDs, Mindmaps are drawn.

##### **(g) Same Name but Different Models**

This reason is given when a user creates the same Models with the same name in the same Namespace.

#### **b. Type**

## 21. Compare Projects

In this column, Element Types are displayed.

### c. Namespace in the Working Project/Namespace in the Compared Project

In this column, the Namespaces of Elements are displayed. The Namespace of the topmost Element is empty.

### d. Name in the Working Project/Name in the Compared Project

In this column, the Names of Elements are displayed. If the Element has no Name, the column is empty.

## 21.1.4. Export Result of Comparison

The result of the project comparison can be exported into a text file.

- Click [Select] in the Compare Project dialog, and specify the exported file.
- Click [Export] to export the result of the project comparison.

Output Items	Description
Result	-: Models that exist only in the working Project +: Models that exist only in the compared Project *: Models exist in the both Projects.
Model Type	Type of Diagrams and Models
Namespace and Name of Model	Model's Namespace and Name

**Diagrams:** All Diagrams

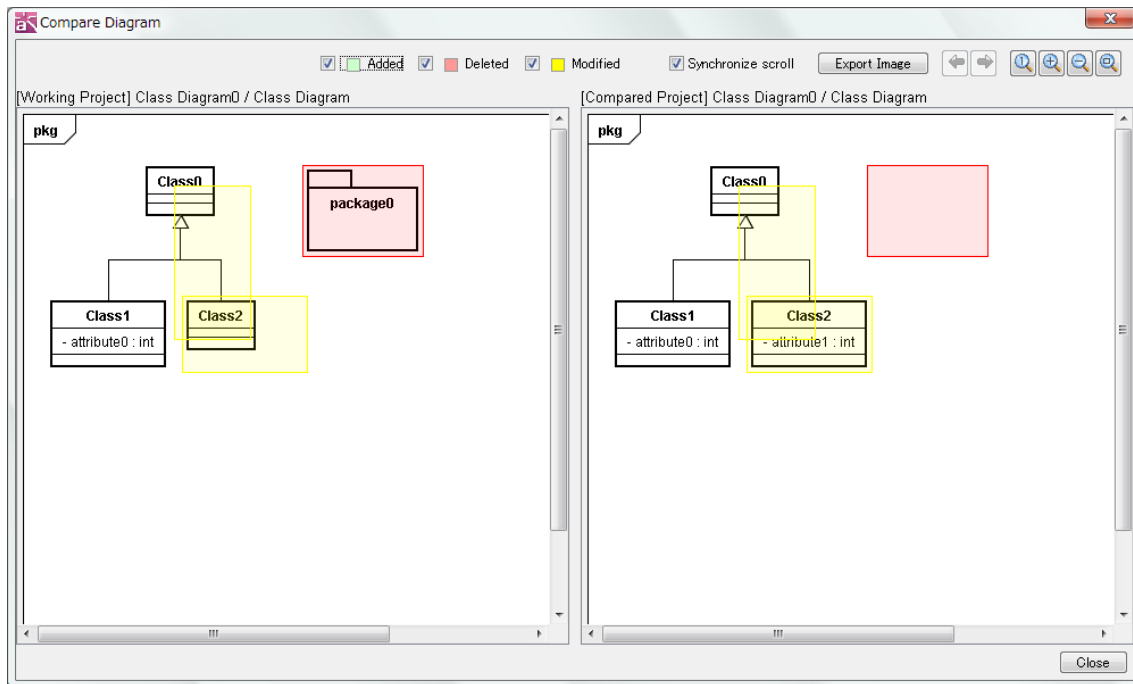
**Models:** Package, Model, SubSystem, Class, Interface, Control, Boundary, Entity, Actor, UseCase, Component, Node, External Entity, Data Store, ER Model, ER Domain, ER Datatype, ER Entity, Requirement and TestCase

## 21.1.5. Compare Diagram

Compare diagram elements between the working Project and the compared Project.

- Double-Click the selected diagram in the conflict tree of the Compare Project Dialog or the Flexible Merge Dialog. Or, select the diagram in the conflict tree and click [Show Diagram Difference] button.

## 21. Compare Projects



Output Items	Description
Result	∴ Models that exist only in the working Project +∴ Models that exist only in the compared Project *∴ Models exist in the both Projects.
Model Type	Type of Diagrams and Models
Namespace and Name of Model	Model's Namespace and Name

**Diagrams:** All Diagrams except CRUD

**Models :** All Diagram Elements

(a) Added

Display green frames over diagram elements which exist in the compared diagram only.

(b) Deleted

Display red frames over diagram elements which exist in the working diagram elements.

(c) Modified

Display yellow frames over diagram elements which exist in the both diagrams and are modified.

## 21. Compare Projects

(d) Export Image

Export the compared result into a PNG/JPG image file.

Right, left or both diagrams can be selected to export.

(e) Previous Diagram Difference

Display the previous diagram to compare.

(f) Next Diagram Difference

Display the next diagram to compare.

(g) Zoom to Default

Display the compared result with 100%.

(h) Zoom In

Zoom in the compared result.

(i) Zoom Out

Zoom out the compared result.

(j) Fit in Window

Display the overview of the compared result.

(k) Synchronize Scroll

Synchronize scroll of the working Project and the compared Project.

## 22. Drag & Drop of Files

### **22. Drag & Drop of Files**

Options can be selected by drag and drop of image files (png, jpeg, jpg) or other files onto astah\*.

#### **(1) Insert the image file**

Insert as an image by drag and drop of image files onto Diagram Editor.

#### **(2) Create a hyperlink of the file for the diagram**

Create a hyperlink of the file by drag and drop of image files or other files onto Diagram Editor.

#### **(3) Create a new text hyperlink of the file in the Diagram**

Create a new text with hyperlink by drag and drop of image files or other files onto Diagram Editor.

#### **(4) Insert the image file in a new topic (Mind Map Only)**

Create a new topic with the image file by drag and drop of image files onto Diagram Editor.

#### **(5) Create a hyperlink of the file for a new topic (Mind Map Only)**

Create a new topic and add a hyperlink of the file by drag and drop of image files or other files onto Diagram Editor.

#### **(5) Create a hyperlink for a topic (Mind Map Only)**

Add a hyperlink of the file to the selected topic by drag and drop of image files or other files onto a topic.

#### **(6) Add or replace an image in the topic**

Add as a topic image or replace the image for the topic by drag and drop of image files on topics.

#### **(7) Insert the Clipboard image**

Insert as image to paste Clipboard images on Diagram Editor.

## 23. EMF (Enhanced Meta File)

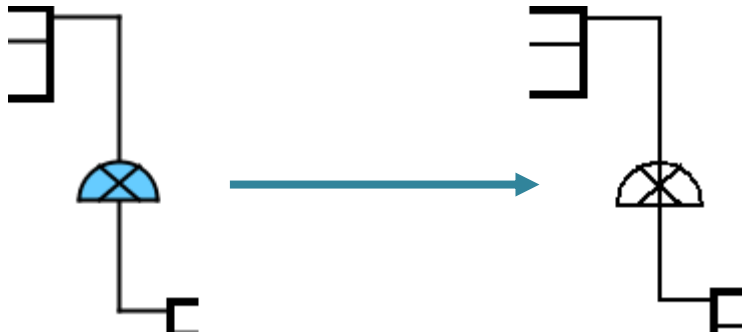
### **23. EMF (Enhanced Meta File)**

Elements in diagrams can be pasted to Excel and Word files in EMF format as follows:

- a. Select the target elements in the Diagram and copy to the Clipboard using the popup menu ([Copy to Clipboard] - [EMF]) of the elements.
  - b. Open an Excel or a Word file and paste the Elements using [Edit]-[Paste].
- > Ungroup the Elements by selecting [Ungroup]. The Models can then be edited.

**Note)** Problems may occur after pasting elements to Excel or Word are ungrouped. Our technical support won't cover these issues.

By pasting Subtypes (ER Diagrams) as EMF format onto Excel or Word, it will lose the color, also the relationship line will be appear over the Subsystem Icon.



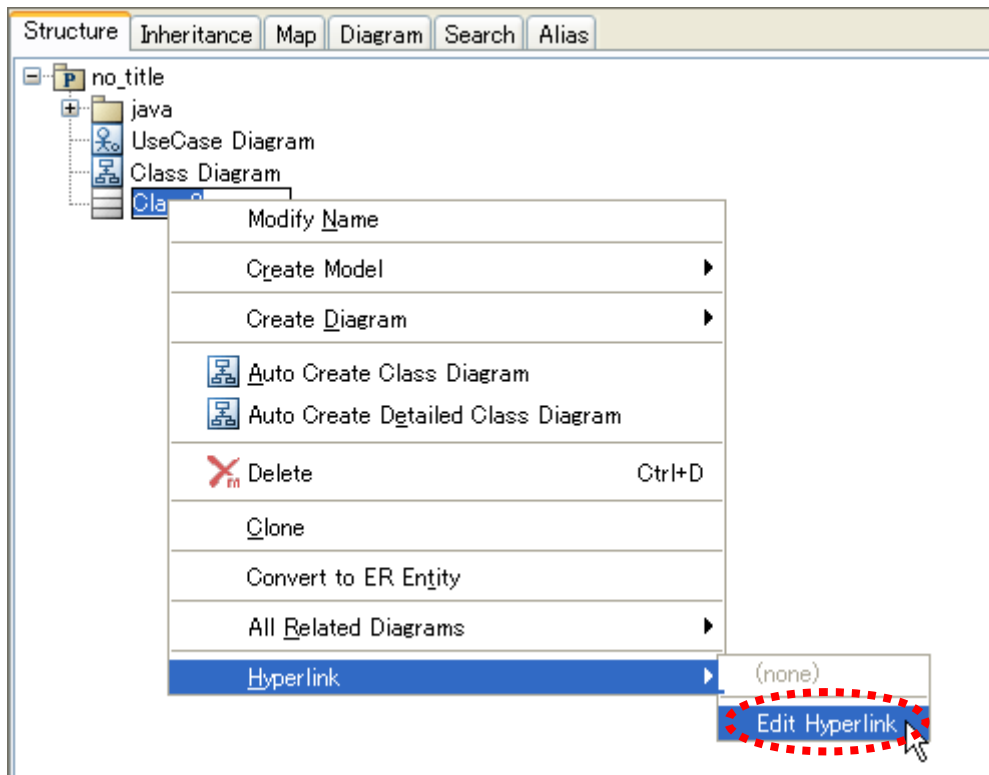
## 24. Hyperlinks

## 24. Hyperlinks

### 24.1. Editing Hyperlinks

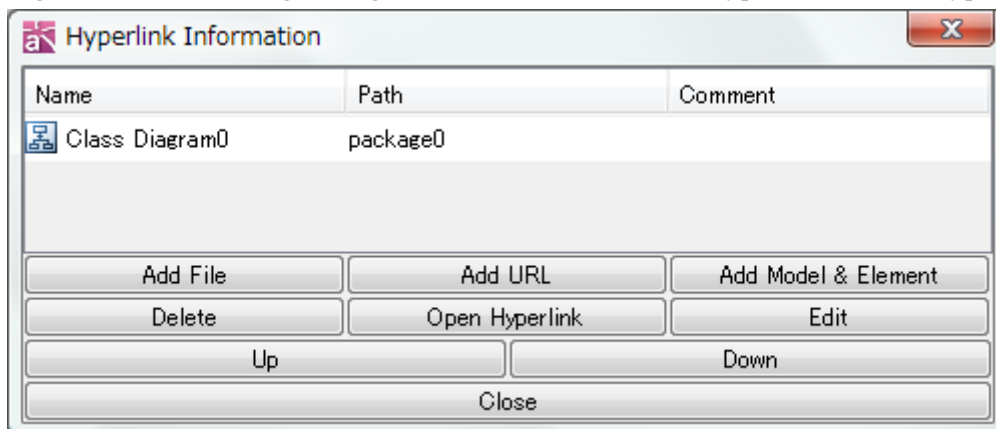
#### i) Using the Pop-up Menu in the Project View.

Right-click on the target model and select [Hyperlink]-[Edit Hyperlink] in the [Structure Tree].



#### ii) Using the Pop-up Menu of Diagram Elements.

Right-click on the target diagram element and select [Hyperlink]-[Edit Hyperlink].

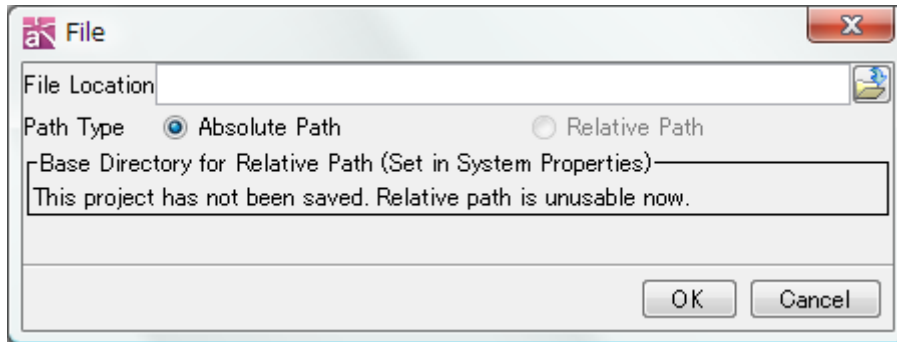


#### ii) Using the Property View

## 24. Hyperlinks

### 24.1.1. Add File

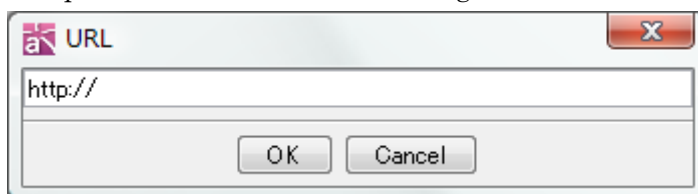
- To add a file, click [Add File] in the Hyperlink Information Dialog.
- Select either Relative Path or Absolute Path and select the file in the File Dialog.



- When [Set Relative Path based on the project directory] in [System Properties]-[Hyperlink] is checked, Relative Path cannot be selected if the Project is not stored. -> Please refer to the [System Properties - Hyperlinks](#) section.

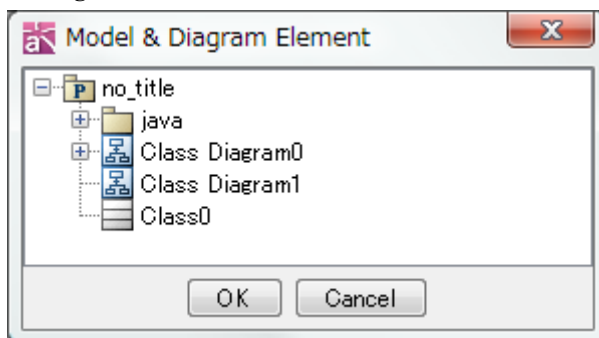
### 24.1.2. Add URL

- Click [Add URL] in the Hyperlink Information Dialog.
- Input the URL in the URL Dialog.



### 24.1.3. Add Model & Element

- Click [Add Model& Element] in the Hyperlink Information Dialog.
- Select the target Diagram Element or Model in the Model & Diagram Element Dialog.





## 24. Hyperlinks

### 24.1.4. Delete

Select the target Hyperlinks in the Hyperlink Information Dialog and click [Delete].

### 24.1.5. Open Hyperlink

Select the target Hyperlink in the Hyperlink Information Dialog and click [Open Hyperlink].

### 24.1.6. Up

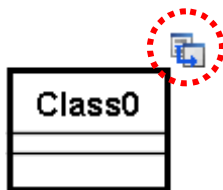
Select the target Hyperlink in the Hyperlink Information Dialog and click [Up].

### 24.1.7. Down

Select the target Hyperlink in the Hyperlink Information Dialog and click [Down].

## 24.2. Opening Hyperlinks

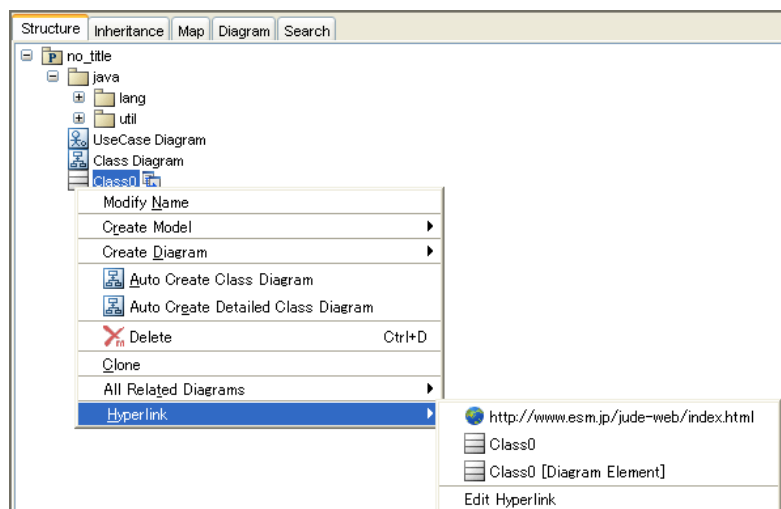
### i) Using the hyperlink icon on the Diagram Editor.



Double-click the hyperlink icon on the Diagram Editor.

### ii) Using the Pop-up Menu in the Project View.

Select [Hyperlink] from the Pop-up Menu.



## 24. Hyperlinks

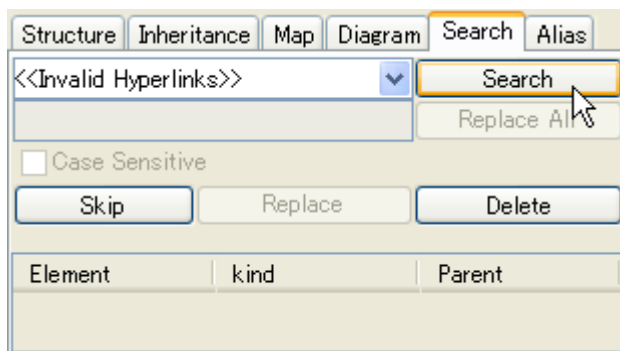
### iii) Using the Pop-up Menu of Diagram Elements.

Select [Hyperlink] from the Pop-up Menu.

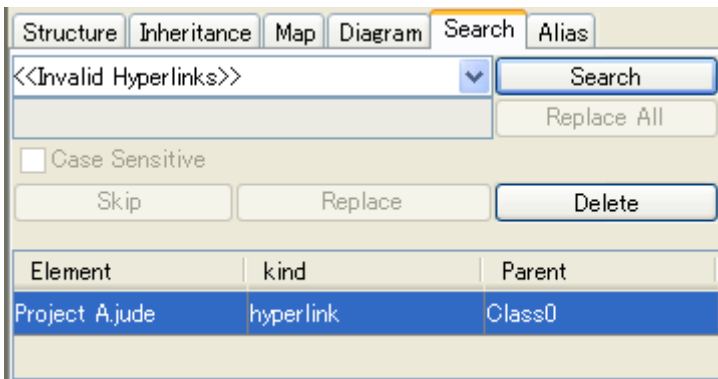
### 24. 3. Search Invalid Hyperlinks

It searches for invalid Hyperlinks to files. Hyperlinks to URL, Model Elements and Models will not be included.

- (1) Open the [Search] Tab in the Project View.
- (2) Select [<<Invalid Hyperlinks>>] then press [Search].



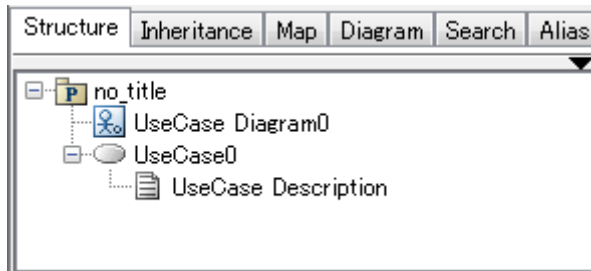
- (3) Results appear on the List.



## 25. UseCase Description

### 25. UseCase Description

This View is used to write UseCase Descriptions. A single “UseCase Description” can be created for each UseCase. UseCase Descriptions are displayed under UseCase in the Structure Tree when they are created.



#### 25. 1. Opening UseCase Description

To open a UseCase Description, press [Open UseCase Description] in the [Structure Tree] in the [Project View], or right-click on the target UseCase and select [Open UseCase Description].

The screenshot shows a window titled 'UseCase0 / UseCase Description'. It contains a table with two columns: 'ITEM' and 'VALUE'.

ITEM	VALUE
UseCase	UseCase0
Summary	
Base Sequence	
Branch Sequence	
Note	
Precondition	
Postcondition	
Sub UseCase	

## 25. UseCase Description

### 25. 2. UseCase Description Items

The default UseCase Description Items are listed below.

Item	Function	Edit
UseCase	Display the Name of the UseCase.	Auto-Display
Summary	Input Remarks.	Editable
Actor	Display Associated Actors or Extended UseCases.	Auto-Display
Precondition	Input Preconditions.	Editable
Postcondition	Input Postconditions.	Editable
Base sequence	Input Base Sequences.	Editable
Branch sequence	Input Branch Sequences.	Editable
Exception sequence	Input Exception Sequences.	Editable
Sub UseCase	Display the included UseCases.	Auto-Display
Note	Input Notes.	Editable

Note) UseCase Description Items can be edited, added and deleted by using [UseCase Description Template](#).

## 26. Exporting Image

### **26. Exporting Image**

Diagram images can be exported to image files. The diagram name is set to the file name.

To use the export image function by command line, please refer to [astah\\* Command line tool](#).

#### **26. 1. Save Diagram as PNG**

Save the diagram in the Diagram Editor by PNG format.

#### **26. 2. Save Multiple Diagrams as PNG**

Save the selected diagrams in the Multi Diagram Chooser by PNG format.

#### **26. 3. Save Diagram as JPEG**

Save the diagram in the Diagram Editor by JPEG format.

#### **26. 4. Save Multiple Diagrams as JPEG**

Save the selected diagrams in the Multi Diagram Chooser by JPEG format.

#### **26. 5. Save Diagram as EMF**

Save the diagram in the Diagram Editor by EMF format.

#### **26. 6. Save Multiple Diagrams as EMF**

Save the selected diagrams in the Multi Diagram Chooser by EMF format.

#### **26. 7. Save Diagram as SVG**

Save the diagram in the Diagram Editor by SVG format.

#### **26. 8. Save Multiple Diagrams as SVG (\*1)**

Save the selected diagrams in the Multi Diagram Chooser by SVG format

**(\*1) You are able to export SVG images by setting up “Batik SVG Toolkit” library.**

**[How to set up]**

1. Close astah\*
2. Download Batik SVG Toolkit"
3. Unzip the file and save them under astah\* install folder¥lib¥batik  
(astah\* install folder¥lib¥batik¥batik.jar)
4. Run astah\*

## 27. Command Line Tool

Command Line Tool exports image files of diagrams by using Command prompt. Please refer to the `astah*` Command Line Tool User Guide (`astah*` install folder/CommandRunner-e.html) for details.

### 27. 1. System Requirements

Running this command line tool requires you to have an environment that runs `astah*` properly. If you are going to handle large size of project, we recommend you to adjust the JavaVM memory option. (`asta-command.bat`)

(e.g. How to set up 16M byte for initial heap size, 256M byte for maximum heap size and 2M for Stack size)

`-Xms16m -Xmx256m -Xss2m`

### 27. 2. Exporting image files

Use 'image' action when you export diagram images as PNG, EMF or JPEG. If you do not specify the format to export it as, it exports in PNG format automatically.

e.g.1. Export an ER diagram in the `C:\input\hoge.asta` file to `C:\output` in PNG

```
call asta-command.bat -image er -f C:\input\hoge.asta -t png -o C:\output
```

e.g.2. Export all the diagrams in `C:\input\hoge.asta` file to `C:\output` in PNG

```
call asta-command.bat -image all -f C:\input\hoge.asta -t png -o C:\output
```

Option	Description	Kind	Note
-image	Export Action	all	All diagrams
		cl	Class Diagram
		uc	UseCase Diagram
		ucd	UseCase Description
		sc	Statemachine Diagram
		act	Activity Diagram
		seq	Sequence Diagram
		com	Communication Diagram
		cmp	Component Diagram

## 27. Command Line Tool

		dep	Deployment Diagram
		cs	Composite Structure Diagram
		fc	Flowchart
		dfd	DataFlow Diagram
		er	ER Diagram
		crud	CRUD
		mm	Mind Map
		rqd	Requirement Diagram
		rqt	Requirement Table
		tm	Traceability Map
		ignore-ref	Does not include reference projects
-dpi,--dpi <i>[image dpi]</i>	Resolution (dpi)	-	- Specify the dpi of image Default is set as 96 in the System Properties. dpi 72 makes the image as same as it shows in the Diagram Editor.
-f,--file <i>[target file]</i>	Target file		
-id,--dgm_id <i>[ids for target diagrams]</i>	Set ID		- Specify Diagram's IDs with a space between them If you export images with IDs on, File names will be these ID's instead of diagram names.
-o,--output <i>[output]</i>	Base folder where this image is exported to	-	Folder where the image is exported to is "base folder and project file name"
-t,--type <i>[image type]</i>	Format of images	png	PNG
		jpg	JPEG
		emf	EMF(Enhanced Metafile)

## 28. Exporting HTML

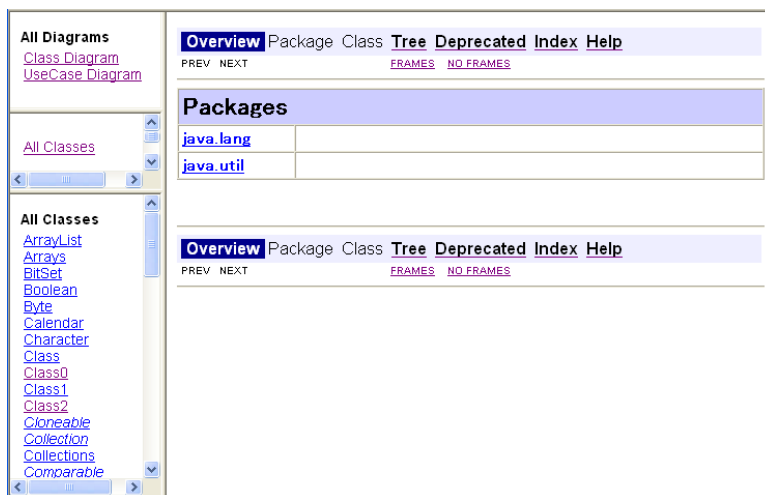
## 28. Exporting HTML

API Documentation (javadoc) of the opened Project can be generated in HTML format as follows:

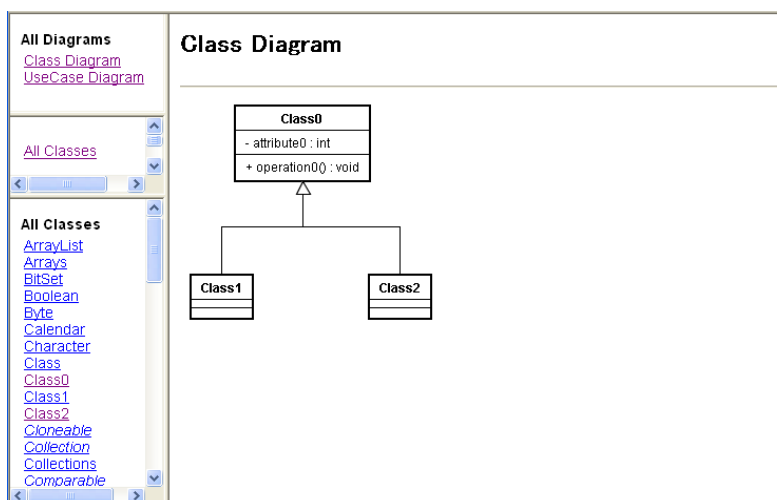
- a. Click [Tool]-[Export Html] in the Main Menu.
- b. Select the target folder and click on [Select].

**Note ) To use this function except in JRE Bundled Version, please copy lib/tools.jar of J2SE5.0 or 6.0 depending on the java environment to the astah\* install folder.**

1. Download and install the latest version of J2SE 5.0 or 6.0 depending on the java environment.
2. Copy %JAVA\_HOME%\lib\tools.jar to the astah\* Install folder.



To display a diagram, click a link to the diagram. The detailed information can be displayed by clicking Classes.





### 29. XMI Input & Output [P]

Projects can be input and output to and from XMI files in [XMI1.1 format](#) for UML 1.4 models. This function is designed mainly to extract certain UML models created with astah\* and tally them up through XML.

The XMI input/output is available between astah\* professional and other tools described on astah\* Reference manual. Technical support is not provided for any issues occurred using XMI created by any other tools.

An astah\*-specific format is used for diagram information, Mind Maps and UML 2.0 models and the information about the astah\*-specific format is currently not available to the public.

About encoding rules:

Strings are encoded using java.net.URLEncoder partially. In order to decode them, use java.net.URLDecoder. Particularly the names of elements, labels of presentations, 2-byte characters in item definitions are encoded. Also the values of TaggedValue are encoded if TaggedValue's value includes information, in order to prevent from misreading.

#### 29. 1. Inputting XMI Project Files

Using this function, Project files in XMI format can be opened and original astah\* expressions in Diagrams can be restored. To use this function, go to [Tool] - [XMI Input & Output] - [Open XMI Project]

##### Limitations

- *XMI files that are exported by JUDE/Professional 3.0 or earlier versions cannot be inputted into the later versions.*
- *To export XMI files from files generated in JUDE/Professional 3.0 or earlier versions, load .jude files into astah\* professional and export them as XMI files.*

#### 29. 2. Outputting XMI Project Files

Using this function, Project Information can be stored in XMI format. The output file includes the original astah\* expressions in Diagrams. To use this function, go to [Tool] - [XMI Input & Output] - [Save as XMI Project]

## 29. XMI Input & Output

### **29. 3. Rational Rose(TM) XMI File Input**

Using this function, XMI files that are output by XMI Add-in 1.3.6, Rational Rose 2003/2002, can be opened.

Input supports Class Diagrams and UseCase Diagrams. Some Models are not supported.

**Note) Please contact Unisys regarding XMI Add-in 1.3.6.**

-> Please refer to the [Rose Compatible XMI Input & Output](#) section for more details.

### **29. 4. Rational Rose(TM) Compatible XMI Files Output**

Using this function, Project Information can be stored in Rational Rose compatible XMI format. Output supports Class Diagrams and UseCase Diagrams. Some Diagram Information is not stored. Some Models are not supported.

Output XMI by this menu is not able to be input back to astah\* because it has been converted for Rational Rose(TM) use. To be able to input XMI that is exported by astah\* itself, save the XMI from [XMI Input & Output] - [Save as XMI Project].

-> Please refer to the [Rose Compatible XMI Input & Output](#) section for more details.

### **30. Rose Compatible XMI Input-Output [P]**

#### **30. 1. Overview**

This chapter describes the import and export of data between astah\* and IBM Rational Rose (abbreviated as “Rose” in the following descriptions) via XMI format files. The operation has been tested using both the Japanese and English editions of Rose2003. Importing and Exporting also partially support Enterprise Architect v 4.x (abbreviated as “EA” in the following descriptions) by Sparx Systems Pty Ltd. Other UML tools are not supported as the target of importing XMI files. In addition, XMI files that have been manually edited using a text editor may not be supported.

This chapter mainly refers to importing and exporting of data to and from Rose. Supplementary information about EA can be also found.

The import and export functions described here are based on XMI version 1.1. In the XMI files, UML descriptions are based on UML version 1.3. Therefore, astah\* cannot import or export any model elements that have been appeared since UML version 2.0. UML Models and Diagrams cannot be exported perfectly due to the restrictions of the XMI format and the different specifications of each UML tool. For this reason, manual editing may be required after importing XMI data.

“XMI Add-in 1.3.6”, the add-in tool for Rose, is beyond the scope of astah\* support. This chapter refers to XMI Add-in 1.3.6, a tool developed by Unisys for the English version of Rose2002/2003. IBM does not support XMI Add-in 1.3.6. Please do not contact IBM about the contents of this chapter.

There are limitations with importing and exporting data with EA. Please do not contact Sparx Systems Pty Ltd. about the contents of this chapter.

The restrictions described in this chapter may be removed or improved in the future, as data support in astah\* is enhanced.

#### **30. 2. Preparation: Settings of Rose**

- a. Install “XMI Add-in 1.3.6”, the add-in tool for Rational Rose 2003/2002.

### 30. Rose Compatible XMI Input-Output

#### *Using the Japanese edition of Rose*

(System Drive):¥Program Files¥Unisys¥RoseXML Tools¥MOF13¥JCRUML.mnu

- b. Start up Rose and check [JCRUML] in the Add-in Menu of the Add-in Manager.
- c. In “Menu Tools”, a menu item “UML 1.3 XMI Addin” is added.
- d. Input-Output is performed using Rose with the [UML 1.3 XMI export] menu and the [UML 1.3 XMI import] menu of the “UML 1.3 XMI Addin”.

**Note)** This operation is not guaranteed by IBM, Unisys, or Change Vision, Inc.

#### *Outputting XMI Files*

To output an XMI file using the Rose [UML 1.3 XMI export] menu, so that astah\* can subsequently import it, the following options must be selected:

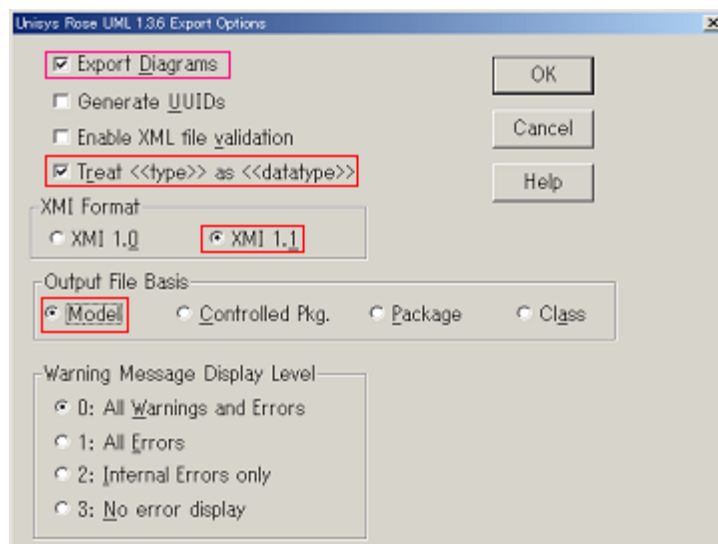
[Treat <<type>> as <<datatype>>]

[XMI Format: XMI 1.1]

[Output File Basis: Model]

If Diagram information is also required, please select the following option:

[Export Diagrams]



### 30.3. Supplementary information: Settings of EA

#### *Outputting XMI Files*

To output an XMI file using the EA [Export Package to XMI] menu, so that astah\* can subsequently import it, the following options must be selected:

### 30. Rose Compatible XMI Input-Output

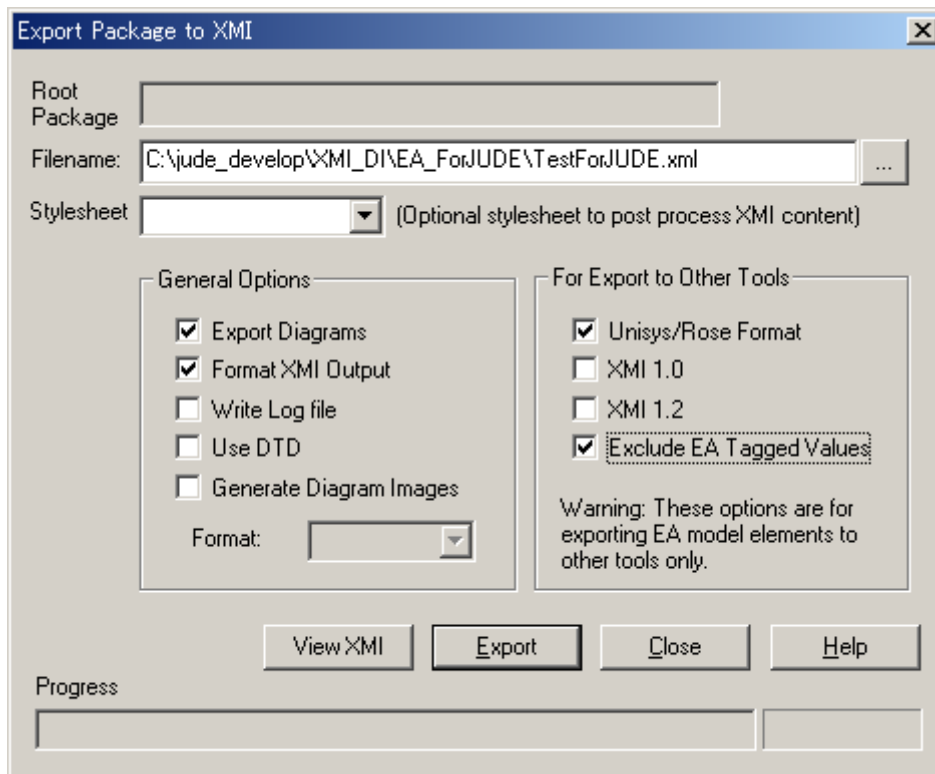
[Format XMI Output]

[Unisys/Rose Format]

[Exclude EA Tagged Values]

If Diagram information is also required, please select the following option:

[Export Diagrams]



#### 30. 4. Operations using astah\*

XMI data can be imported and exported between astah\* and Rose or EA using [Open XMI Project from Rational Rose(TM)] and [Save As XMI Project for Rational Rose(TM)] in [Tool]-[XMI Input & Output].

##### 30. 4. 1. [Open XMI Project from Rational Rose(TM)]

Using this function, parts of Models can be imported from Rose to astah\* via an XMI file that is generated by XMI Add-in 1.3.6.

The targets of Input are the following Models and Diagram Elements.

*Note) To import Diagram Elements, first select the option [Import/Export XMI file for Rational Rose(TM) with diagram], found in the "File" section of the System Properties.*

#### ***Models/Diagram Elements of Class Diagrams and UseCase Diagrams***

*Note) Diagrams other than Class and UseCase Diagrams are not supported.*

- Class
- Interface
- Actor
- UseCase
- Entity Class (Entity)
- Control Class (Control)
- Boundary Class (Boundary)
- Association Class
- Attribute
- Operation
- Parameter
- Basic Data Type (as DataType)
- Association
- Multiplicity
- Generalization
- Dependency
- Realization
- Stereotype
- Package
- Note
- Note Anchor

Note) When the option [Import/Export XMI file for Rational Rose(TM)] in the System Properties is not selected, Diagram information is not imported. Notes and Note Anchors, which require Diagram information, are also not imported.

Note) The Rose “UseCase View Package” is imported as a Model called “Use Case View”. The Rose “Component View Package” is imported as a Subsystem. Other Elements are imported under the Project Model.

#### ***Other target Models that can be imported/exported besides Class Diagrams and UseCase Diagrams***

- Component
- Node

### 30. Rose Compatible XMI Input-Output

#### ***Models that cannot be imported due to Rose Restrictions***

- Stereotype of UseCase
- Dependency between UseCases
- Include
- Extend
- Extension Point
- Association between Nodes
- Constraint of Association

#### ***Models that are transformed due to Rose Restrictions***

- Constraint of Attribute
- Constraint of Association Role

#### ***Models that are converted to other Models due to astah\* Restrictions***

- Parameterized Class -> Class (Formal Parameters will be deleted.)

### **30. 4. 2. Supplementary information: Selecting EA Output files in [Open XMI Project from Rational Rose (TM)]**

Models that are output by EA using [Export Package in XML] can be partially imported by astah\*.

***Note) To import Diagram Elements, first select the option [Import/Export XMI file for Rational Rose(TM) with diagram], found in the “File” section of the System Properties.***

Restrictions of and support for EA files are similar to those for Rose files. However, there are the following differences:

#### ***Additional Models supported by EA***

- Dependency between UseCases
- Constraint of Attribute (only one Constraint)
- Constraint of Association

#### ***Models that are converted to other Models due to EA Output for Rose***

- Include -> Association + Stereotype <<include>>
- Extend -> Association + Stereotype <<extend>>

### 30. Rose Compatible XMI Input-Output

- Collaboration in UseCase Diagrams -> UseCase
- Association Class -> Association + Class

#### ***Models that are deleted from the Diagram due to EA Output for Rose***

- Package
- Boundary of UseCase
- Constraint of Association Role

#### **Models that are deleted from the Project due to EA Output for Rose**

- Dependency to Package
- Association to Package
- Constraint of Association End (Multiplicity)

#### **Models that can be drawn in Class Diagrams and UseCase Diagrams only in EA**

- Node
- Component

***Note) Models that are deployed or associated against the Notation specified in UML1.3. are not supported.***

*Note) The color settings of Diagram Elements are discarded.*

### **30. 4. 3. [Save As XMI Project for Rational Rose(TM)]**

Models created using astah\* can be partially exported to Rose via XMI Add-in 1.3.6.

**Note) Using this function, only a portion of astah\* Project data can be output to an XMI file. To save astah\* Project data, please use [Save] or [Save as XMI Project].**

The targets of Output are the following Models and Diagram Elements.

***Note) To export Diagram Elements, first select the option [Import/Export XMI file for Rational Rose(TM) with diagram], found in the "File" section of the System Properties.***

#### ***Models/Diagram Elements of Class Diagrams and UseCase Diagrams***

***Note) Diagrams other than Class and UseCase Diagrams are not supported.***

- Class
- Interface (as Class + Stereotype <<interface>>)
- Actor (as Class + Stereotype <<Actor>>)



### 30. Rose Compatible XMI Input-Output

- UseCase
- Entity Class (Entity) (as Class + Stereotype <<entity>>)
- Control Class (Control) (as Class + Stereotype <<control>>)
- Boundary Class (Boundary) (as Class + Stereotype <<boundary>>)
- Association Class
- Attribute
- Operation
- Parameter
- Basic Data Type (as DataType)
- Association
- Multiplicity
- Generalization
- Dependency
- Realization
- Stereotype
- Package
- Note
- Note Anchor

**Note)** When the option [Import/Export XMI file for Rational Rose(TM)] in the System Properties is not selected, Diagram information is not exported. Notes and Note Anchors that require Diagram information are also not exported.

*Models that are not output as Diagram Elements, but are treated as the target of output*

- Component
- Node
- Classifier
- Artifact

**Note)** When the file is imported to Rose via XMI Add-in 1.3.6, Components are imported under the “Component View Package” and Nodes under the “Deployment View Package”. Other Models and Diagrams are imported under the “Logical View Package”.

*Models that are deleted by Rose due to Rose Restrictions*

### 30. Rose Compatible XMI Input-Output

- Dependency between UseCases
- Include
- Extend
- Extension Point
- Association between Nodes
- Dependency between Nodes
- Constraint of Association
- Constraint of Association Role
- Constraint of Attribute
- Constraint of Operation

#### ***Models that are converted to other Models due to Rose restrictions***

- Subsystem -> Package (Operations are deleted)
- Model -> Package
- Classifier -> Class
- Artifact -> Class
- Required Interface -> Interface
- Provided Interface -> Interface

#### ***Models that will not be output due to Rose restrictions***

- Associations and association classes that are connected to Subsystem
- Instance Specification
- Link
- Dependency to Instance Specification
- Dependency between a Node and a Component
- Dependency between a Node and an Interface
- Realization of Interface by Node
- Dependency between a Component and an Interface
- Realization of Interface by Component
- Node Instance
- Dependency to NodeInstance
- ComponentInstance
- Dependency to ComponentInstance
- Realization of Interface by ComponentInstance
- Text

### 30. Rose Compatible XMI Input-Output

- Rectangle
- Line
- Image

*Note) Using astah\*, these Models can be created in the same Diagram mixed with other Models that can be exported. However, to cope with the specification differences between astah\* and Rose, these are not the targets of output.*

*Note) astah\* allows multiple Stereotypes to be set to one Model. However Rose imports only the first one.*

*Note) Hyperlinks of Elements cannot be output.*

#### **30. 4. 4. Supplementary information: Using the Output File of [Save as XMI Project for Rational Rose(TM)] with EA**

The XMI output file of astah\* for Rose XMI Add-in 1.3.6 can be also used with EA.

*Note) To export Diagram Elements, first select the option [Import/Export XMI file for Rational Rose(TM) with diagram], found in the “File” section of the System Properties.*

Similar restrictions apply as when the file is used with Rose. However, there are following differences:

##### ***Additional Models supported by EA***

- Dependency between UseCases
- Include
- Extend
- Association between Nodes

##### ***Models that are deleted due to specification differences between astah\* and EA***

- Stereotype of Class (Entity Class, Boundary Class, and Control Class will be Normal Class)
- Stereotype of Association
- Classifier of Association
- Constraint of Association

### 30. Rose Compatible XMI Input-Output

- Constraint of Association Role (Multiplicity)
- Constraint of Attribute
- Constraint of Operation

*Note) The color settings of Diagram Elements are discarded.*

*Note) astah\* allows multiple Stereotypes to be set to one Model. However EA imports only the first one.*

*Note) Hyperlinks of Elements cannot be output.*

## 31. Exporting RTF

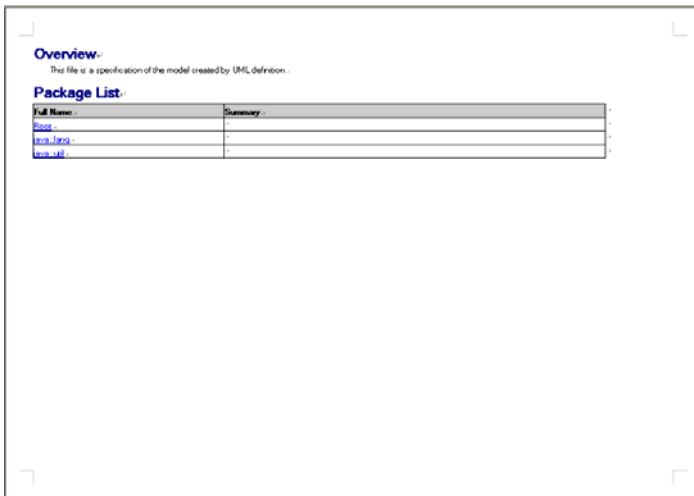
### **31. Exporting RTF**

To export RTF, go to [Tool] - [Export RTF]

#### **31. 1. RTF**

1. Package List
2. Use Case List
3. Classifier List
4. Data Flow Diagram Model List
5. Requirement List
6. TestCase List
7. Diagrams
8. Use Case Description
9. Classes, Attributes, Operations etc.
10. Hierarchy structure of Activity Diagram
11. Property of Actions (Definition, TaggedValues etc.)

[Package List]

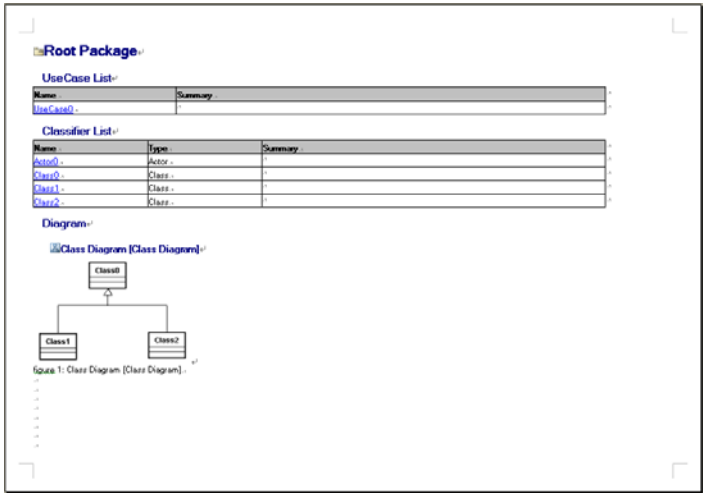


The screenshot shows a software window titled 'Overview' with a subtitle 'This file is a specification of the model created by UML definition.' Below this is a section titled 'Package List' containing a table with two columns: 'Full Name' and 'Summary'. The table has three rows of data.

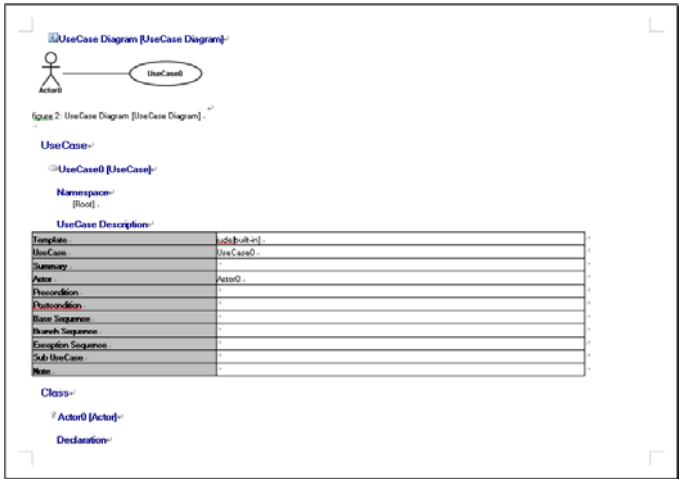
Full Name	Summary
Root	
Root -> ...	
Root -> ...	

[Use Case List, Class List, Class Diagram]

31. Exporting RTF



[Use Case Diagram/Use Case Description]



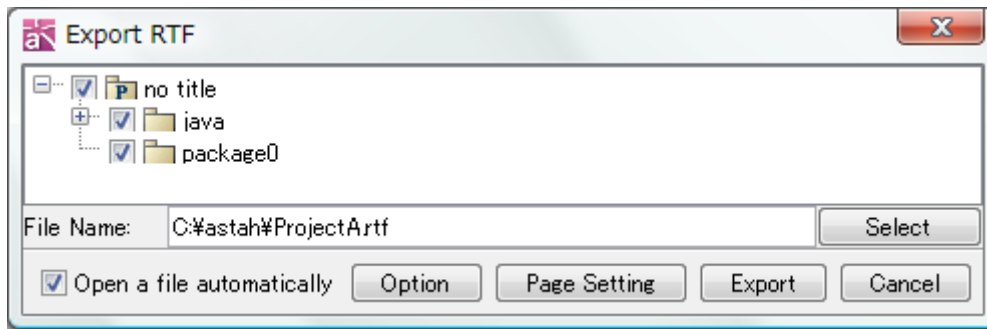
[Class]



31.2. Export RTF

Set RTF in the Export RTF dialog.

### 31. Exporting RTF



#### 1) Select Models in the Tree

Select Models to export into RTF in the Tree.

#### 2) Select a file

Select a file to export the RTF.

#### 3) Open a file automatically

Check this option to open the RTF automatically.

#### 4) Option

Click the Option button to set detailed setting of the RTF.

#### 5) Page Setting

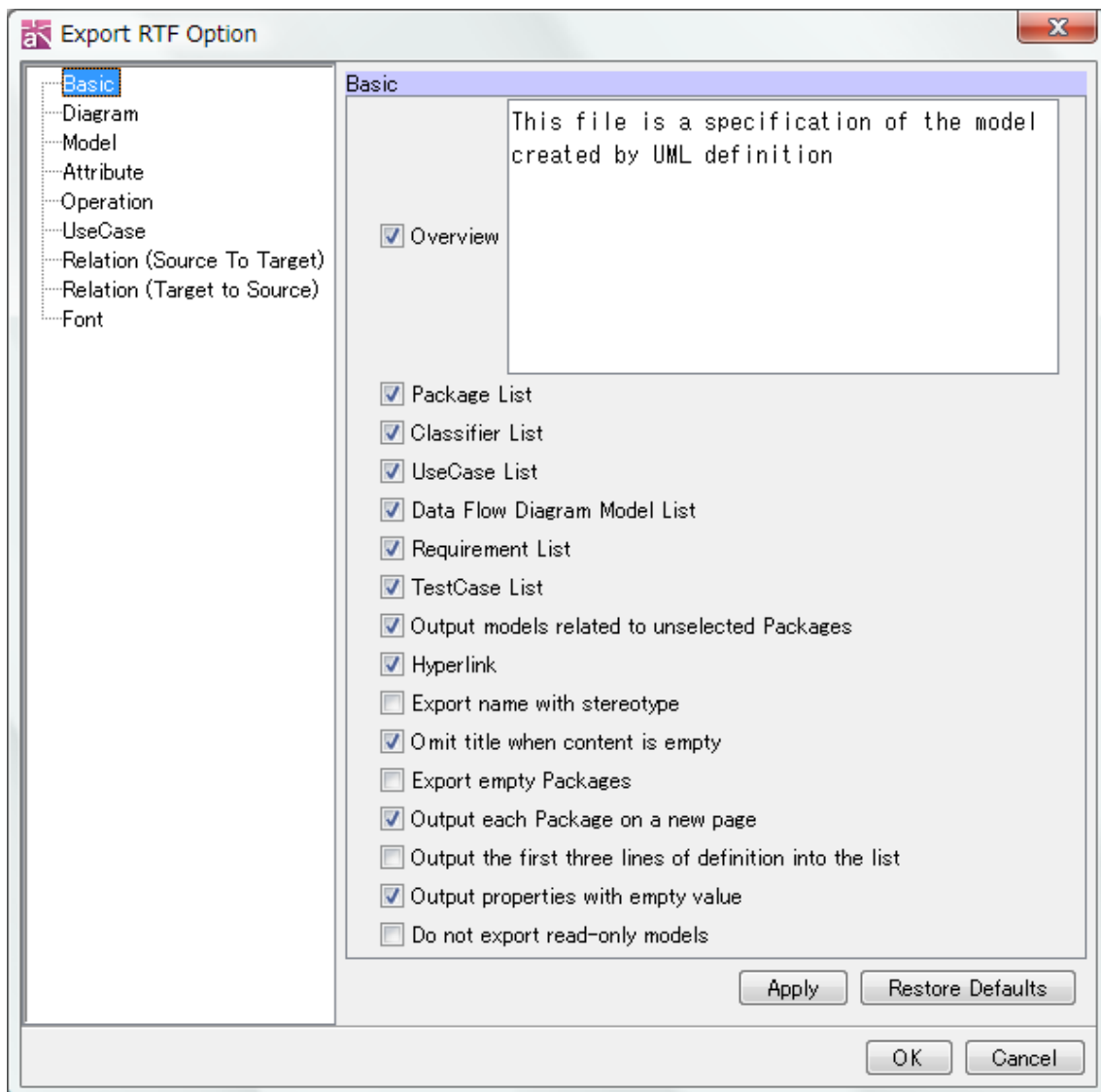
Click the Page Setting button to set the page setting.

#### 6) Export

Click the Export button to export the RTF.

## 31. Exporting RTF

### 31.3. Basic



#### 1) Overview

This option can be used to output an overview.

Default [ON]

#### 2) Package List

This option can be used to output a Package List.

Default [ON]

#### 3) Classifier List

This option can be used to output Classifier Lists for each Package.

Default [ON]

#### 4) Use Case Lists

This option can be used to output UseCase Lists for each Package.



## 31. Exporting RTF

**Default [ON]**

### **5) Data Flow Diagram Model List**

This option can be used to output Data Flow Diagram List.

**Default [ON]**

### **6) Requirement List**

This option can be used to output Requirement List.

**Default [ON]**

### **7) TestCase List**

This option can be used to output TestCase List.

**Default [ON]**

### **8) Output Models related with unselected Packages**

This option can be used to output Models related with unselected Packages.

**Default [ON]**

### **9) Hyperlink**

This option can be used to output Hyperlinks.

**Default [ON]**

### **10) Export name with stereotype**

This option can be used to output names with stereotype in the lists.

**Default [OFF]**

### **11) Omit title when content is empty**

This option can be used not to output titles if the contents of the items are empty.

**Default [ON]**

### **12) Export empty package**

This option can be used to output empty Packages.

**Default [OFF]**

### **13) Output each Package on new page**

This option can be used to output a new page for each Package.

**Default [ON]**

### **14) Output the first three lines of definition into the list**

This option can be used to output the first three lines of definition in the list.

**Default [OFF]**

### **15) Output properties with empty value**

This option can be used to output properties with empty value.

**Default [ON]**

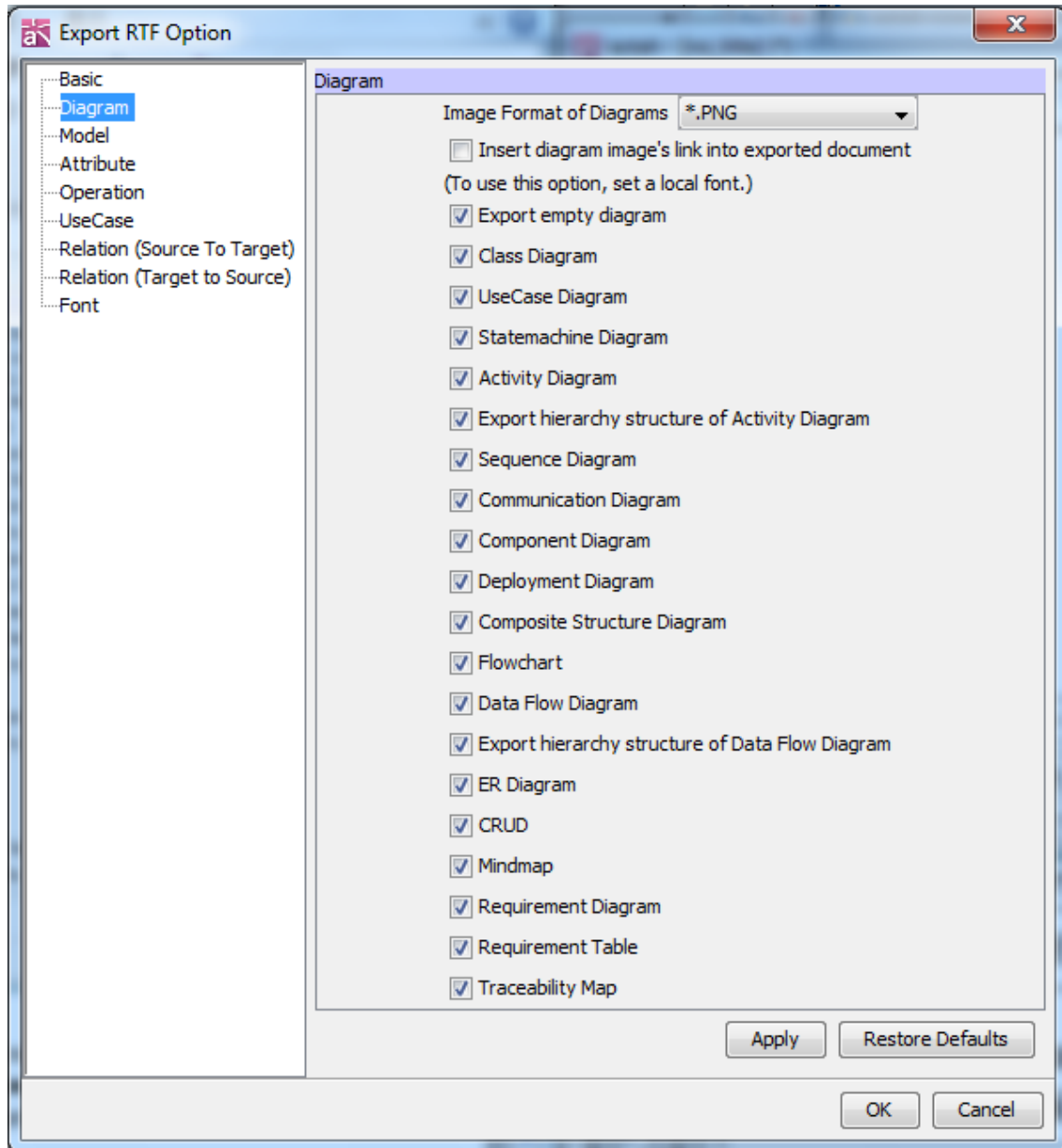
### **16) Do not export read-only models**

This option can be used to export RTF including read-only reference models.

## 31. Exporting RTF

Default [OFF]

### 31.4. Diagram



#### 1) Image Format of Diagrams

This option can be used to select an image format of Diagrams.

#### 2) Insert diagram image's link in exported document

This option can be used to insert links to diagram images. To display diagrams, set the appropriate locale font in the Font tab.

Default [OFF]

#### 3) Export empty diagram

### 31. Exporting RTF

This option can be used to output empty diagrams.

**Default [ON]**

#### **4) Class Diagram**

This option can be used to output Class Diagrams.

**Default [ON]**

#### **5) UseCase Diagram**

This option can be used to output UseCase Diagrams.

**Default [ON]**

#### **6) Statemachine Diagram**

This option can be used to output Statemachine Diagrams.

**Default [ON]**

#### **7) Activity Diagram**

This option can be used to output Activity Diagrams.

**Default [ON]**

#### **8) Export hierarchy structure of Activity Diagram**

This option can be used to output hierarchy structure of Activity Diagrams.

**Default [ON]**

#### **9) Sequence Diagram**

This option can be used to output Sequence Diagrams.

**Default [ON]**

#### **10) Communication Diagram**

This option can be used to output Communication Diagrams.

**Default [ON]**

#### **11) Component Diagram**

This option can be used to output Component Diagram

**Default [ON]**

#### **12) Deployment Diagram**

This option can be used to output Deployment Diagrams.

**Default [ON]**

#### **13) Composite Structure Diagram**

This option can be used to output Composite Structure Diagram.

**Default [ON]**

#### **14) Flowchart**

This option can be used to output Flowcharts.

**Default [ON]**

#### **15) Data Flow Diagram (DFD)**

### 31. Exporting RTF

This option can be used to output Data Flow Diagrams.

**Default [ON]**

#### **16) Export hierarchy structure of Data Flow Diagram**

This option can be used to output hierarchy structure of Data Flow Diagrams.

**Default [ON]**

#### **17) ER Diagram**

This option can be used to output ER Diagrams.

**Default [ON]**

#### **18) CRUD**

This option can be used to output CRUDs.

**Default [ON]**

#### **19) Mindmap**

This option can be used to output Mindmaps.

**Default [ON]**

#### **20) Requirement Diagram**

This option can be used to output Requirement Diagrams.

**Default [ON]**

#### **21) Requirement Table**

This option can be used to output Requirement Tables.

**Default [ON]**

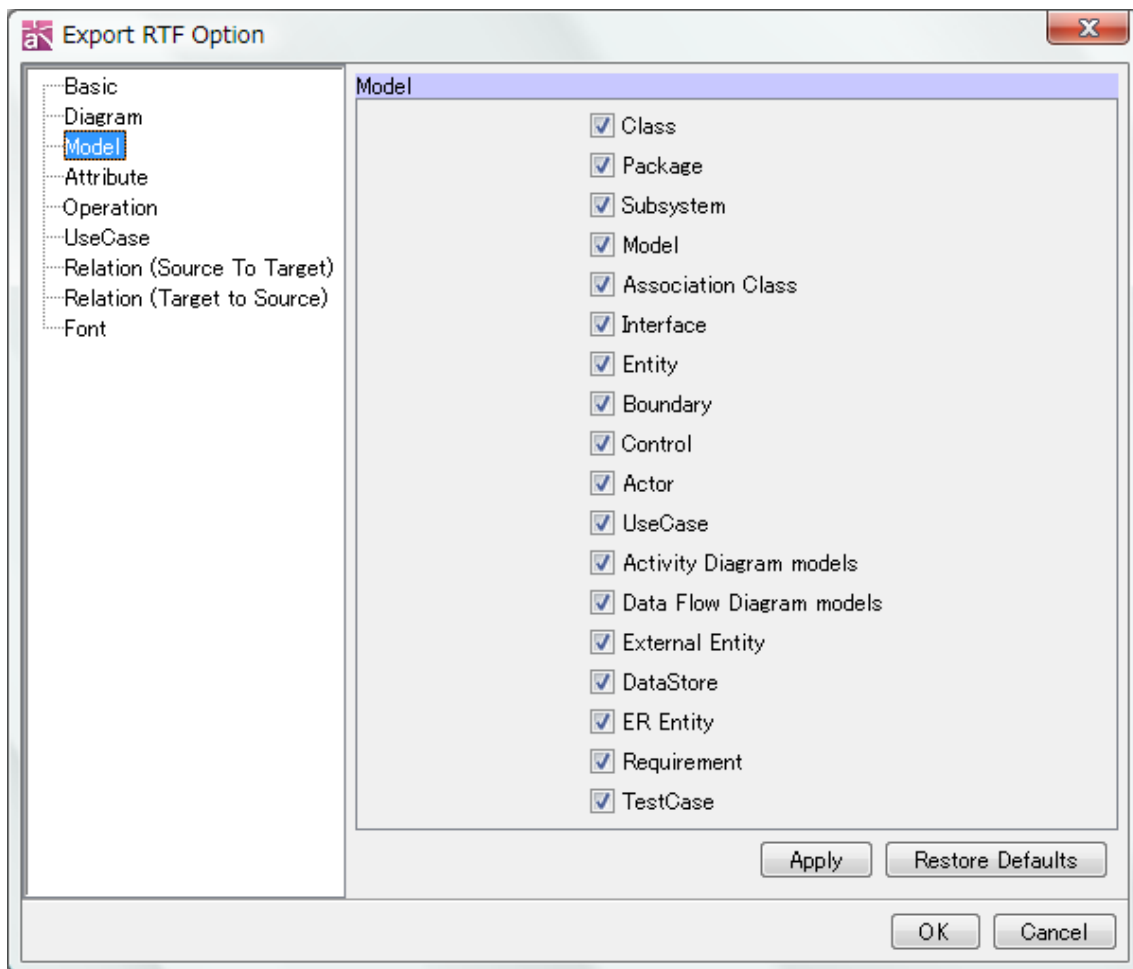
#### **22) Traceability Map**

This option can be used to output Traceability Maps.

**Default [ON]**

## 31. Exporting RTF

### 31.5. Model



These options can be used to output Models. The following Models can be output.

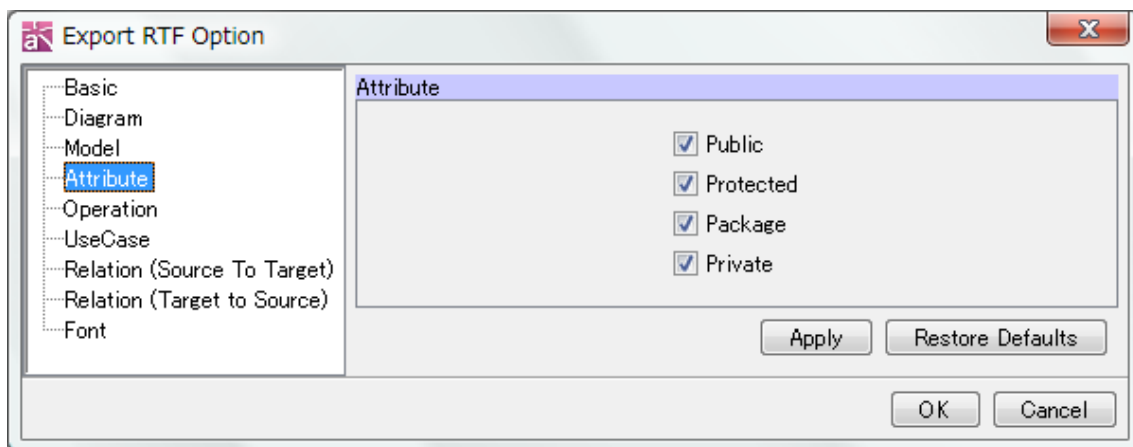
#### **Default [ON]**

- 1) Class
- 2) Package
- 3) Subsystem
- 4) Model
- 5) Association Class
- 6) Interface
- 7) Entity
- 8) Boundary
- 9) Control
- 10) Actor
- 11) UseCase
- 12) Activity Diagram models

## 31. Exporting RTF

- 13) Data Flow Diagram models
- 14) External Entity
- 15) Data Store
- 16) ER Entity
- 17) Requirement
- 18) TestCase

### 31.6. Attribute

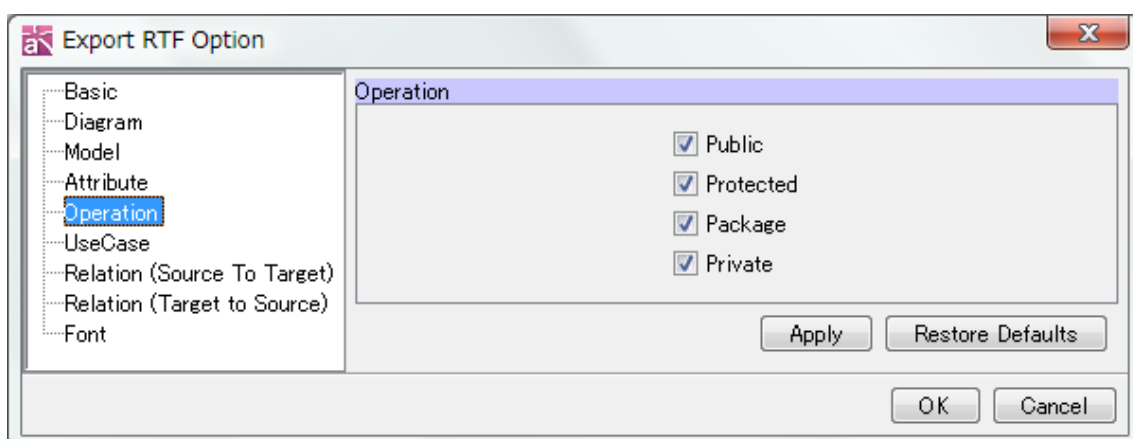


These options can be used to select Attribute visibilities.

#### Default [ON]

- 1) Public
- 2) Protected
- 3) Package
- 4) Private

### 31.7. Operation



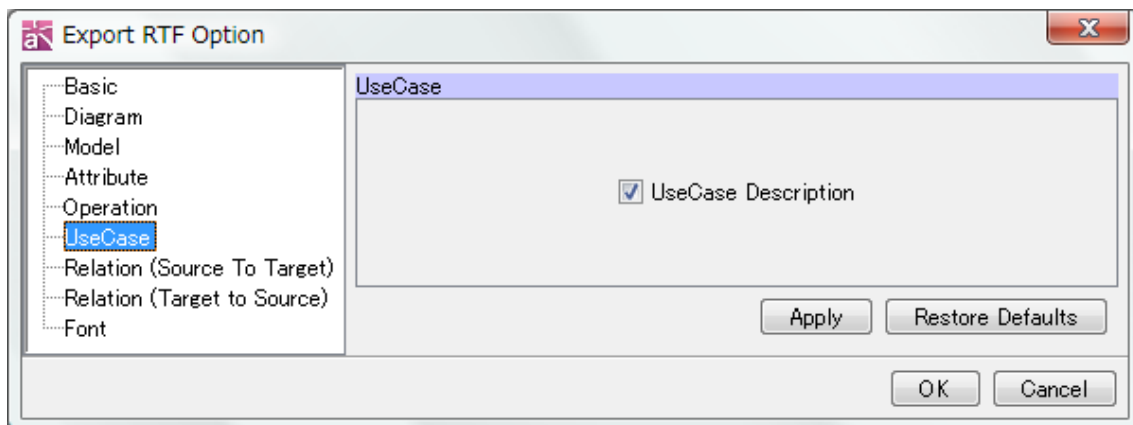
### 31. Exporting RTF

This option can be used to select Operation visibilities.

**Default [ON]**

- 1) Public
- 2) Protected
- 3) Package
- 4) Private

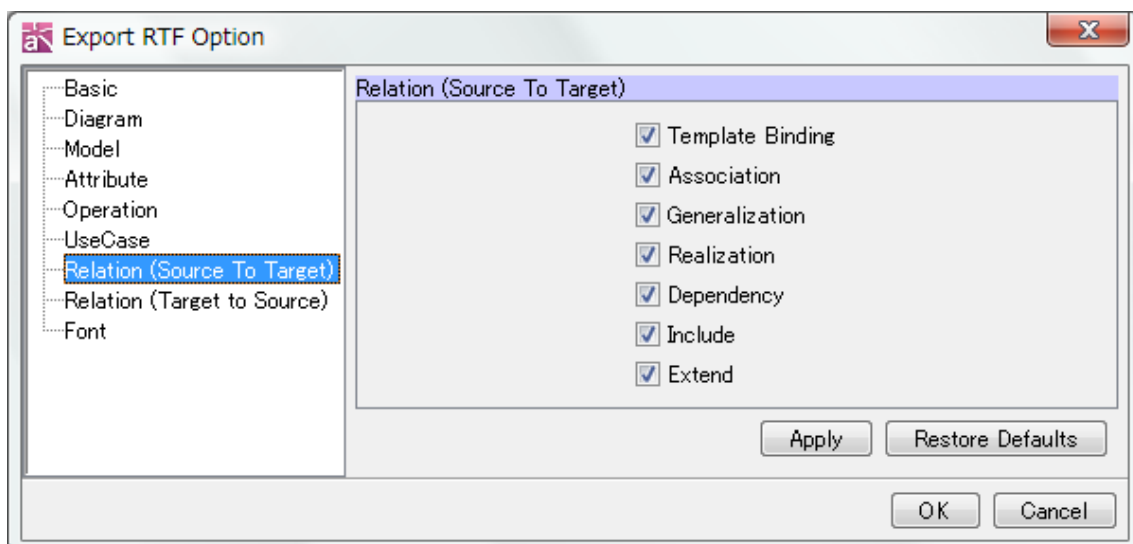
#### 31. 8. UseCase



This option can be used to output UseCase Descriptions.

**Default [ON]**

#### 31. 9. Relation (Source to Target)



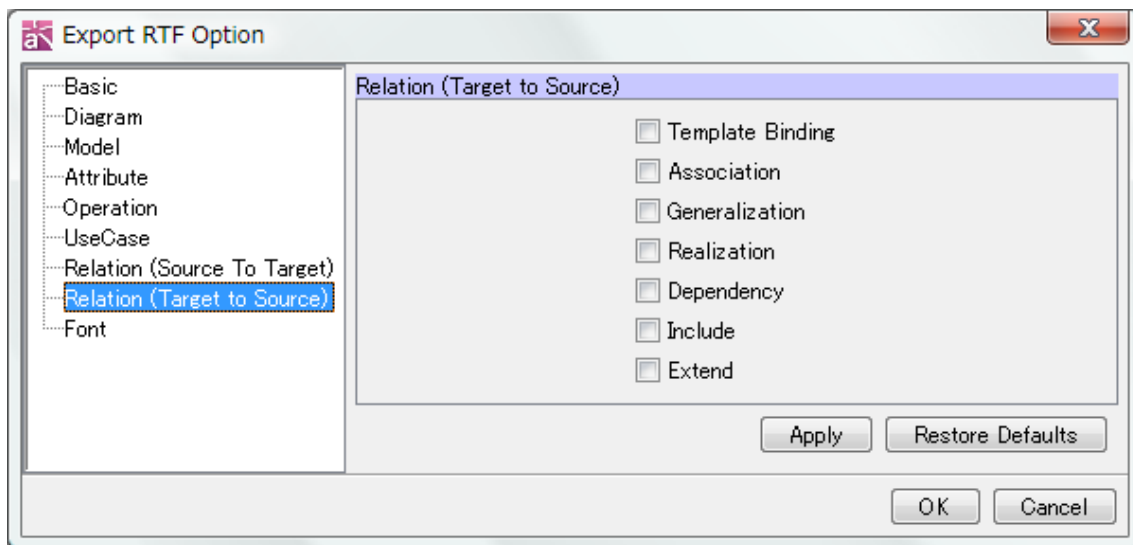
These options can be used to output relations from source to target.

**Default [ON]**

### 31. Exporting RTF

- 1) Template Binding
- 2) Association
- 3) Generalization
- 4) Realization
- 5) Dependency
- 6) Include
- 7) Extend

#### 31.10. Relations (Target to Source)



These options can be used to output relations from target to source.

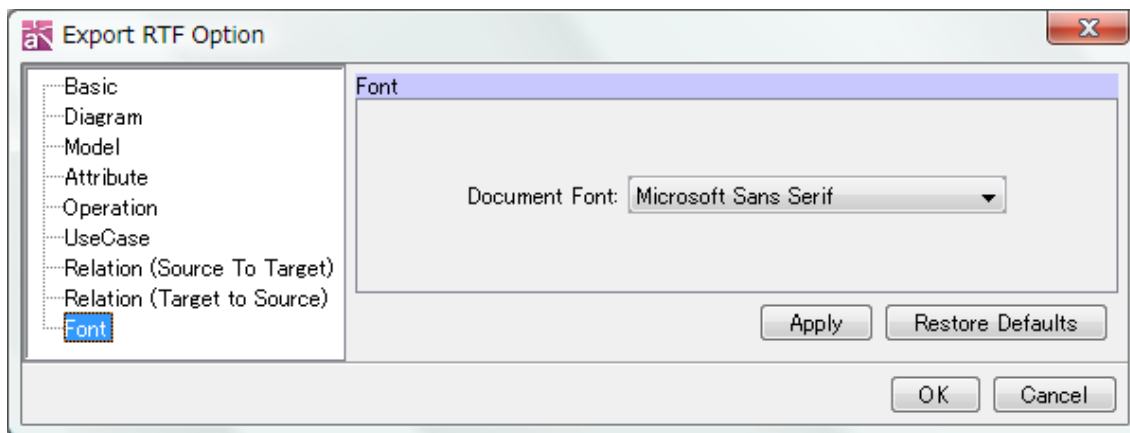
#### **Default [OFF]**

- 1) Template Binding
- 2) Association
- 3) Generalization
- 4) Realization
- 5) Dependency
- 6) Include
- 7) Extend



## 31. Exporting RTF

### 31.11. Font



This option is used to select a font to output a document.

## 32. Exporting Documents for Mind Map/Traceability Map

### 32. Exporting Documents for Mind Map/Traceability Map

Export RTF for Mind Map/Traceability Map and export PowerPoint for Mind Map.

[P] Traceability Map is supported in astah\* professional.

#### 32. 1. Export RTF for Mind Map/Traceability Map

To export RTF of Mind Map/Traceability Map, go to the Main Menu.

Mindmap : [Tool] – [Mindmap] - [Export RTF]

Traceability Map : [Tool] – [Traceability Map] – [Export RTF]

[Example]

#### Marketing Mix (4Ps)\_0

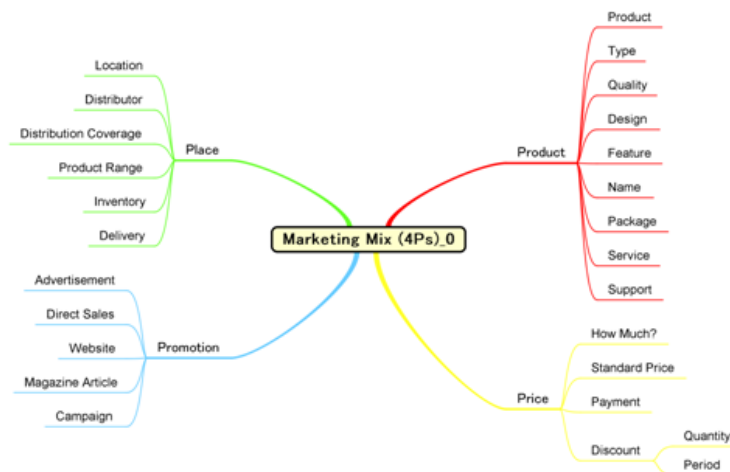


figure 1 : Marketing Mix (4Ps)0[Mindmap]

#### Product

Product

Type

Quality

Design

Feature

Name

Package

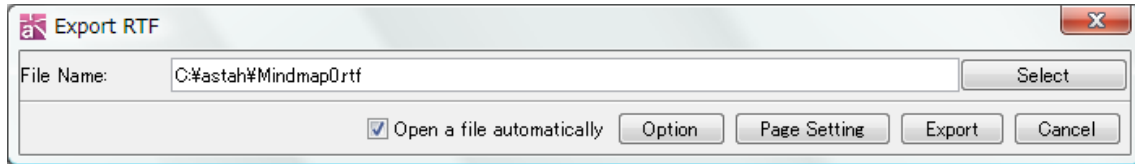
Service

Support

## 32. Exporting Documents for Mind Map/Traceability Map

### 32.1.1. Export RTF

Set Document Format in the Export RTF dialog.



#### 1) Select a file

Select a file to export the RTF.

#### 2) Open a file automatically

Check this option to open the RTF automatically.

#### 3) Option

Click the Option button to set detailed setting of the RTF.

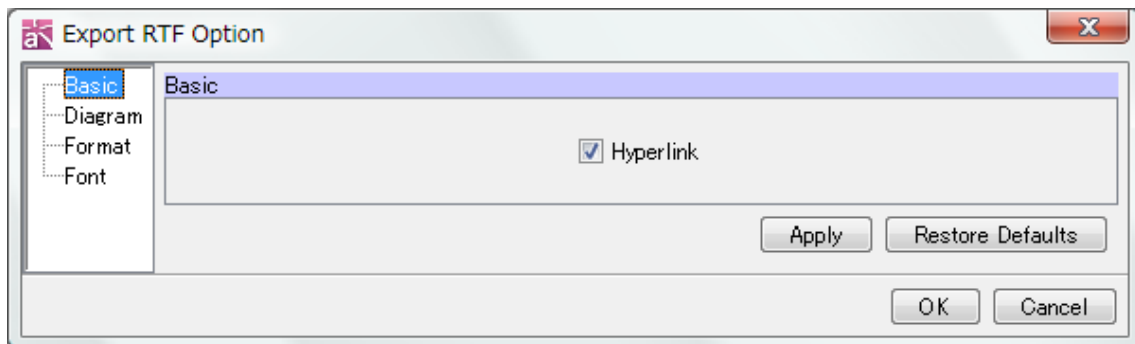
#### 4) Page Setting

Click the Page Setting button to set the page setting.

#### 5) Export

Click the Export button to export the RTF.

### 32.1.2. Basic



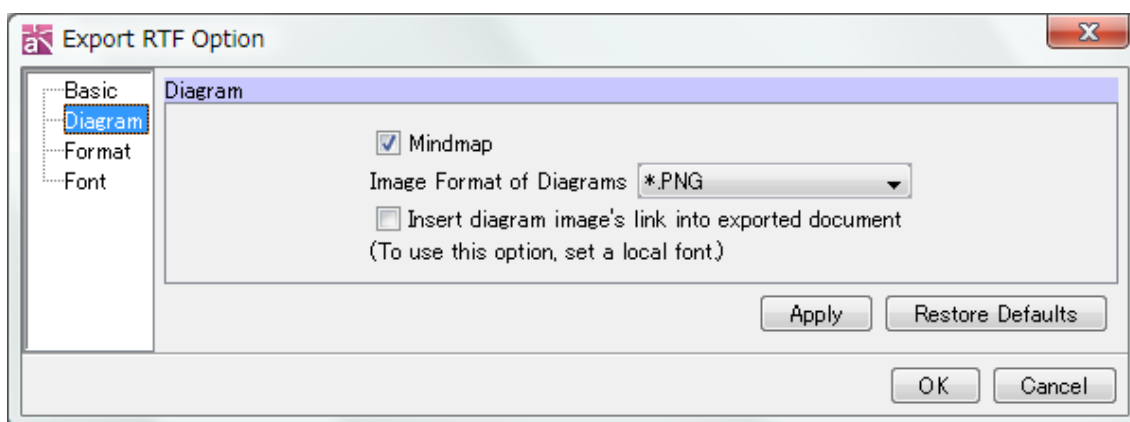
#### 1) Hyperlink

Check this option on to include Hyperlink to exported Mind Map.

Default [ON]

## 32. Exporting Documents for Mind Map/Traceability Map

### 32.1.3. Diagram



#### 1) Mindmap

Check this option on to include Images of Mindmaps to exported RTF.

Default [ON]

#### 2) Image Format of Diagrams

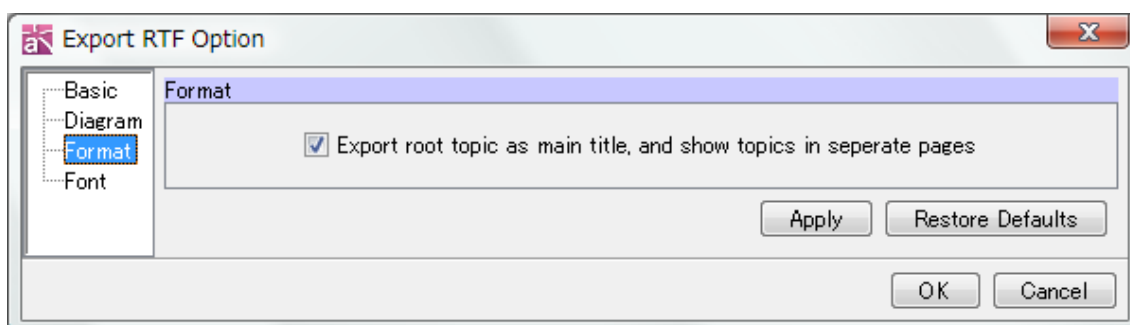
This option can be used to select an image format of Diagrams.

#### 3) Insert diagram image's link in exported document (To use this option, set a local font)

Export the image of Mindmap to separate another file and the link of the file will be included in exported document.

Default [OFF]

### 32.1.4. Format



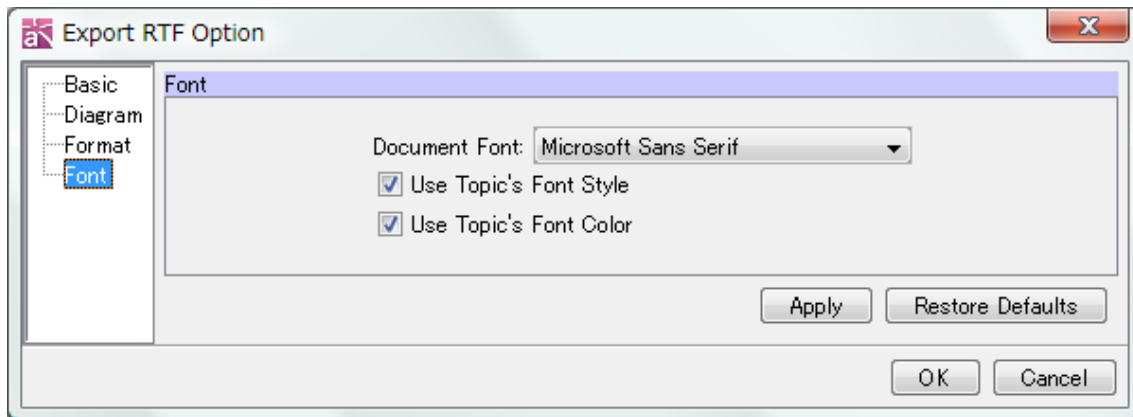
#### 1) Export root topics as main title, and show topics in separate pages.

Check this option on to export root topic as main title, and then they will be shown as topics in separate pages on Microsoft PowerPoint.

Default [ON]

## 32. Exporting Documents for Mind Map/Traceability Map

### 32.1.5. Font



#### 1) Document Font

Set the Font type for exported RTF.

#### 2) Use Topic's Font Style

Export in Topic's font style.

**Default [ON]**

#### 3) Use Topic's Font Color

Export using Topic's font color.

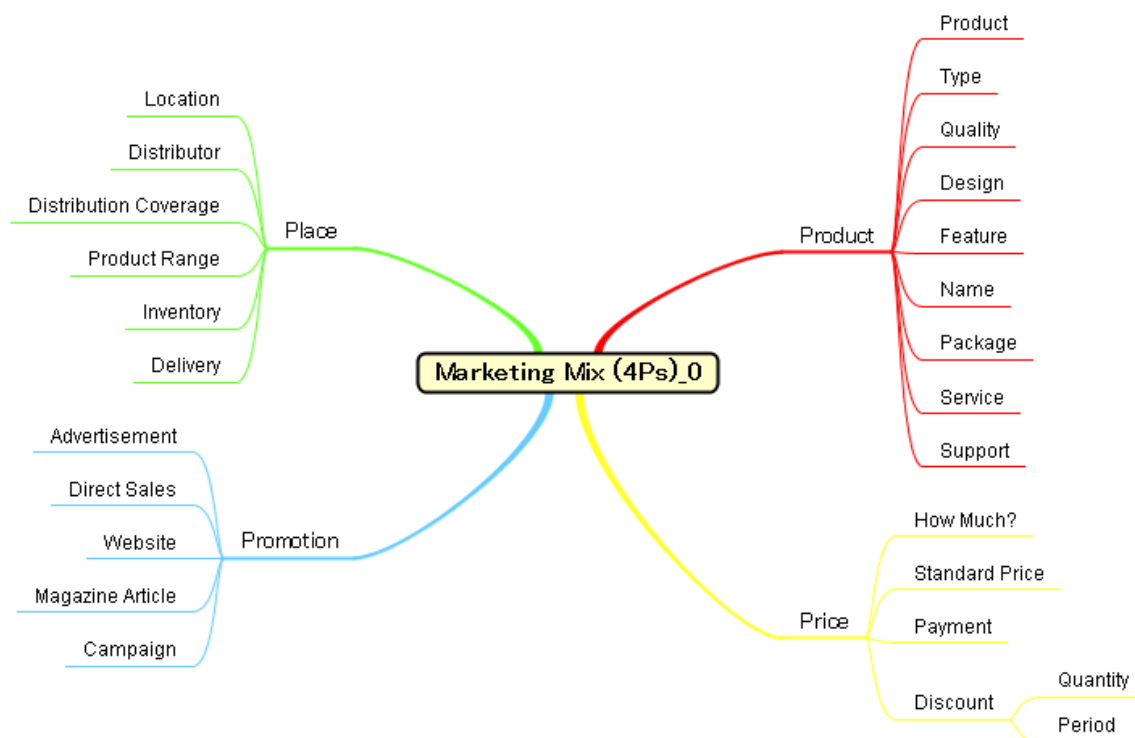
**Default [ON]**

## 32.2. Export PowerPoint for Mind Map

To export PowerPoint of Mind Map, go to [Tool] – [Mindmap] - [Export PowerPoint] in the Main Menu.

[Example]

32. Exporting Documents for Mind Map/Traceability Map



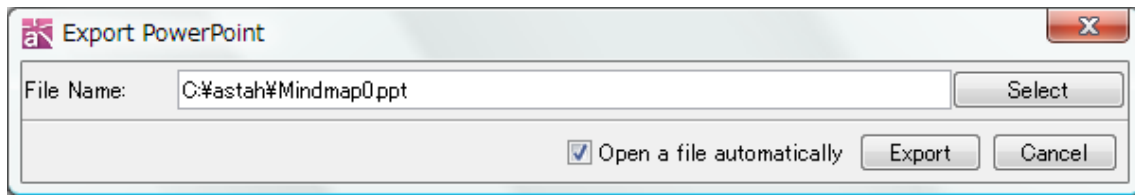
[Export Mind Map to PowerPoint]



32. 2. 1. Export PowerPoint

Set Document Format in the Export PowerPoint dialog.

## 32. Exporting Documents for Mind Map/Traceability Map



### 1) Select a file

Select a file to export the PowerPoint.

### 2) Open a file automatically

Check this option to open the PowerPoint automatically.

### 3) Export

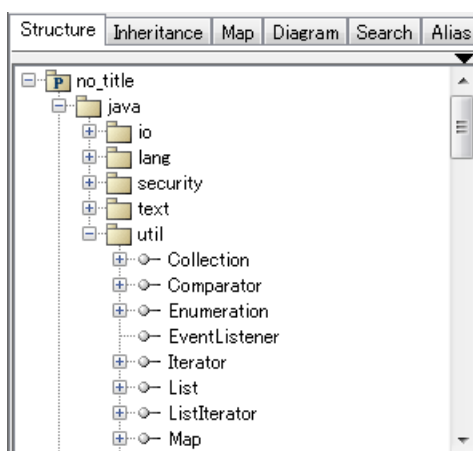
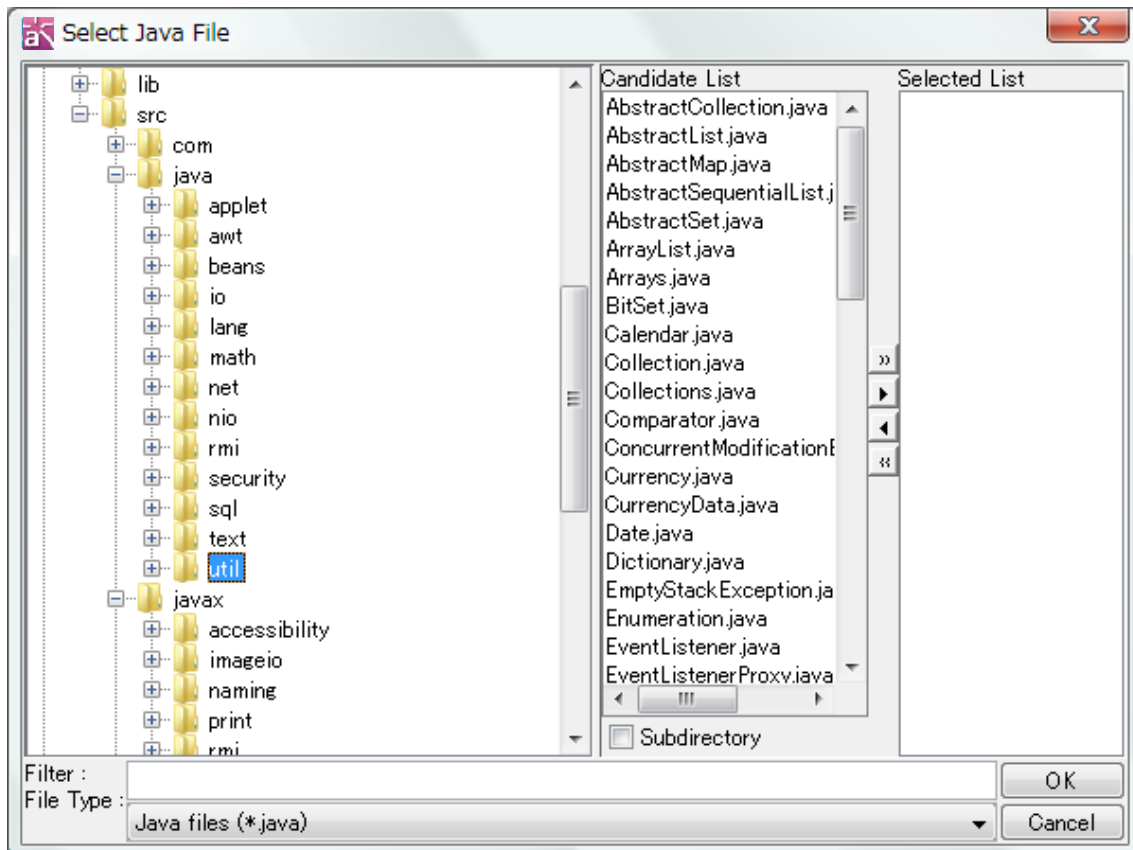
Click the Export button to export the PowerPoint.

### 33. Importing Java Source Code

### 33. Importing Java Source Code

“Import Java” is used to import Classes and their parent Packages from .java files into the current Project. If the target .java file does not specify a Package, the Class (Model Element) is generated under a Package called “no-title”.

To import .java files, select [Tool]-[Java]-[Import Java] to open the [Select Java File] Dialog.



Note) Diagrams cannot be generated by “Import Java”. However, using the “Generate Class Diagrams” function, Class Diagrams can be created for the imported Packages.

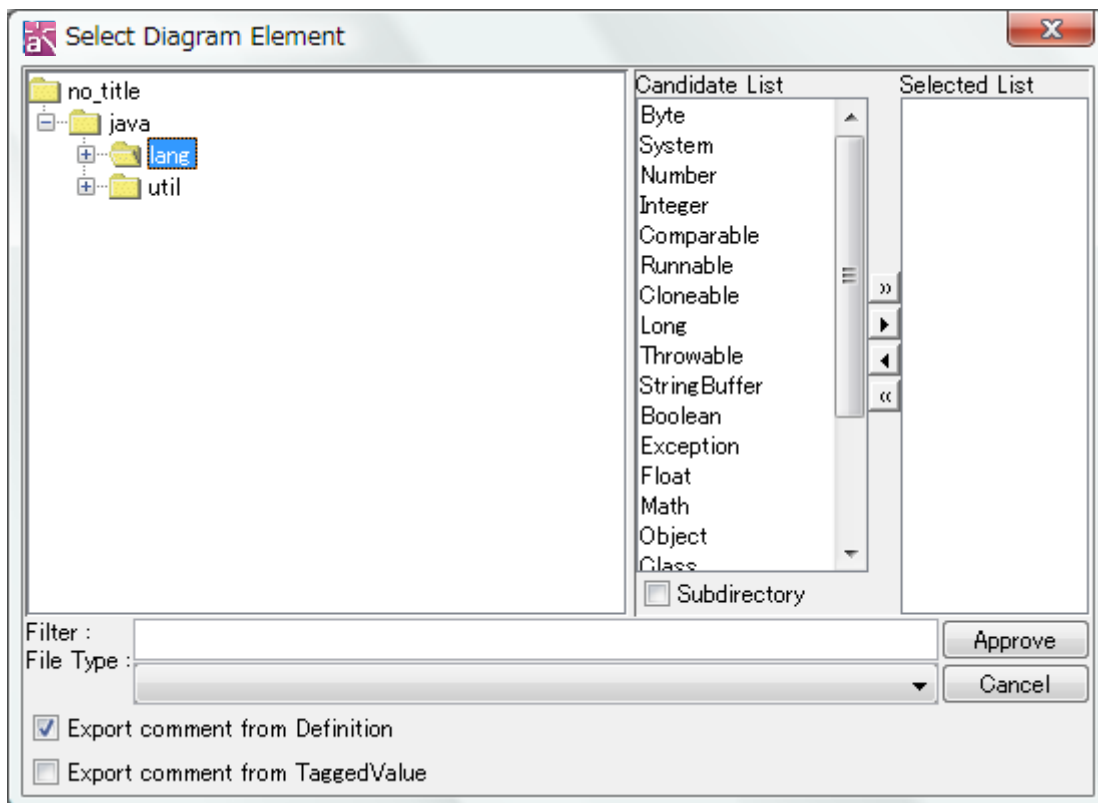


### 34. Exporting Java

#### 34. Exporting Java

“Export Java” is used to generate Java Skeleton Code from selected Diagram Elements. The Definitions of Classes and Operations are exported as Documentation Comments.

- Select [Tool]-[Java]-[Export Java] in the Main Menu to open the “Select” Dialog.
- Select the target folder in the “Select” Dialog.
- Select the target Model, from which .java files are to be generated, in the “Select Diagram Element” Dialog.



- Specify the comment options.

Export comment from Definition / Export comment from TaggedValue

- Click on [Approve] to export the .java files.

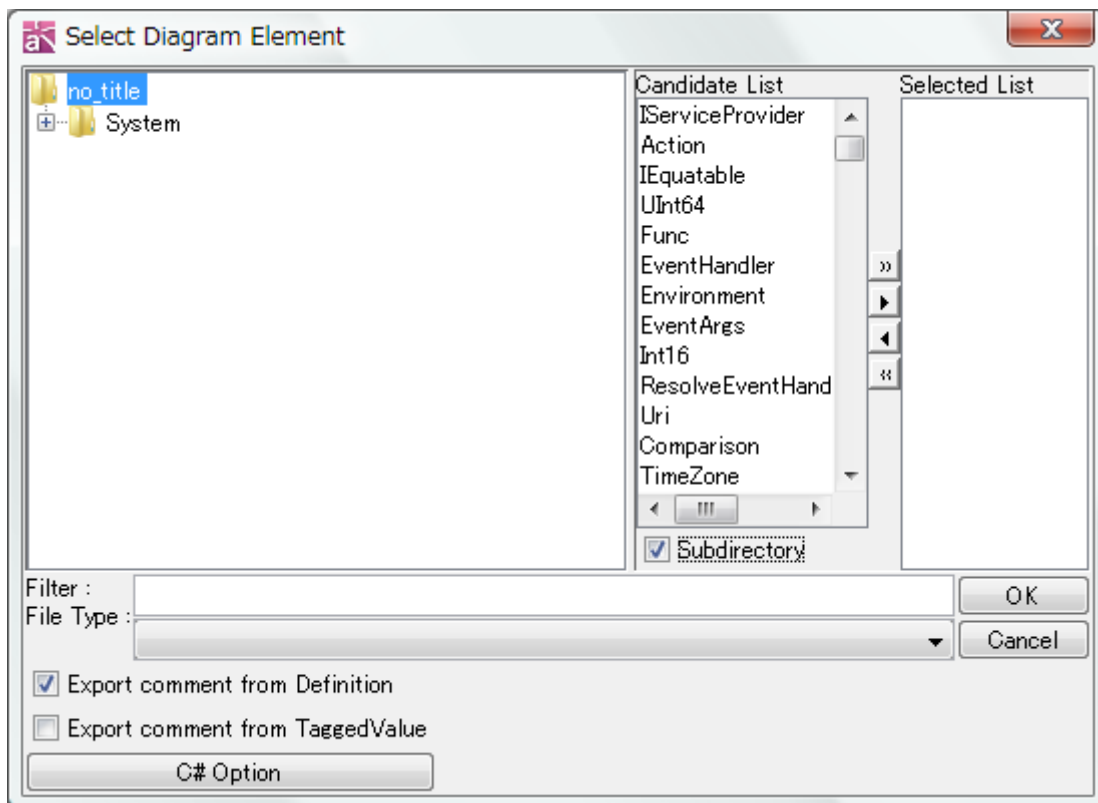
**Note)** If a .java file with the same name already exists, it will be overwritten.

### 35. Exporting C#

#### 35. Exporting C#

“Export C#” is used to generate C# Skeleton Code from selected Diagram Elements. The Definitions of Classes and Operations are exported as Documentation Comments.

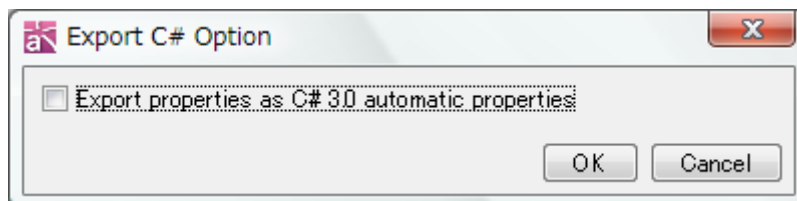
- Select [Tool]-[C#]-[Export C#] in the Main Menu to open the “Select” Dialog.
- Select the target folder in the “Select” Dialog.
- Select the target Model, from which .cs files are to be generated, in the “Select Diagram Element” Dialog.



- Specify the comment options.

Export comment from Definition / Export comment from TaggedValue

- Check this option to export properties as C# automatic properties.



- Click on [Approve] to export the .cs files.

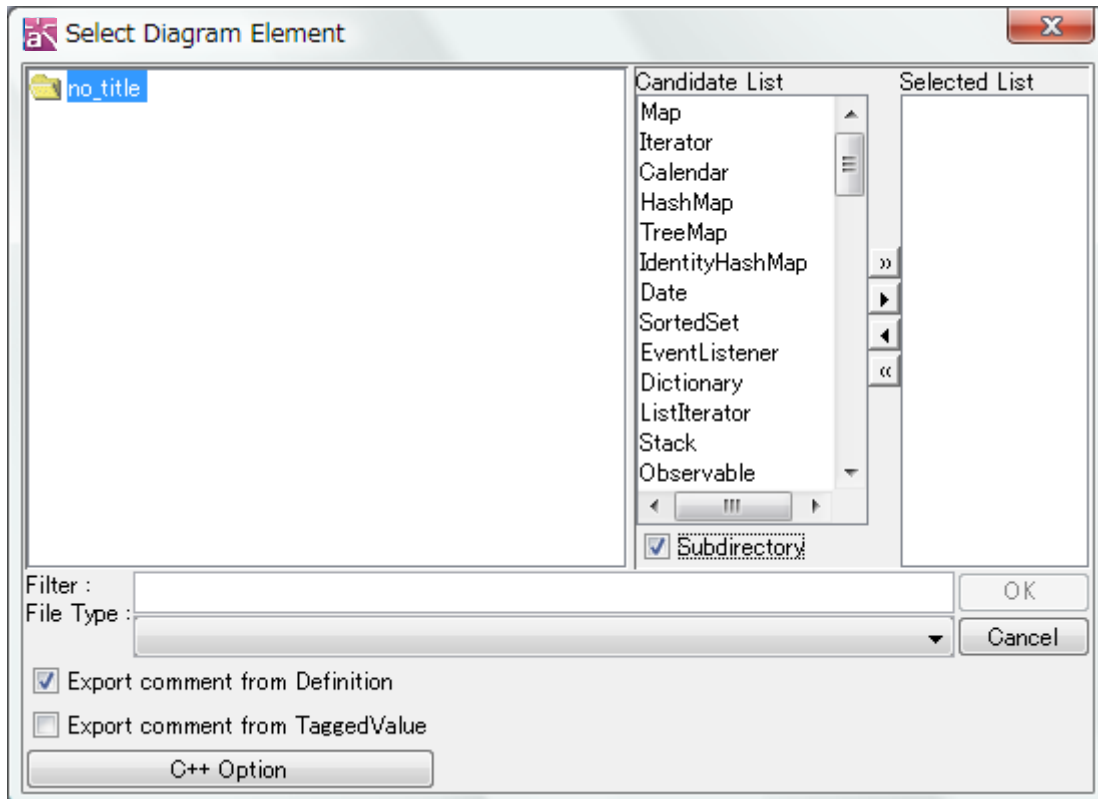
**Note)** If a .cs file with the same name already exists, it will be overwritten.

## 36. Exporting C++

### 36. Exporting C++

“Export C++” is used to generate C++ Skeleton Code from selected Diagram Elements. The Definitions of Classes and Operations are exported as Documentation Comments.

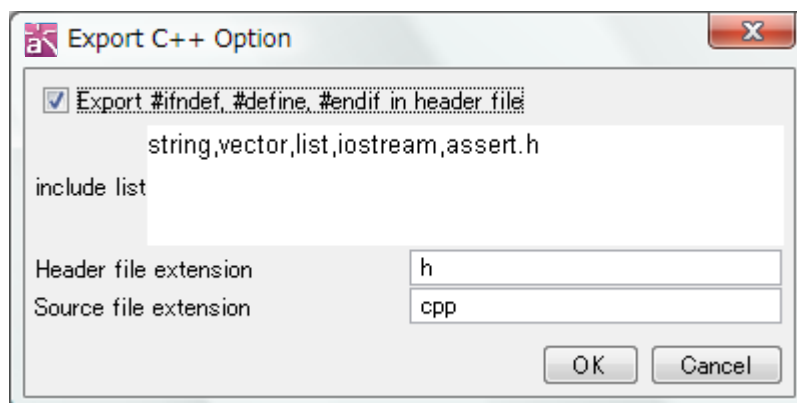
- Select [Tool]-[C++]-[Export C++] in the Main Menu to open the “Select” Dialog.
- Select the target folder in the “Select” Dialog.
- Select the target Model in the “Select Diagram Element” Dialog.



- Specify the comment options.

Export comment from Definition / Export comment from TaggedValue

- Click on [C++ Option] to set options.



### **36. Exporting C++**

#### **Export #ifndef, #define, #endif in header file :**

Export #ifndef, #define and #endif to a header file.

#### **Include list :**

Export a list divided by , (comma) to a header file and a resource file

**Header file extension :** Specify the header file extension (h, hxx)

**Source file extension :** Specify the source file extension (cpp, cxx)

f. Click on [Approve] to export the files.

**Note) If a file with the same name already exists, it will be overwritten.**

## 37. UseCase Description Template

### 37. UseCase Description Template

This sets a UseCase Description Template.

#### 37. 1. Property File of UseCase Description Template

These templates are created in USERHOME/.astah/professional(uml) directory:  
“UCDescriptiorntProp.properties”

The UseCase Description Templates are not included in the astah\* Project file. To use the Project file on multiple computers, the UseCase Description Templates have to be copied onto each computer.

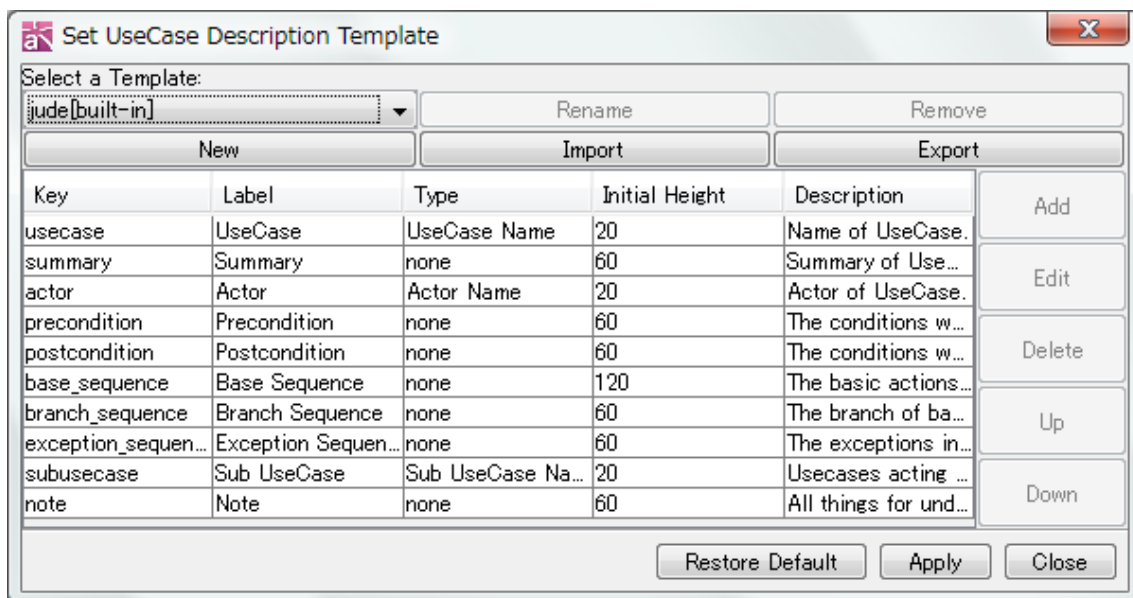
#### 37. 2. UseCase Description Template Set-up

To set up a UseCase Description Template click [Tool] - [Set Template] - [UseCase Description Template] and select the option in the Main Menu.

##### 37. 2. 1. Default Templates

There are three default UseCase Description Templates.

a) Built-in Template



b) Complete Format by Alistair Cockburn

### 37. UseCase Description Template

Select a Template: Complete Format by Alistair Cock... Rename Remove

New Import Export

Key	Label	Type	Initial Height	Description	
usecase	UseCase	UseCase Name	20	Name of UseCase.	Add
context	Context	none	60	Common conditio...	Edit
scope	Scope	none	30	Target system wh...	
level	Level	UseCase Level	30	User's goal, sub f...	Delete
actor	Actor	Actor Name	30	The role name of ...	
benefit	Benefit	none	50	Concerned people...	Up
precondition	Precondition	none	60	The conditions w...	
basicinsurance	Basic Insurance	none	20	This guarantee m...	Down
successinsurance	Success Insurance	none	60	The condition wh...	
trigger	Trigger	none	30	The event invoke...	
base_sequence	Base Sequence	none	100	<step num><actio...	
branch_sequence	Branch Sequence	none	100	<modified step><...	
variation	Sub UseCase	UseCase Variation	50	<step num/>variati...	
note	Note	none	60	All things for und...	

Restore Default Apply Close

#### c) RUP Style

Select a Template: RUP Style Rename Remove

New Import Export

Key	Label	Type	Initial Height	Description	
usecase	UseCase	UseCase Name	20	Name of UseCase.	Add
summary	Summary	none	60	Summary of Use...	Edit
base_sequence	Base Sequence	none	120	The basic actions...	Delete
branch_sequence	Branch Sequence	none	120	The exceptions in...	
note	Note	none	60	Record special c...	Up
precondition	Precondition	none	60	The conditions w...	
postcondition	Postcondition	none	60	The conditions w...	Down
subusecase	Sub UseCase	Sub UseCase Na...	20	The extention poi...	

Restore Default Apply Close

### 37. UseCase Description Template

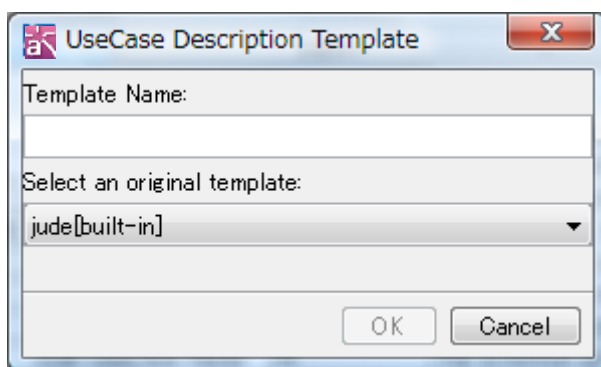
#### 37. 2. 2. Items in Template

Key	Unique key for UseCase Description (Alphanumeric inputs only).	
Label	Name of UseCase Description. (Leaving the field blank is not permitted)	
Type	None	Edit in any formats
	UseCase Name	Display UseCase Name (Not editable)
	Actor Name	Display Actor Name (Not Editable)
	Sub UseCase Name	Display included UseCase Name (Not editable)
	UseCase Level	Select levels. a. High Requirement Level b. Requirement Level c. User Goal Level d. Sub Function Level e. Low Level
Initial Height	Initial height pixel range 20-10000	
Description	Explain the items in UseCase Description (Tooltip).	

#### 37. 2. 3. Creating Templates

##### a. Creating New Templates

1. Click the “New” button in the UseCase Description Template.

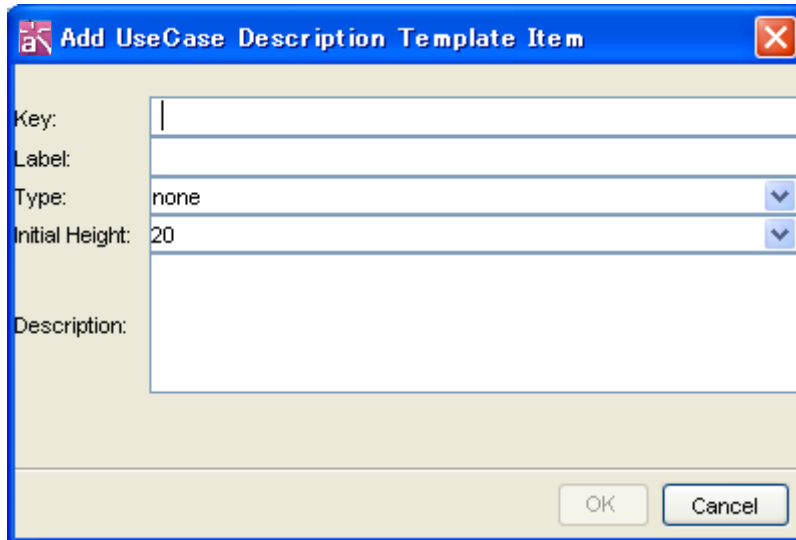


2. Input the Template Name (The Template Name must be unique.)
3. Select an original template
4. Click [OK] to create a new Template

### 37. UseCase Description Template

#### b. Creating Keys

Select a Key and then click [Add] in the UseCase Description Template dialog. The Add UseCase Description Template Item Dialog will come up (see below).



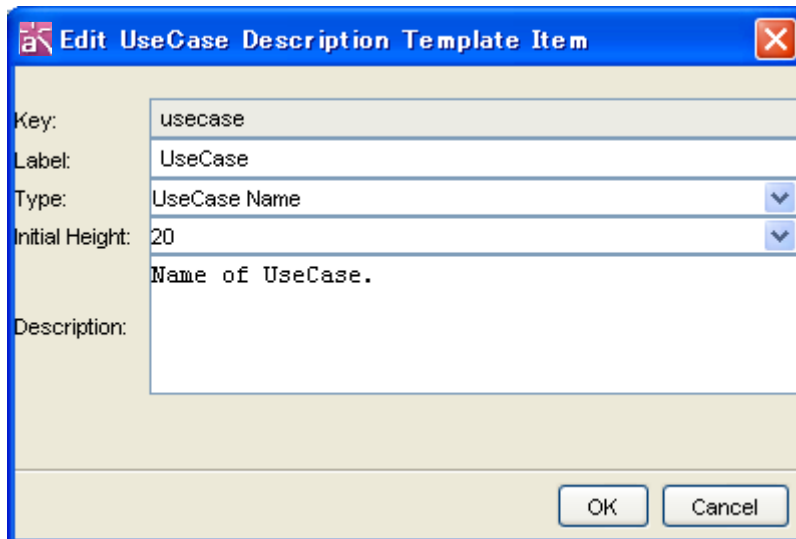
The dialog box is titled "Add UseCase Description Template Item". It contains the following fields:

- Key: A text input field.
- Label: A text input field.
- Type: A dropdown menu with "none" selected.
- Initial Height: A dropdown menu with "20" selected.
- Description: A large text area.

At the bottom right, there are "OK" and "Cancel" buttons.

#### c. Editing Keys

Select a Key, and then click [Edit] in the UseCase Description Template dialog. The Edit UseCase Description Template Item Dialog will come up (see below).



The dialog box is titled "Edit UseCase Description Template Item". It contains the following fields:

- Key: A text input field containing "usecase".
- Label: A text input field containing "UseCase".
- Type: A dropdown menu with "UseCase Name" selected.
- Initial Height: A dropdown menu with "20" selected.
- Description: A large text area containing "Name of UseCase."

At the bottom right, there are "OK" and "Cancel" buttons.

#### d. Deleting Keys

Select a Key, and then click [Delete] in the UseCase Description Template dialog.



## **37. UseCase Description Template**

### **e. Changing Order of Keys**

Select a Key, and then click [↑][↓] to change the order of Keys.

### **37. 2. 4. Renaming Template**

Click [Edit] in the UseCase Description Template dialog to rename the template.

### **37. 2. 5. Removing Template**

Click [Remove] in the UseCase Description Template dialog to remove the template.

### **37. 2. 6. Importing Templates**

To import the templates, click [Import] in the Use Case Description Template dialog. Then, select the template file (\*.properties) to be imported.

### **37. 2. 7. Exporting Templates**

To export or share templates, click [Export] in the UseCase Description Template dialog; Then input a file name and save it.

## 38. Flow Symbol Template

### 38. Flow Symbol Template [P]

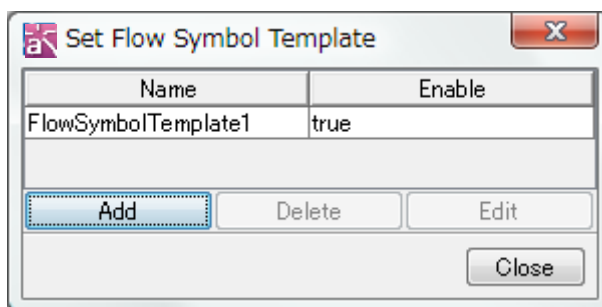
This sets a Flow Symbol Template to use in Flowchart.

#### 38. 1. Property File of Flow Symbol Template

These templates are created in USERHOME /.astah/professional(uml).

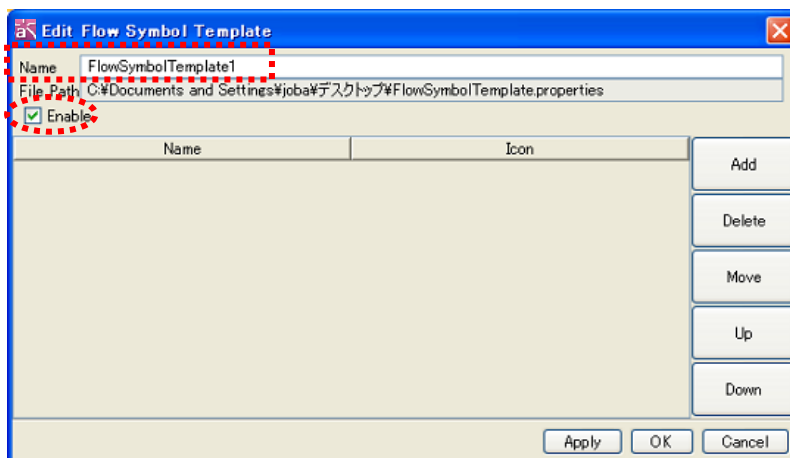
To use the Project file on multiple computers, the property file of Flow Symbol Templates have to be copied to each computer.

#### 38. 2. Creating Flow Symbol Templates



1. Select [Tool] - [Set Template] - [Flow Symbol] from Main Menu and select [Add]
2. Save the property file. (The Template Name must be unique.)
3. Select the added template and click [Edit]
4. Input the Template Name in Name field then click [Apply] - [OK].

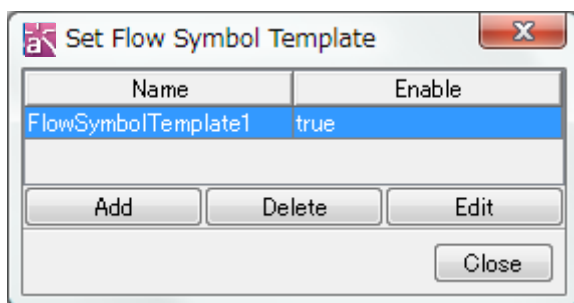
Check [Enable] box to show this Flow Symbol Template on the Flow Symbol Palette in the Diagram Editor.



5. Added Template appear on the Flow Symbol Palette

## 38. Flow Symbol Template

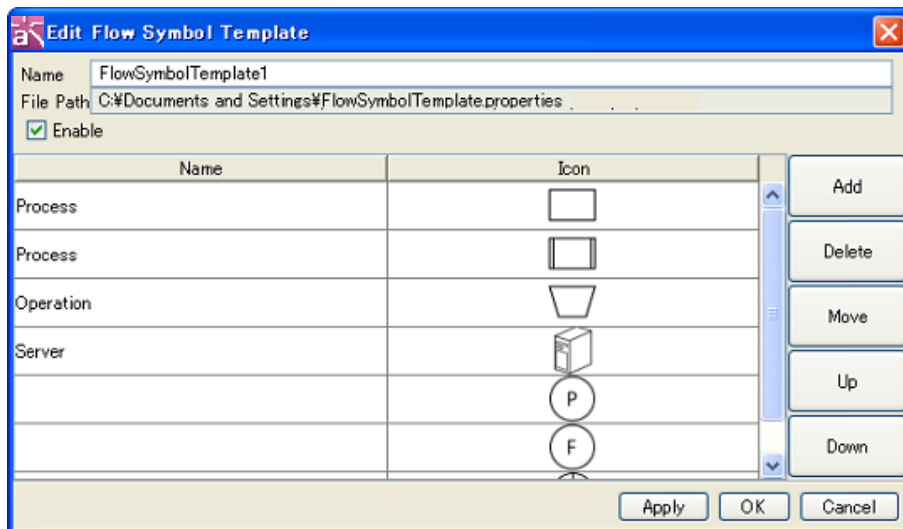
### 38. 3. Editing Flow Symbol Template



1. Select [Tool] - [Set Template] - [Flow Symbol] from Main Menu.

3. Select a template and click [Edit]

All the Flow Symbols included in the selected Template will be shown.



- Add . . . Add new flow symbols. Select image files and name it
- Delete . . . Delete selected Flow Symbol
- Move . . . Transfer the selected Flow Symbol to other Templates
- Up/Down . . . Sort the order

### 38. 4. Adding Flow Symbols to Flow Symbol Template

Select [Add to Template] from Flow Symbols Pop-Up Menu (by right-clicking) on the Diagram Editor, and then select Template. Or, use [Edit Flow Symbol Template].

### 38. 5. Deleting Flow Symbol Templates

Select a template on the [Set Flow Symbol Template] dialog then click [Delete]

### 39. Import User Defined TaggedValue

## **39. Import User Defined TaggedValue [P]**

Import User Defined TaggedValues.

### **39. 1. Define TaggedValue**

1. Create [astah\_customproperty\_def.properties] file.
2. Save this file in USERHOME/.astah/professional directory.

#### **39. 1. 1. TaggedValue Format**

TaggedValue name, Target Models types, Target Stereotype, Default Value and definition can be set by using the format below.

##### **a. Name**

key : tag.xxx.name

##### **b. Target Model**

key : tag.xxx.target

Note) Target model is required

Note) Allow to set multiple Target Models

Note) Cannot import properly if it contains invalid strings

<b>Model Names</b>	<b>String to set for “tag.xxx.target”</b>
Model	Model
Subsystem	Subsystem
Package	Package
Class Diagram	ClassDiagram
Class	Class
Attribute	Attribute
Operation	Method
Association	Association
Association Role	AssociationRole
Association Class	AssociationClass
Generalization	Generalization
Interface	Interface
Dependency	Dependency
Entity	Entity
Boundary	Boundary

### 39. Import User Defined TaggedValue

Control	Control
Instance Specificaation	Object
Link(Object/ Communication Diagram)	Link
UseCase Diagram	UseCaseDiagram
Actor	Actor
UseCase	UseCase
Extend	Extend
Include	Include
Statemachine Diagram	StatemachineDiagram
State	State
Submachine State	SubmachineState
Stub State	StubState
Activity Diagram	ActivityDiagram
Partition	Partition
Action	Action
CallBehavior Action	CallBehaviorAction
Transition	Transition
Object Node	ObjectNode
Sequence Diagram	SequenceDiagram
Lifeline (Sequence, Communication Diagram)	LifeLine
Message (Sequence Diagram)	Message
Create Message	CreateMessage
Destroy Message	DestroyMessage
Reply Message	ReturnMessage
Combined Fragment	CombinedFragment
Interaction Use	InteractionUse
StateInvariant	StateInvariant
Communication Diagram	CommunicationDiagram
Message (Communication Diagram)	MessageCL
Component Diagram	ComponentDiagram
Component	Component
Artifact	Artifact

### **39. Import User Defined TaggedValue**

Deployment Diagram	DeploymentDiagram
Node	Node
Node Instance	NodeInstance
Component Instance	ComponentInstance
Note	Comment
Flowchart	Flowchart
Flow Element	FlowElement
Data Flow Diagram (DFD)	DataFlowDiagram
Eternal Entity	ExternalEntity
Data Store	DataStore
Dataflow	DataFlow
Anchor	Anchor
ER Diagram	ERDiagram
ER Entity	EREntity
ER Attribute	ERAttribute
Domain	Domain
Relationship	ERRelationship
Many to Many Relationship	ManyToManyRelationship
Subtype	Subtype
CRUD	CRUD
Requirement Diagram	RequirementDiagram
Requirement Table	RequirementTable
Requirement	Requirement
TestCase	TestCase
Traceability Map	TraceabilityMap

#### **c. Target Stereotype**

- Key : tag.xxx.stereotype
- Only one stereotype can be set
  - Optional

#### **d. Default Value**

- Key : tag.xxx.defaultvalue
- Optional

#### **e. Definition**

- Key : tag.xxx.definition

### **39. Import User Defined TaggedValue**

- Optional

```
tag.id_001.name=creator1
tag.id_001.target=Class
tag.id_001.stereotype=stereotype0
tag.id_001.defaultvalue=Dendy
tag.id_001.definition=The creator of a model

tag.id_002.name=creator2
tag.id_002.target=UseCase,Package
tag.id_002.stereotype=stereotype1
tag.id_002.defaultvalue=Tony
tag.id_002.definition=The creator of a model
```

#### **39. 2. Import User Defined TaggedValue**

(1) Select [Tool] - [Import User Defined TaggedValue]

TaggedValues are added to Models that match with property file.

- (2) If some TaggedValues had same Tagged Name and the TaggedValue was changed, the changed TaggedValue will be imported.
- (3) Once the project file has imported User Defined TaggedValue, the TaggedValue will be added automatically when creating new models.

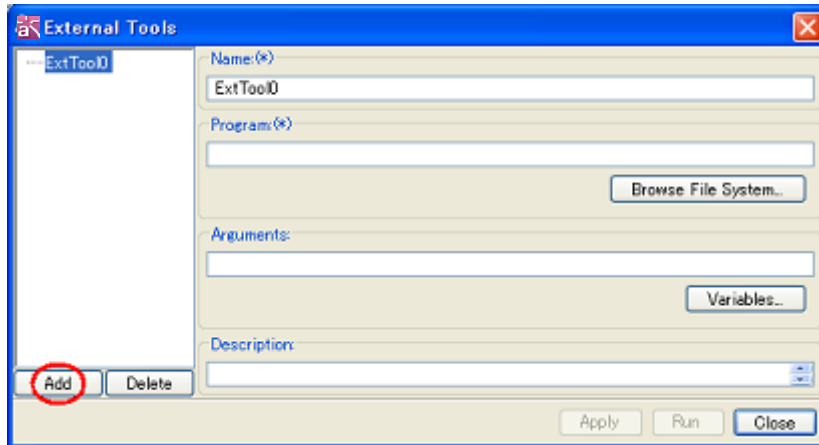
## 40. External Tool [P]

### 40. External Tool [P]

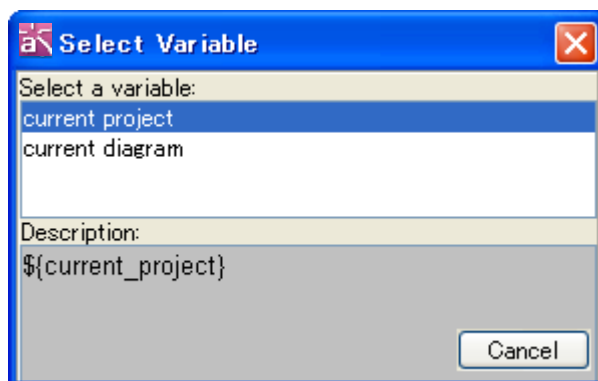
Run external tools (programs) on astah\*.

#### 40. 1. Adding External Tool

- (1) Select [Tool] - [External Tool] - [Customize External Tool] in Main Menu.
- (2) Select [Add] button on [External Tools] dialog then put the name in.



- (3) Click [Browse File System] then select an external tool.
- (4) Click [Variables] then set the Variables.



#### Current Project

Absolute path for the current .asta file will be set. It would be empty if there is no project open.

#### Current Diagram

ID of current Diagram will be set. This ID will be used on the Program with astah\* API. It would be empty if there is no project open.

- Add Descriptions for External Tools in Description field.
- Press [Apply] button to save the setting. Press [Run] to save and run the program.



## **40. External Tool [P]**

### **40. 2. Running External Tools**

Select an External Tool from the left on [External Tools] dialog then press [Run].

### **40. 3. Deleting External Tools**

Select an External Tool from the left on [External Tools] dialog then press [Delete].

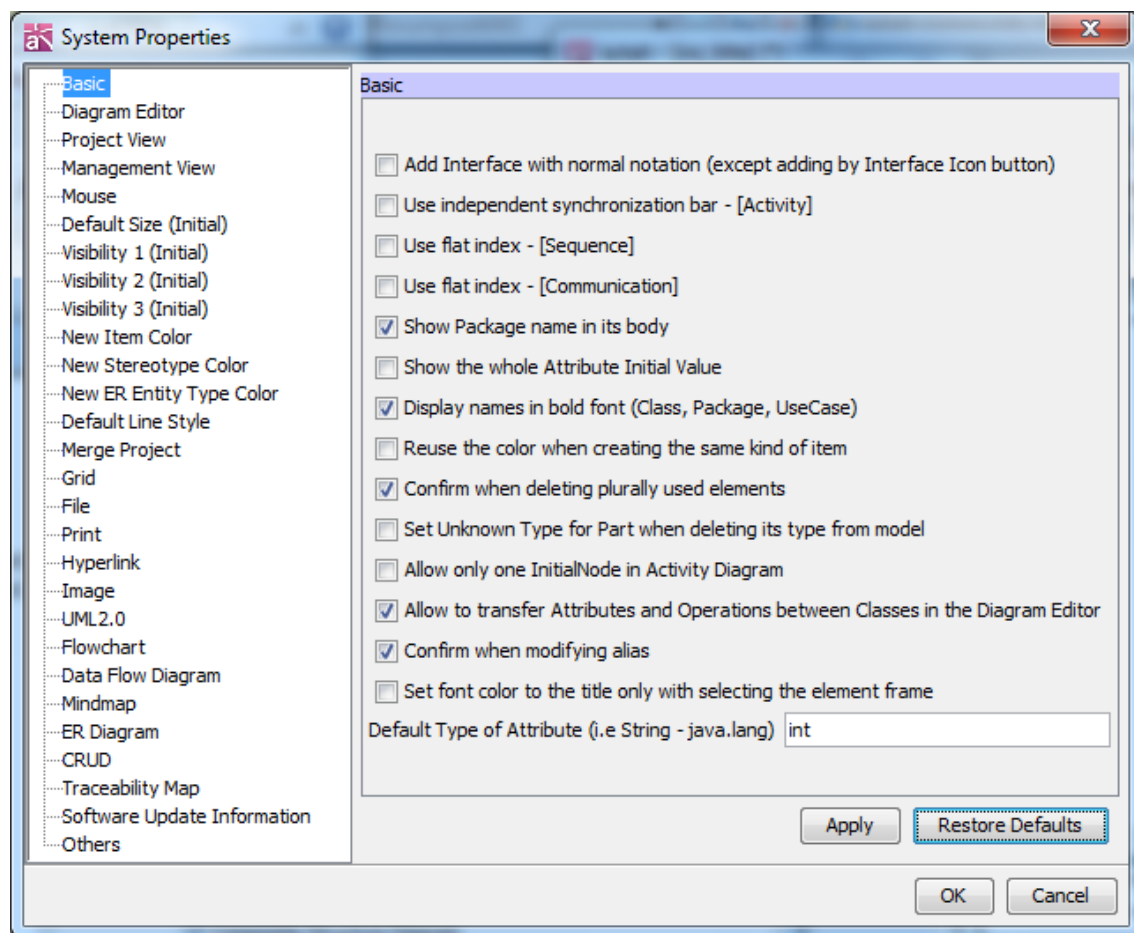
## 41. System Properties

### 41. System Properties

The System Properties of astah\* can be set up using [Tool]-[System Properties] in the Main menu.

#### 41. 1. Basic

The basic Properties can be set in this segment.



#### a. Add Interface with normal notation (except adding by Interface Icon button)

Check this option to add an Interface with normal notation except adding by Interface icon button. This option applies to drag & drop Interfaces from the structure tree to the diagram editor, or auto-create Class Diagrams and so on.

**Default [OFF]**

#### b. Use independent synchronization bar - [Activity]

Check this option to use the Independent Synchronization Bar in Activity Diagrams.

The Independent Synchronization Bar is the Synchronization Bar that is independent

## **41. System Properties**

from Partitions.

**Default [OFF]**

### **c. Use flat index - [Sequence]**

Check this option to remove hierarchies of indexes that are added to Messages in Sequence Diagrams.

**Default [OFF]**

### **d. Use flat index - [Communication]**

Check this option to remove hierarchies of indexes that are added to Messages in Communication Diagrams.

**Default [OFF]**

### **e. Show Package name in its body**

Check this option to display Package Names in the Body.

**Default [ON]**

### **f. Show the whole Attribute Initial Value**

Check this option to display the full-length of initial values of Attributes, even if the value is longer than 51 letters.

**Default [OFF]**

### **g. Display names in bold font (Class, Package, UseCase)**

Check this option to display Names of Model Elements in the Diagram Editor in Bold.

**Default [ON]**

### **h. Reuse the color when creating the same kind of item**

Check this option to create a Diagram Element using the same color that was used for the previous Diagram Element of the same Type.

**Default [OFF]**

### **i. Confirm when deleting plural used elements**

When this option is checked, a dialog is displayed when elements are deleted in the Structure Tree or the Diagram Editor, which are also used in other Diagrams. The dialog asks the user to confirm the deletion.

**Default [ON]**

### **j. Set Unknown Type for Part when deleting its type from model**

Check this option to set unknown type to the types of part when deleting its type from model.

## **41. System Properties**

**Default [OFF]**

### **k. Allow only one InitialNode in Activity Diagram**

Check this option to allow creating only one InitialNode in Activity Diagram.

**Default [OFF]**

### **l. Allow to transfer Attributes and Operations between Classes in the Diagram Editor**

Check this option to allow transferring Attributes and Operations in the Diagram Editor.

**Default [ON]**

### **m. Confirm when modifying alias**

Check this option to have a confirm dialog when modifying alias.

**Default [ON]**

### **n. Set font color to the title only with selecting the element frame**

Check this option to set font color to element's title when selecting a frame of the element. Font color will apply to all items on the selected elements if the option is OFF.

**Default [OFF]**

### **o. Default Type of Attribute (i.e. String - java.lang)**

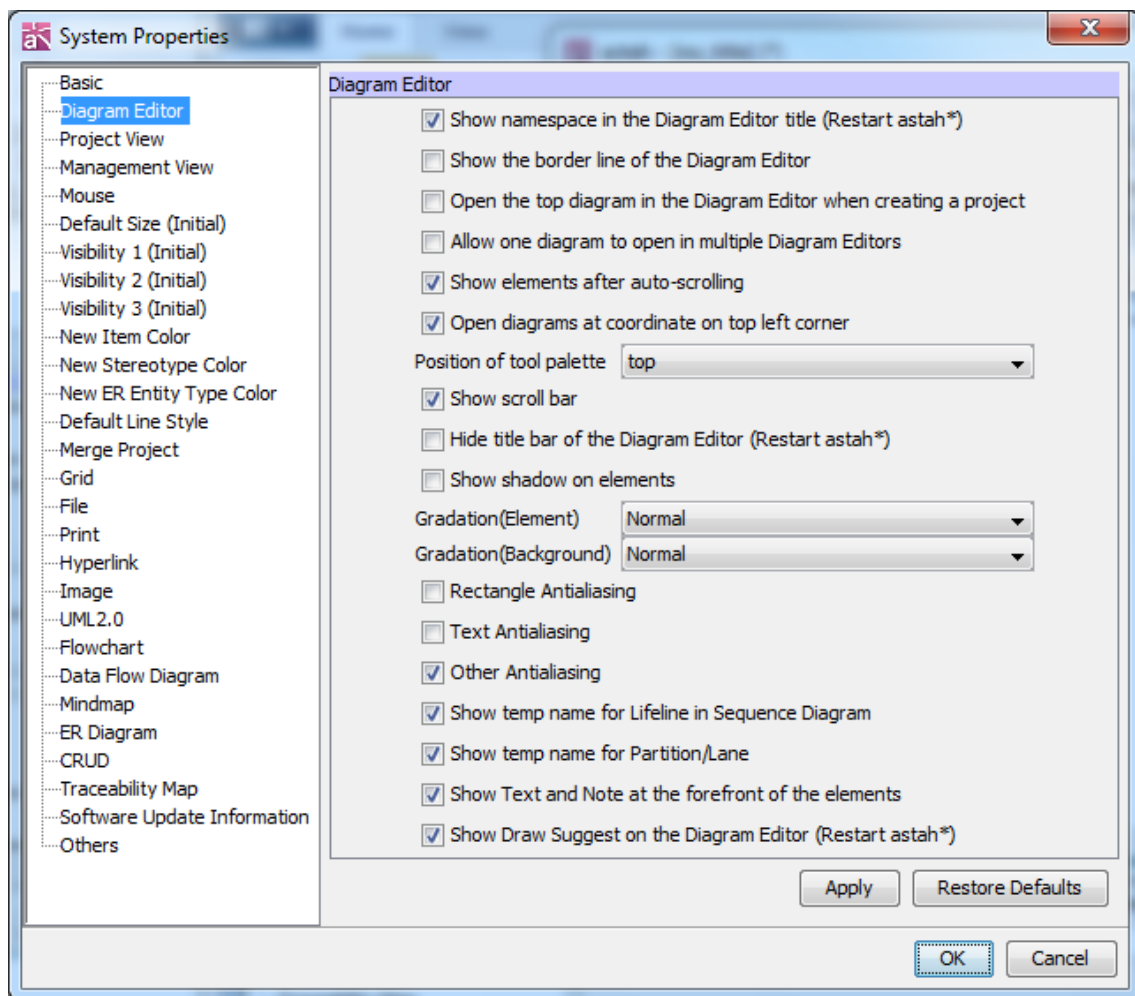
Set the Default type of Attribute.

**Default [int]**

## **41. 2. Diagram Editor**

The Diagram Editor Properties can be set in this segment.

## 41. System Properties



### a. Show namespace in the Diagram Editor title

Check this option to show the namespace of diagram in the Diagram Editor title.

**Default [ON]**

### b. Show the border line of the Diagram Editor

Check this option to show the borderline of the Diagram Editor.

**Default [OFF]**

### c. Open the top diagram in the Diagram Editor when creating a project

Check this option to open the first diagram automatically when a new project is created.

**Default [OFF]**

### d. Allow one diagram to open in multiple Diagram Editors

Check this option to allow a Diagram to be opened in multiple Editors.

If a Diagram is edited in one Editor, the changes are reflected in all the other Editors in which the Diagram is open.

## **41. System Properties**

**Default [OFF]**

### **e. Show elements after auto-scrolling**

Check this option to display an Element that is edited after auto-scrolling in the screen.

**Default [ON]**

### **f. Open diagrams at coordinate on top left corner**

Check this option to open diagrams at coordinate on top left corner.

**Default [ON]**

### **g. Position of tool palette**

The position of the Tool Palette in the Diagram Editor can be selected using this option.

**Default [top]**

### **h. Show scroll bar**

Check this option to display Scroll Bars.

**Default [ON]**

### **i. Hide title bar of the Diagram Editor**

Check this option to hide the title bar of editor frame. It requires restarting astah\* to apply this option.

**Default [OFF]**

### **j. Show shadow on elements**

Show shadow on elements.

**Default [OFF]**

### **k. Gradation (Element)**

Add gradation on elements.

**Default [Normal]**

### **l. Gradation (Background)**

Add gradation on Background.

**Default [Normal]**

### **m. Rectangle Antialiasing**

Display rectangles with antialiasing.

**Default [OFF]**

### **n. Text Antialiasing**

Display texts with antialiasing

## **41. System Properties**

**Default [OFF]**

### **o. Other Antialiasing**

Display elements except rectangles and texts with antialiasing.

**Default [ON]**

### **p. Show temp name for Lifeline in Sequence Diagram**

Check this option to display the temp name for Lifeline in Sequence Diagram.

**Default [ON]**

### **q. Show temp name for Partition/Lane**

Check this option to display the temp name for Partition (Activity Diagram) and Lane (Flowchart).

**Default [ON]**

### **r. Show Text and Note at the forefront of the elements**

Check this option to display Texts and Notes at the forefront of the elements on the Diagram Editor.

**Default [ON]**

### **s. Show Draw Suggest on the Diagram Editor**

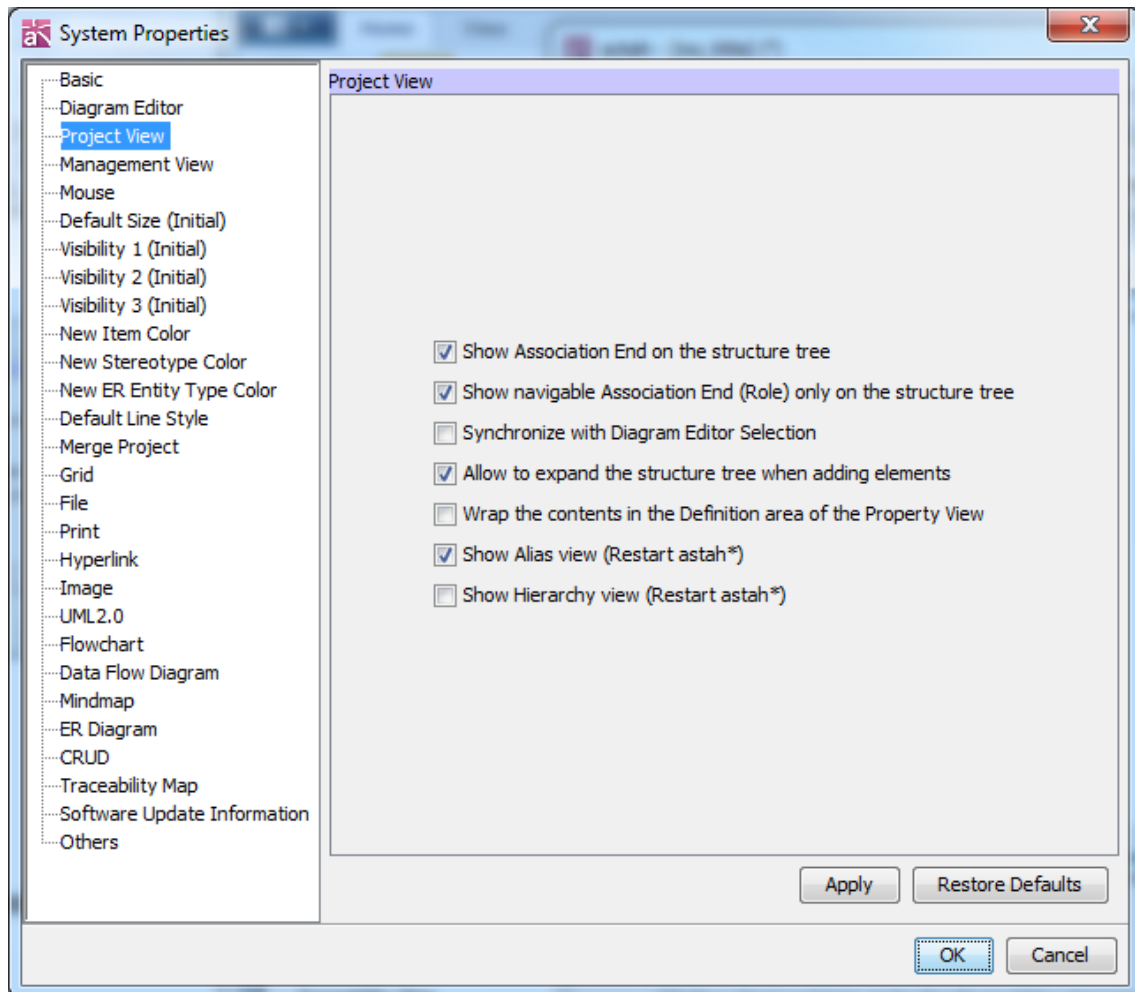
Check this option to enable the suggest feature

**Default [ON]**

## **41. 3. Project View**

The Project View Properties can be set in this segment.

## 41. System Properties



### a. Show Association End on the structure tree

Check this option to show Association End on the structure tree.

**Default [ON]**

### b. Show navigable Association End (Role) on the structure tree

Check this option to show Internal Part only as Association End (Role) on the structure tree.

**Default [ON]**

### c. Synchronize with Diagram Editor Selection

Check this option to synchronize with the Diagram Editor selection.

**Default [OFF]**

### d. Allow to expand the Structure Tree when adding elements

Check this option to expand the Structure Tree every time adding new elements.

**Default [ON]**



## 41. System Properties

### e. Wrap the contents in the Definition area of the Property View

Check this option to show input within definition area of Property View.

**Default [OFF]**

### f. Show alias view [P]

Check this option to display the Alias View.

**Default [ON]**

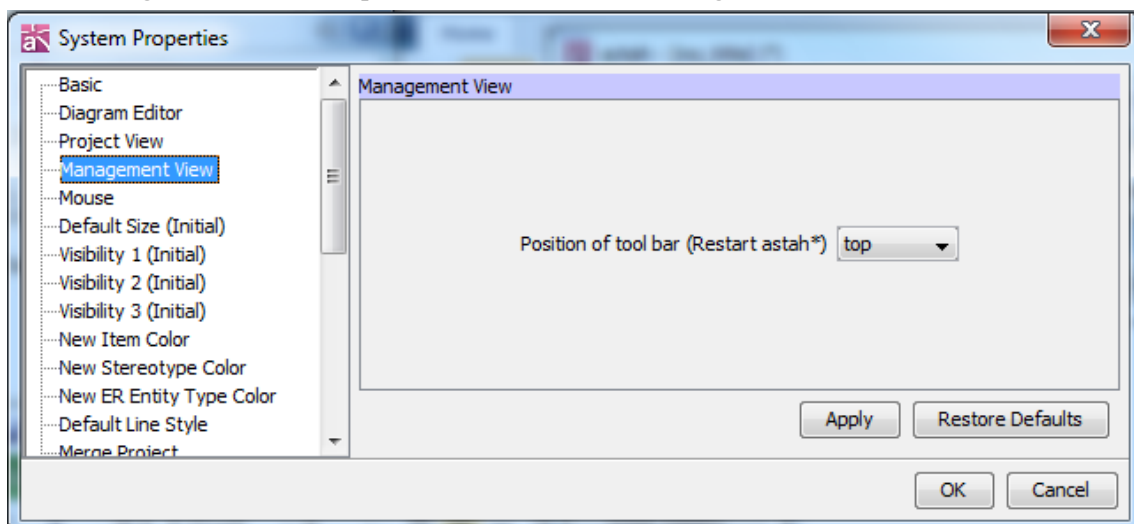
### g. Show Hierarchy view [P]

Check this option to display the Hierarchy View.

**Default [OFF]**

## 41. 4. Management View

The Management View Properties can be set in this segment.



### a. Position of tool bar (Restart astah)

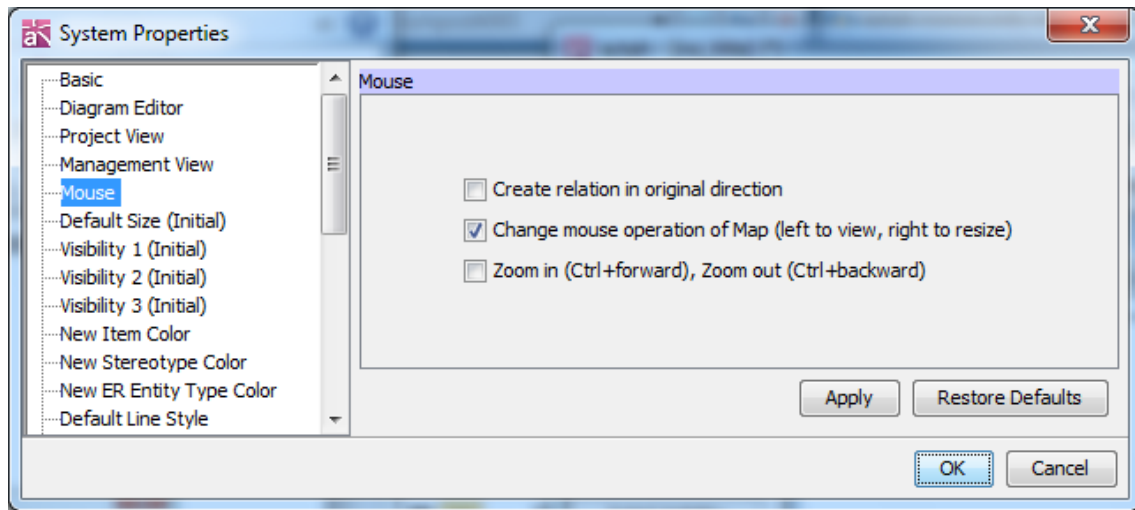
The position of the Tool Bar in the Management View can be selected using this option.

**Default [top]**

## 41. 5. Mouse

The Mouse Properties can be set in this segment.

## 41. System Properties



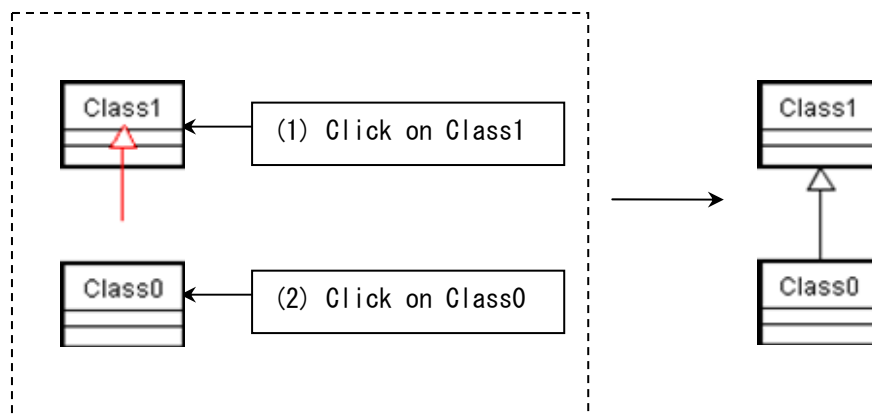
### a. Create relation in original direction

Check this option to create Relation Lines in astah\*-specific order. When unchecked, Relation Lines are created the following direction of arrows.

Default [ON (Left to view, Right to Resize)]

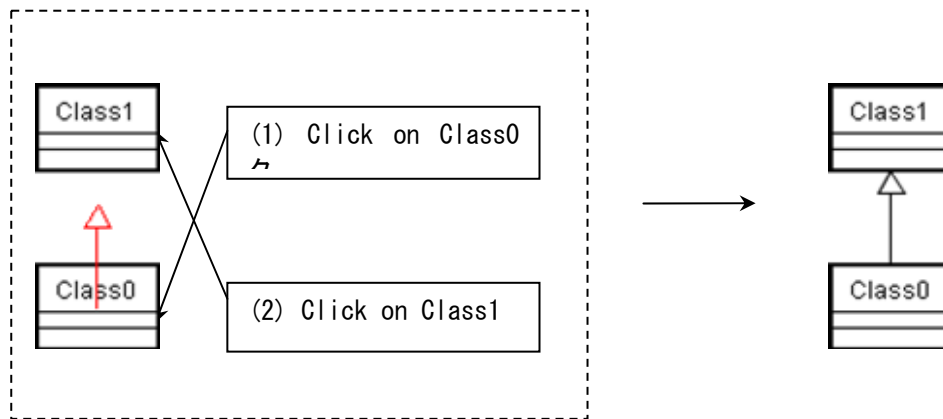
*For example, there are 2 ways to draw a line to indicate “Class0 inherits Class1”.*

#### (a) The Original Way (astah\*-specific order)



#### (b) The Order following the Direction of Arrows

## 41. System Properties



### b. Change mouse operation of Map (left to view, right to resize)

Check this option to swap the functions of the mouse buttons when used on the [Map] in the “Project View”.

**Default [ON (Left to view, Right to Resize)]**

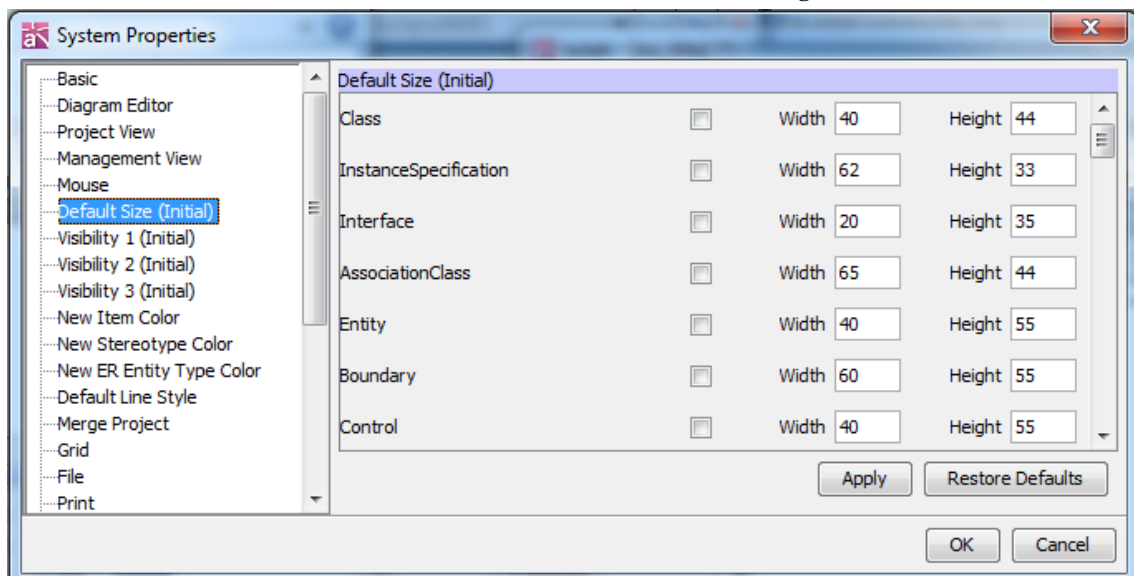
### c. Zoom in (Ctrl+forward), Zoom out (Ctrl + backward)

If this option is checked, Zoom in is performed using Ctrl + forward and Zoom out using Ctrl + backward.

**Default [OFF (Zoom out with Ctrl + forward, Zoom in with Ctrl + backward)]**

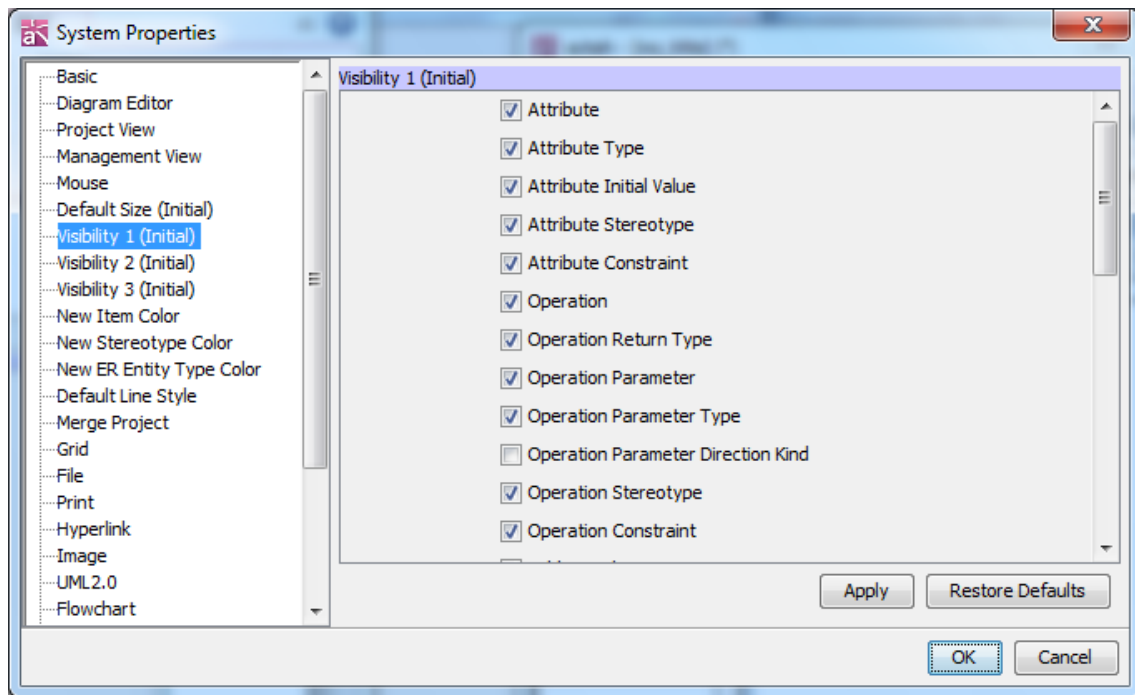
## 41. 6. Default Size

The default size for each model elements can be set in this segment.



## 41. System Properties

### 41. 7. Visibility 1 (Initial)



#### a. Attribute

Check this option to display Attributes of Classes in Diagrams.

Default [ON]

#### b. Attribute Type

Check this option to display the Types of Class Attributes in Diagrams.

Default [ON]

#### c. Attribute Initial Value

Check this option to display the Initial Values of Class Attributes in Diagrams.

Default [ON]

#### d. Attribute Stereotype

Check this option to display the Stereotype of Class Attribute in Diagrams.

Default [ON]

#### e. Attribute Constraint

Check this option to display the Parameters of Class Operations in Diagrams.

Default [ON]

## **41. System Properties**

### **f. Operation**

Check this option to display Class Operations in Diagrams.

**Default [ON]**

### **g. Operation Return Type**

Check this option to display the Operation Return Type of Class Operations in Diagrams.

**Default [ON]**

### **h. Operation Parameter**

Check this option to display the Parameters of Class Operations in Diagrams.

**Default [ON]**

### **i. Operation Parameter Type**

Check this option to display the Parameters Type of Class Operations in Diagrams.

**Default [ON]**

### **j. Operation Parameter Direction Kind**

Check this option to display the Parameter Direction Kinds of Class Operations in Diagrams.

**Default [ON]**

### **k. Operation Stereotype**

Check this option to display the Stereotypes of Class Operations in Diagrams.

**Default [ON]**

### **l. Operation Constraint**

Check this option to display the Constraints of Class Operations in Diagrams.

**Default [ON]**

### **m. Public Attribute**

Check this option to display the Public Attributes in Diagrams.

**Default [ON]**

### **n. Protected Attribute**

Check this option to display the Protected Attributes in Diagrams.

**Default [ON]**

### **o. Package Attribute**

Check this option to display the Package Attributes in Diagrams.

#### **41. System Properties**

**Default [ON]**

**p. Private Attribute**

Check this option to display the Private Attributes in Diagrams.

**Default [ON]**

**q. Public Operation**

Check this option to display the Public Operations in Diagrams.

**Default [ON]**

**r. Protected Operation**

Check this option to display the Protected Operations in Diagrams.

**Default [ON]**

**s. Package Operation**

Check this option to display the Package Operations in Diagrams.

**Default [ON]**

**t. Private Operation**

Check this option to display the Private Operations in Diagrams.

**Default [ON]**

**u. Subsystem Detail**

Check this option to display Specification Elements and Realization Elements on Subsystems.

**Default [OFF]**

**v. Association Name**

Check this option to display Association Names.

**Default [ON]**

**w. Association Name Direction**

Check this option to display directions of Association Names.

**Default [ON]**

**x. Association Constraint**

Check this option to display Association Constraints.

**Default [ON]**

**y. Association Stereotype**

Check this option to display stereotypes of Associations.

## **41. System Properties**

**Default [ON]**

### **z. Association End Visibility Kind**

Check this option to display Association end Visibility Kind.

**Default [ON]**

### **aa. InstanceSpecification Name - [Class]**

Check this option to display Instance Specification Names in Object Diagrams.

**Default [ON]**

### **ab. InstanceSpecification Class Name - [Class]**

Check this option to display InstanceSpecification Class Names in Object Diagrams.

**Default [ON]**

### **ac. InstanceSpecification Slot - [Class]**

Check this option to display InstanceSpecification Slot in Object Diagrams.

**Default [ON]**

### **ad. InstanceSpecification Slot Value - [Class]**

Check this option to display InstanceSpecification Slot Value in Object Diagrams.

**Default [ON]**

### **ae. InstanceSpecification Slot without Value - [Class]**

Check this option to display InstanceSpecification Slot without Value in Object Diagrams.

**Default [ON]**

### **af. Template Parameter Name in Bound Class - [Class]**

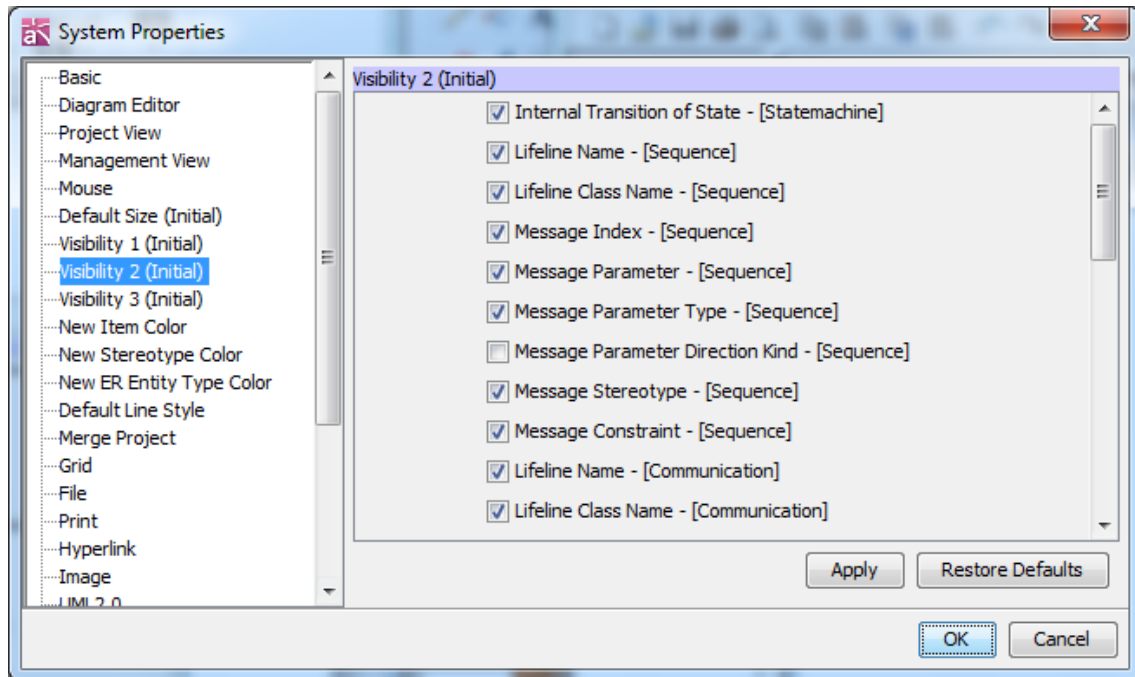
Check this option to display Template Parameter Name in Bound Class in Class Diagrams.

**Default [ON]**

## **41. 8. Visibility 2 (Initial)**

The display/non-display settings for each item can be set in this segment.

## 41. System Properties



### a. Internal Transition of State - [Statemachine]

Check this option to display entry/do/exit or other internal Transitions.

Default [ON]

### b. Lifeline Name - [Sequence]

Check this option to display Lifeline Names in Sequence Diagrams.

Default [ON]

### c. Lifeline Class Name - [Sequence]

Check this option to display Base Class Names of Lifelines in Sequence Diagrams.

Default [ON]

### d. Message Index - [Sequence]

Check this option to display Message Indexes in Sequence Diagrams.

Default [ON]

### e. Message Parameter - [Sequence]

Check this option to display Message Parameters in Sequence Diagrams.

Default [ON]

### f. Message Parameter Type - [Sequence]

Check this option to display Message Parameters in Sequence Diagrams.



## **41. System Properties**

**Default [ON]**

### **g. Message Parameter Direction Kind - [Sequence]**

Check this option to display Message Parameter Direction Kinds in Sequence Diagrams.

**Default [OFF]**

### **h. Message Stereotype - [Sequence]**

Check this option to display Message Stereotypes in Sequence Diagrams.

**Default [ON]**

### **i. Message Constraint - [Sequence]**

Check this option to display Message Constraints in Sequence Diagrams.

**Default [ON]**

### **j. Lifeline Name - [Communication]**

Check this option to display Lifeline Names in Communication Diagrams.

**Default [ON]**

### **k. Lifeline Class Name - [Communication]**

Check this option to display Base Class Names of Lifelines in Communication Diagrams.

**Default [ON]**

### **l. Message Index - [Communication]**

Check this option to display Message Indexes in Communication Diagrams.

**Default [ON]**

### **m. Message Parameter - [Communication]**

Check this option to display Message Parameters in Communication Diagrams.

**Default [ON]**

### **n. Message Parameter Type - [Communication]**

Check this option to display Message Parameter Types in Communication Diagrams.

**Default [ON]**

### **o. Message Parameter Direction Kind - [Communication]**

Check this option to display Message Parameter Direction Kinds in Communication Diagrams.

**Default [OFF]**

#### **41. System Properties**

**p. Message Stereotype - [Communication]**

Check this option to display Message Stereotypes in Communication Diagrams.

**Default [ON]**

**q. NodeInstance Name - [Deployment]**

Check this option to display NodeInstance Names in Deployment Diagrams.

**Default [ON]**

**r. NodeInstance Type - [Deployment]**

Check this option to display NodeInstance Types in Deployment Diagrams.

**Default [ON]**

**s. ComponentInstance Name - [Deployment]**

Check this option to display ComponentInstance Names in Deployment Diagrams.

**Default [ON]**

**t. ComponentInstance Type - [Deployment]**

Check this option to display ComponentInstance Types in Deployment Diagrams.

**Default [ON]**

**u. Port Name - [Composite Structures]**

Check this option to display Port Names in Composite Structure Diagrams.

**Default [ON]**

**v. Port Type - [Composite Structures]**

Check this option to display Port Types in Composite Structure Diagrams.

**Default [ON]**

**w. Port Multiplicity - [Composite Structures]**

Check this option to display Port Multiplicities in Composite Structure Diagrams.

**Default [ON]**

**x. Part Name - [Composite Structures]**

Check this option to display ComponentInstance Types in Deployment Diagrams.

**Default [ON]**

**y. Part Type - [Composite Structures]**

Check this option to display Port Types in Composite Structure Diagrams.

**Default [ON]**

## **41. System Properties**

### **z. Connector Name - [Composite Structures]**

Check this option to display Connector Names in Composite Structure Diagrams.

**Default [ON]**

### **aa. Connector Name Direction - [Composite Structures]**

Check this option to display Connector Name Directions in Composite Structure Diagrams.

**Default [ON]**

### **ab. Connector Constraint - [Composite Structures]**

Check this option to display Connector Constraints in Composite Structure Diagrams.

**Default [ON]**

### **ac. Connector Stereotype - [Composite Structures]**

Check this option to display Connector Stereotypes in Composite Structure Diagrams.

**Default [ON]**

### **ad. Connector Multiplicity - [Composite Structures]**

Check this option to display Connector Multiplicities in Composite Structure Diagrams.

**Default [ON]**

### **ae. Connector Role Name - [Composite Structures]**

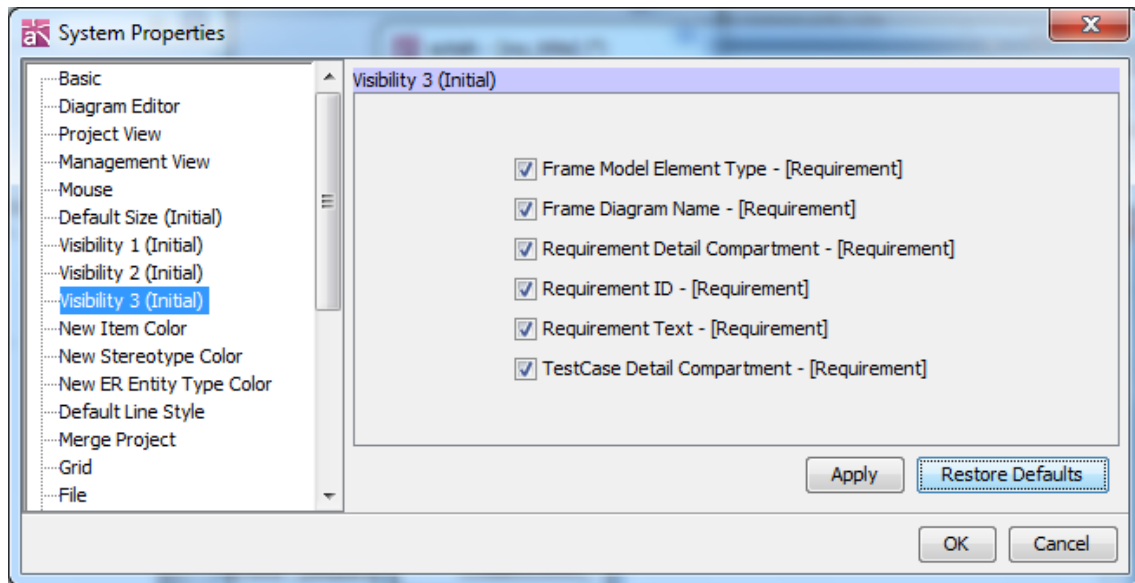
Check this option to display Connector Role Names in Composite Structure Diagrams.

**Default [ON]**

## **41. 9. Visibility 3 (Initial)**

The display/non-display settings for each item can be set in this segment.

## 41. System Properties



### a. **Frame Model Element Type - [Requirement]**

Check this option to display Frame Model Element type in Requirement.

**Default [ON]**

### b. **Frame Diagram Name - [Requirement]**

Check this option to display Frame Diagram Name in Requirement

**Default [ON]**

### c. **Requirement Detail Compartment - [Requirement]**

Check this option to display Requirement Detail Compartment in Requirement.

**Default [ON]**

### d. **Requirement ID - [Requirement]**

Check this option to display Requirement ID in Requirement.

**Default [ON]**

### e. **Requirement Text - [Requirement]**

Check this option to display Requirement Text in Requirement.

**Default [ON]**

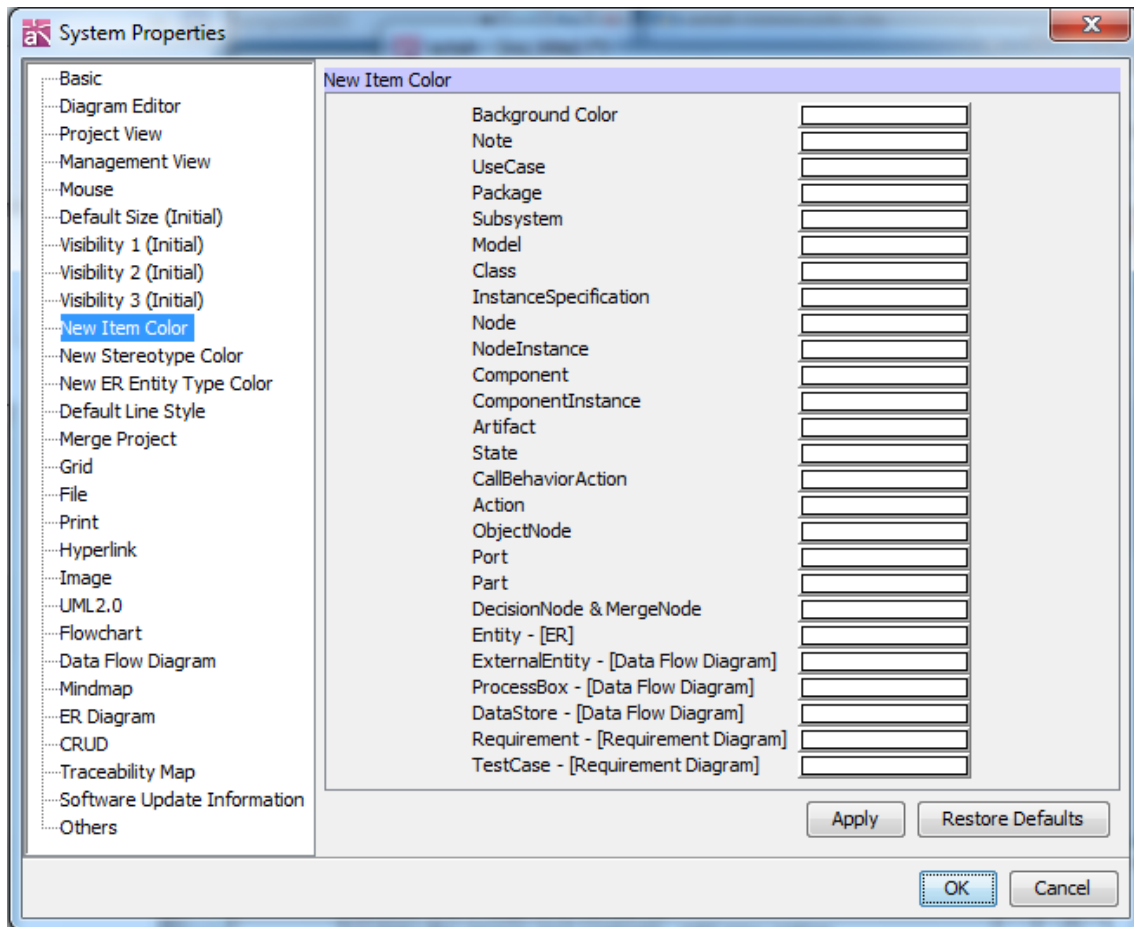
### f. **TestCase Detail Compartment - [Requirement]**

Check this option to display TestCase Detail Compartment in Requirement.

**Default [ON]**

## 41. System Properties

### 41.10. New Item Color



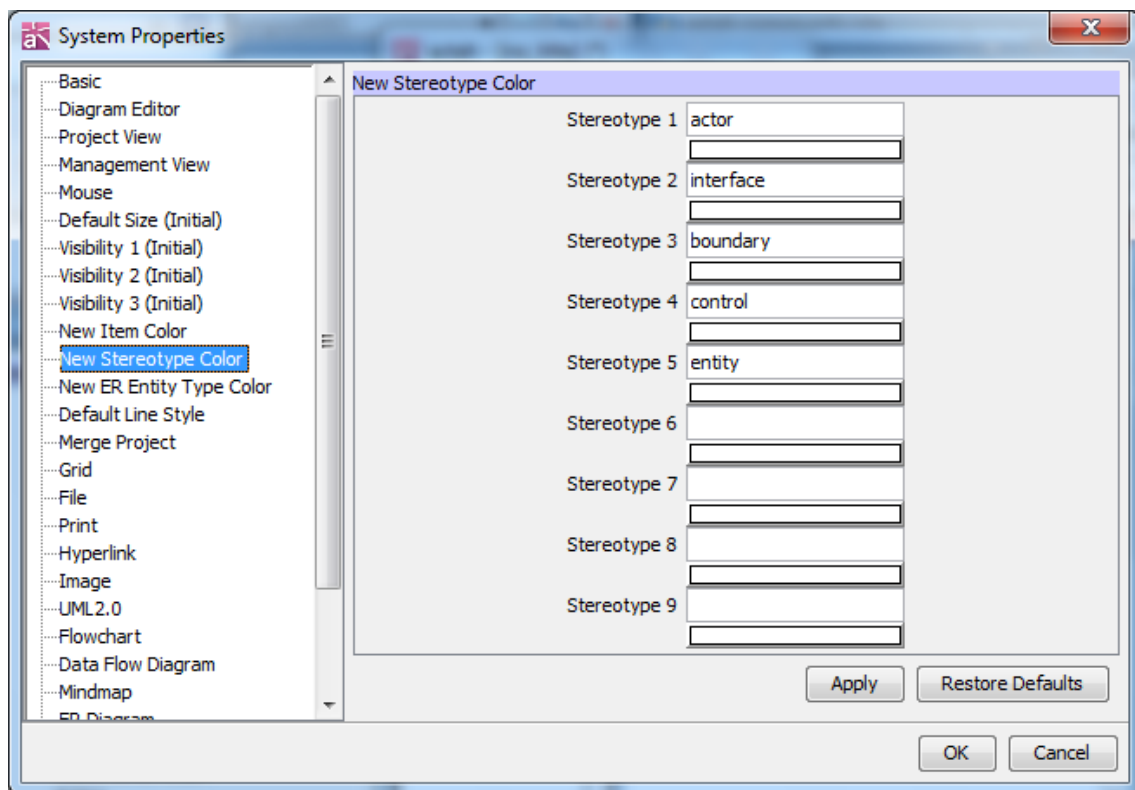
The colors of newly created Diagram Elements can be set in this segment.

#### Default [OFF]

- Click on the setting box of the target Diagram Elements.  
-> Color Chooser appears.
- Select a color or create a new color and click [OK].
- The specified color is applied to newly created Diagram Elements.

## 41. System Properties

### 41.11. New Stereotype Color



The initial color for each Stereotype can be set in this segment. The settings are not applied to existing Diagram Elements. Colors can be set for up to 9 Stereotypes.

[Default]

**Stereotype 1: “Actor”**

**Stereotype 2: “Interface”**

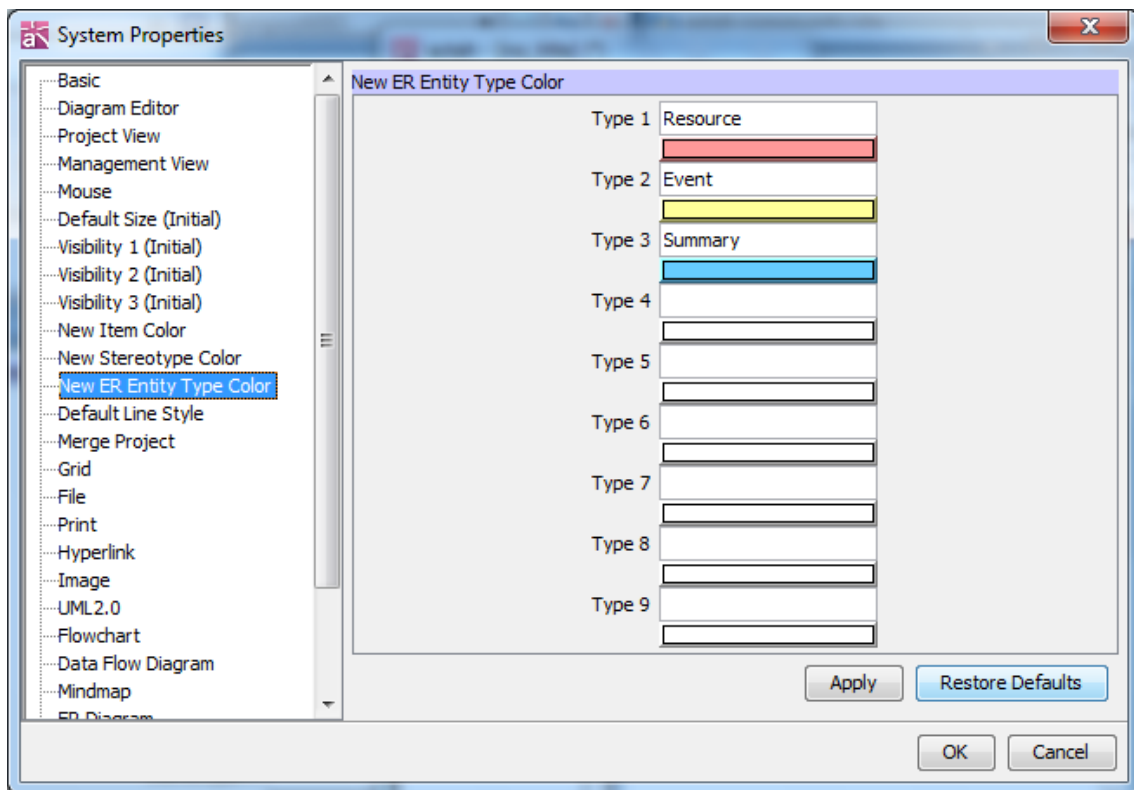
**Stereotype 3: “Boundary”**

**Stereotype 4: “Control”**

**Stereotype 5: “Entity”**

## 41. System Properties

### 41.12. New ER Entity Type Color



The color of ER Entity Type can be set in this segment.

[Default]

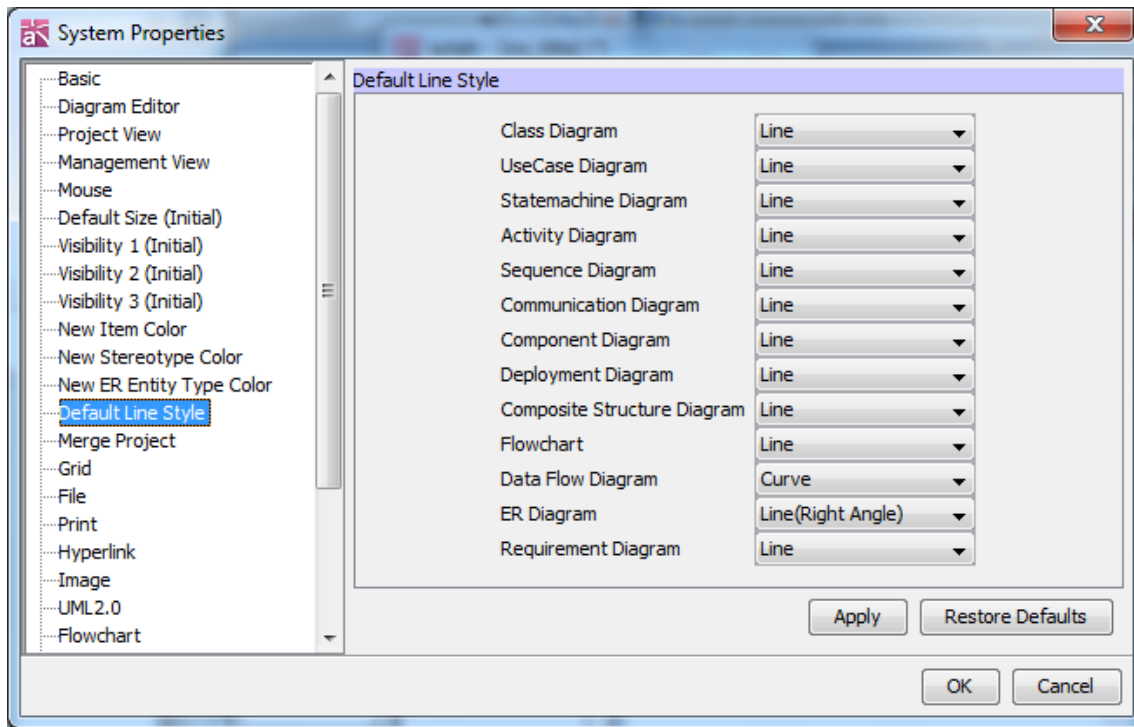
Type 1: “Resource”

Type 2: “Event”

Type 3: “Summary”

## 41. System Properties

### 41. 13. Default Line Style



The default line style of each diagram can be set in this segment.

Line Style: Line, Line (Right Angle), Curve, Curve (Right Angle)

Diagrams: 1) Class Diagram (**Default [Line]**)

2) UseCase Diagram (**Default [Line]**)

3) Statemachine Diagram (**Default [Line]**)

4) Activity Diagram (**Default [Line]**)

5) Sequence Diagram (**Default [Line]**)

6) Communication Diagram (**Default [Line]**)

7) Component Diagram (**Default [Line]**)

8) Deployment Diagram (**Default [Line]**)

9) Composite Structure Diagram (**Default [Line]**)

10) Flowchart (**Default [Line]**)

11) Data Flow Diagram (**Default [Curve]**)

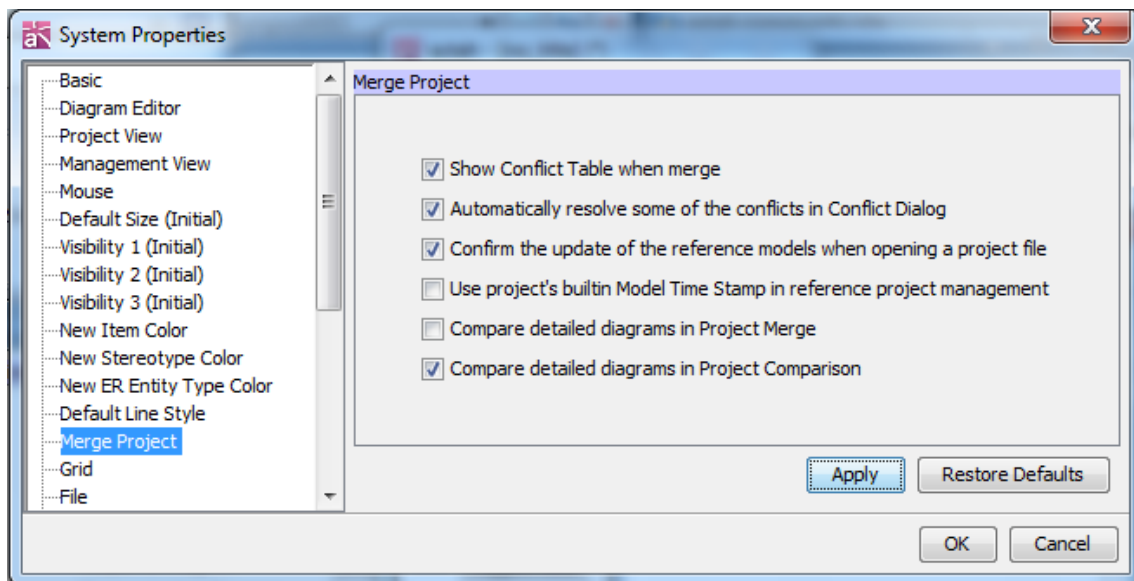
12) ER Diagram (**Default [Line (Right Angle)]**)

13) Requirement Diagram (**Default [Line]**)



## 41. System Properties

### 41. 14. Merge Project



The merge options can be set in this segment.

#### a. Show Conflict Table when checking out

Check this option to display the Merge Dialog when differences are detected between the base Project and the target Project when importing.

**Default [ON]**

#### b. Automatically resolve some of the conflicts in Conflict Dialog

Check this option to use auto-merge. If this option is selected, Projects are partially merged automatically.

**Default [ON]**

#### c. Confirm the update of the reference models when opening a project file [P]

Check this option to confirm the update of the reference projects when opening a project file.

**Default [ON]**

#### d. Use project's builtin Model Time Stamp in reference project management[P]

Check this option to use built-in model time stamp in reference project management, otherwise, file time stamp is used.

**Default [OFF]**

#### e. Compare detailed diagrams in Project Merge

Check this option to compare detailed diagrams when merging projects. Conflict does

## 41. System Properties

not occur for the same diagrams.

- Statemachine Diagram, Activity Diagram, Sequence Diagram Communication diagram, Flowchart, Data Flow Diagram, CRUD, Mindmap

**Default [OFF]**

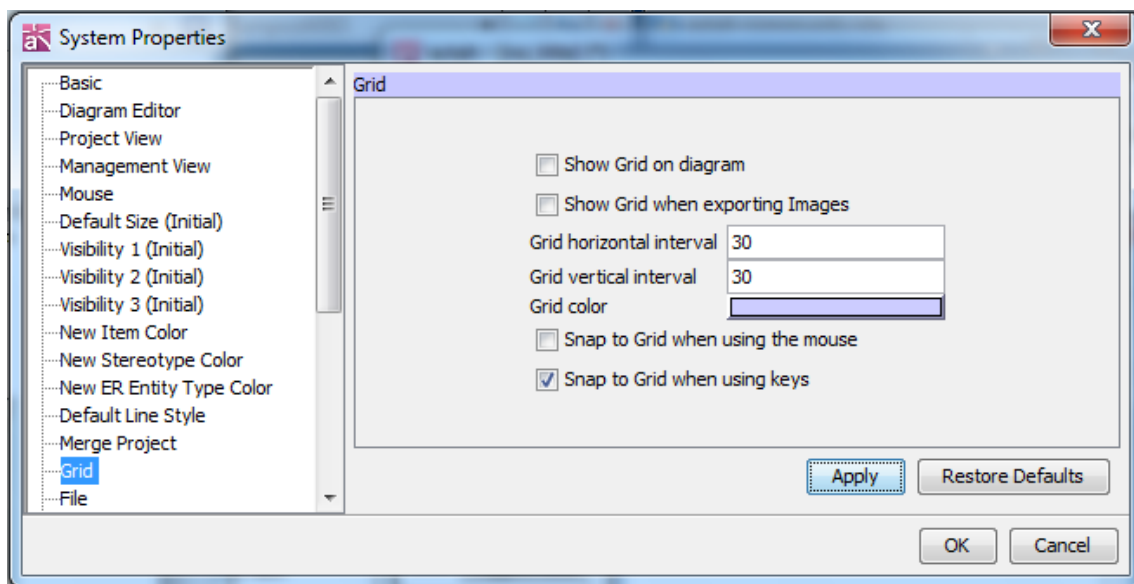
### f. Compare detailed diagrams in Project Comparison [P]

Check this option to compare detailed diagrams when comparing diagram. Conflict does not occur for the same diagrams.

- Statemachine Diagram, Activity Diagram, Sequence Diagram Communication diagram, Flowchart, Data Flow Diagram, CRUD, Mindmap

**Default [ON]**

## 41. 15. Grid



The grid options and settings can be set in this segment.

### a. Show Grid on diagram

Click this option to display the Grid on the Diagram Editor.

**Default [OFF]**

### b. Show Grid when exporting Images

Click this option to show the Grid when exporting Images.

**Default [OFF]**

### c. Grid horizontal interval/ Grid vertical Interval/Grid color

Set Grid horizontal interval, vertical interval and color.

## 41. System Properties

### d. Snap to Grid when using the mouse

Click this option to snap to Grid when using the mouse.

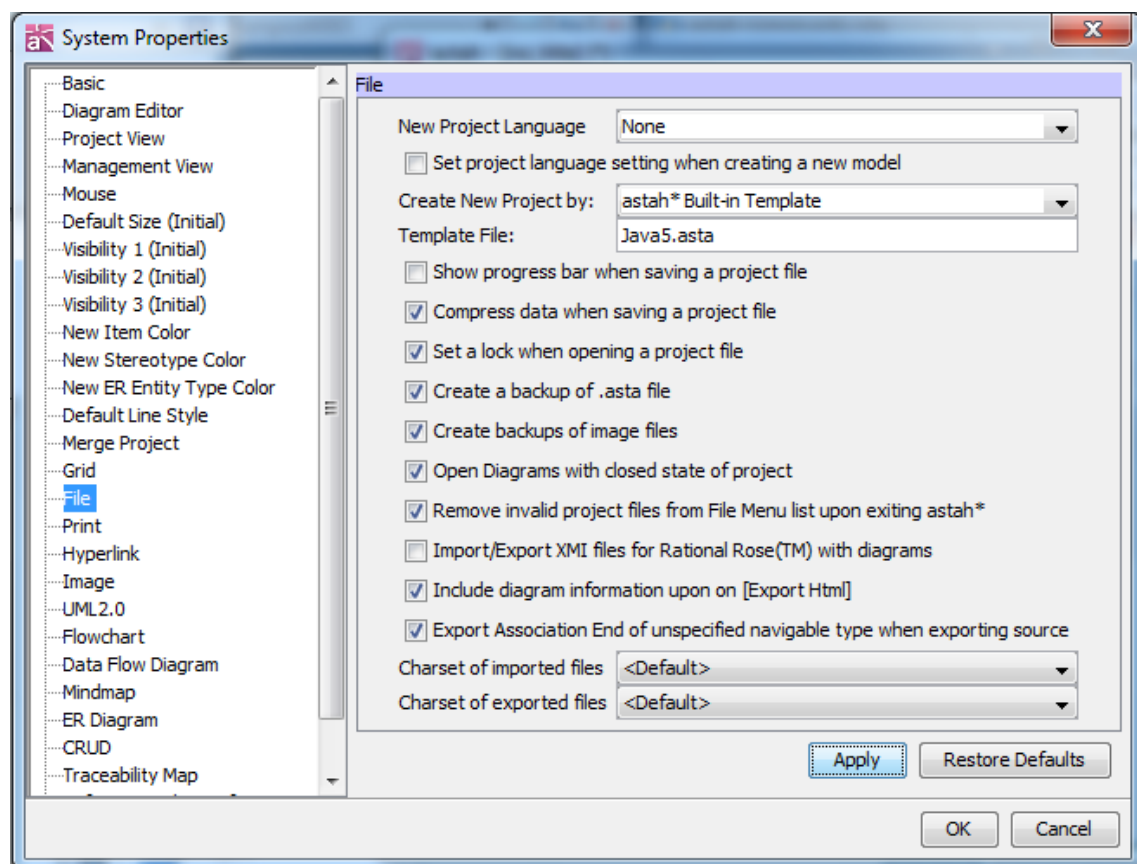
**Default [OFF]**

### e. Snap to Grid when using keys

Click this option to snap to Grid when using keys.

**Default [OFF]**

## 41. 16. File



The file settings can be set in this segment.

### a. New Project Language

Select this option to specify the programming language for the project. The project language is set with this option and the language setting of a template file.

None / Java / C# / C++

**Default [None]**

## **41. System Properties**

### **b. Set project language setting when creating a new model**

Select this option to set the language setting to Classes, Attributes and Operations.

**Default [OFF]**

### **c. Create New Project by:**

Select this option to specify the template file to create a new project.

None / User Template / astah\* Built-in Template

**Default [astah\* Built-in Template]**

### **d. Template File:**

Input the default template file name.

**Default [java5.asta]**

### **e. Show progress bar when saving a project file**

Check this option to show progress bar when saving a project file.

**Default [OFF]**

### **f. Compress data when saving a project file**

Check this option to compress Project data when saving a project file.

**Default [ON]**

### **g. Set a lock when opening a project file**

Check this option to set a lock to a project file when opening it (.lock file will be generated in the directory where the project file is saved). When other users try to open the locked file, it opens in Read-Only mode.

**Default [ON]**

### **h. Create a backup of .asta file**

Check this option to create a backup file when Project is saved.

**Default [ON]**

### **i. Create backups of image files**

Check this option to create backup files when image files are saved.

**Default [ON]**

### **j. Open Diagrams with closed state of project**

Check this option to open diagrams with closed state of project.

**Default [ON]**

## 41. System Properties

### k. Remove invalid project files from File Menu list upon exiting astah\* [P]

Check this option to remove unreadable Projects from the File Menu when exiting astah\*.

Default [ON]

### l. Import/Export XMI files for Rational Rose(TM) with diagrams [P]

Check this option to process Diagram Information on importing/exporting Rational Rose compatible XMI files.

Default [OFF]

*Note) This setting is also applied to import/export XMI files with Enterprise Architect4.x(TM).*

### m. Include diagram information upon on [Export Html]

Click this option to output diagram information to HTML documents.

Default [ON]

### n. Export Association End of unspecified navigable type when exporting source

Click this option to export Association End of unspecified navigable type when exporting source codes.

Default [ON]

### o. Charset of imported files

This option can be used to select the character set used when importing source code.

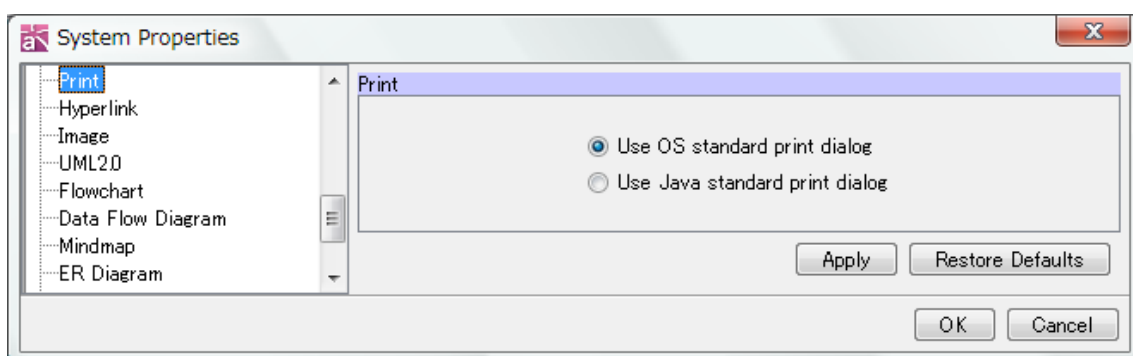
Default [<Default>]

### p. Charset of exported files

This option can be used to select the character set used when exporting skeleton code.

Default [<Default>]

## 41. 17. Print

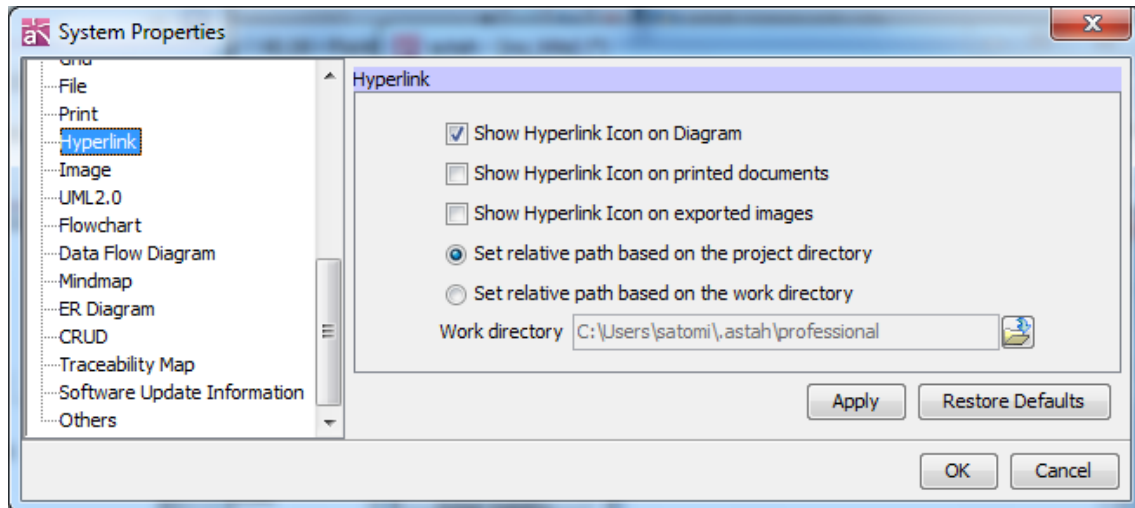


## 41. System Properties

Select which version of print dialog to use, OS standard Print dialog or Java Standard Print dialog.

**Default [<OS Standard>]**

### 41. 18. Hyperlink



The Hyperlink settings can be set in this segment.

#### a. Show Hyperlink Icon on Diagram

Check this option to show the Hyperlink icon on the Diagram Editor.

**Default [ON]**

#### b. Show Hyperlink Icon on printed documents

Check this option to show the Hyperlink icon on printed documents.

**Default [OFF]**

#### c. Show Hyperlink Icon on exported images

Check this option to show Hyperlink icon on exported images.

**Default [OFF]**

#### d. Set relative path based on the project directory

Check this option to set the directory, where the Project is saved, to be the Base Directory of relative paths of Hyperlinks.

**Default [ON]**

#### e. Set relative path based on the work directory

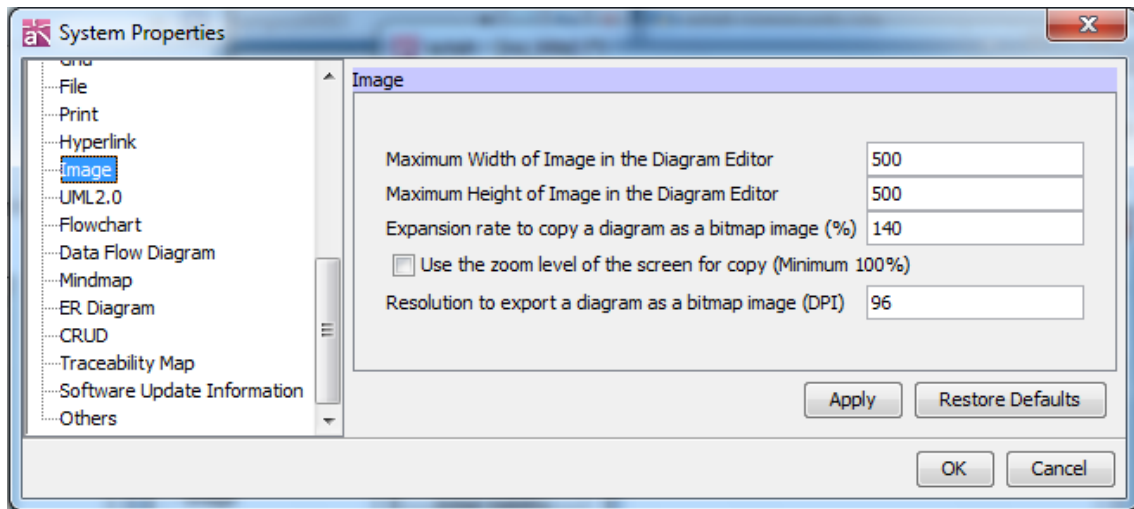
Check this option to set the specified directory to be the Base Directory of relative paths

## 41. System Properties

of Hyperlinks.

**Default [OFF]**

### 41. 19. Image



The image setting can be set in this segment.

#### a. Maximum Width of Image in the Diagram Editor

Set the maximum width of images in the Diagram editor.

**Default [500]**

#### b. Maximum Height of Image in the Diagram Editor

Set the maximum height of images in the Diagram editor.

**Default [500]**

#### c. Expansion rate to copy a diagram as a bitmap image (%)

Set the expansion rate to copy a diagram as a bitmap image (%).

**Default [140]**

#### d. Use the zoom level of the screen for copy (Minimum 100%)

Click this option to use the zoom level of the screen for copy (Minimum 100%).

**Default [ON]**

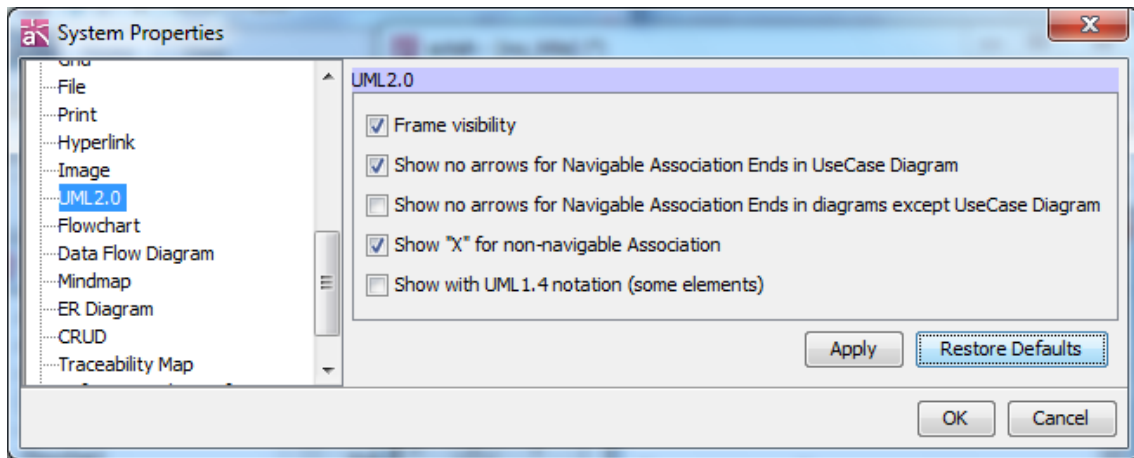
#### e. Resolution to export a diagram as a bitmap image (DPI)

Set the resolution to export a diagram as a bitmap image (DPI).

**Default [96]**

## 41\_System Properties

### 41.20. UML 2.0



The settings of UML2.0 can be set in this segment.

#### a. Frame Visibility

Check this option to show a frame in the Diagram Editor.

This can be switched on/off in Property View.

**Default [ON]**

#### b. Show no arrows for Navigable Association Ends in UseCase Diagram

Check this option to show no arrows if association ends are navigable in UseCase diagram.

**Default [ON]**

#### c. Show no arrows for Navigable Association Ends in diagrams except UseCase Diagram

Check this option to show no arrows if association ends are navigable in diagrams except UseCase diagram.

**Default [OFF]**

#### d. Show "x" for non-navigable association

Check this option to show "x" for non-navigable association.

**Default [ON]**

#### e. Show with UML1.4 notation (some elements)

Check this option to show Component with UML 2.0 Notation.

**Default [OFF]**

Activity Diagram : Action, CallBehaviorAction, Control Flow/Object Flow, Object Node

Sequence Diagram : Lifeline, Message, Create Message



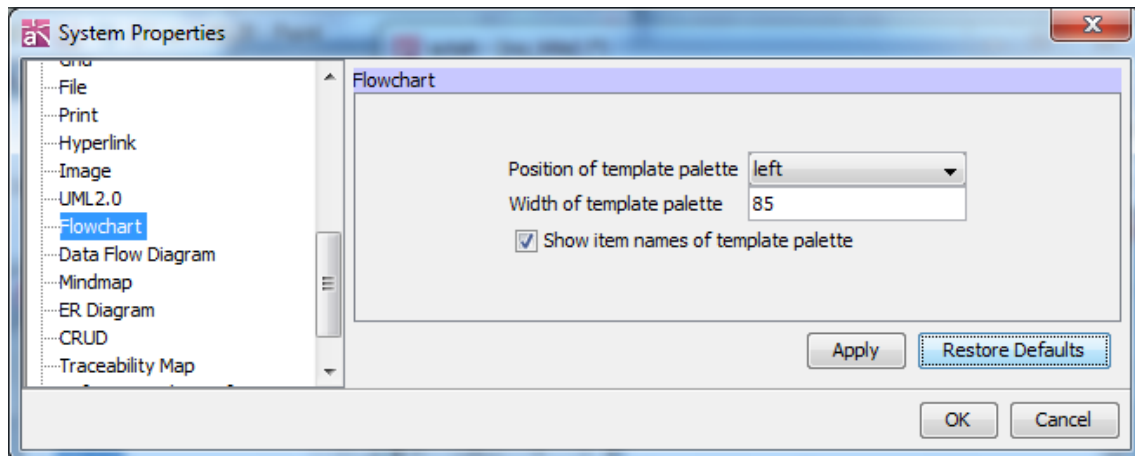
## 41\_System Properties

Communication Diagram : Lifeline, Message

Component Diagram : Component

Deployment Diagram : Component, Component Instance

### 41. 21. Flowchart [P]



The settings of flowcharts can be set in this segment.

#### a. Position of template palette

The position of the Flow Symbol Template Palette can be selected using this option.

**Default [left]**

#### b. Width of Template Palette

The width of the Flow Symbol Template Palette can be set using this option.

**Default [85]**

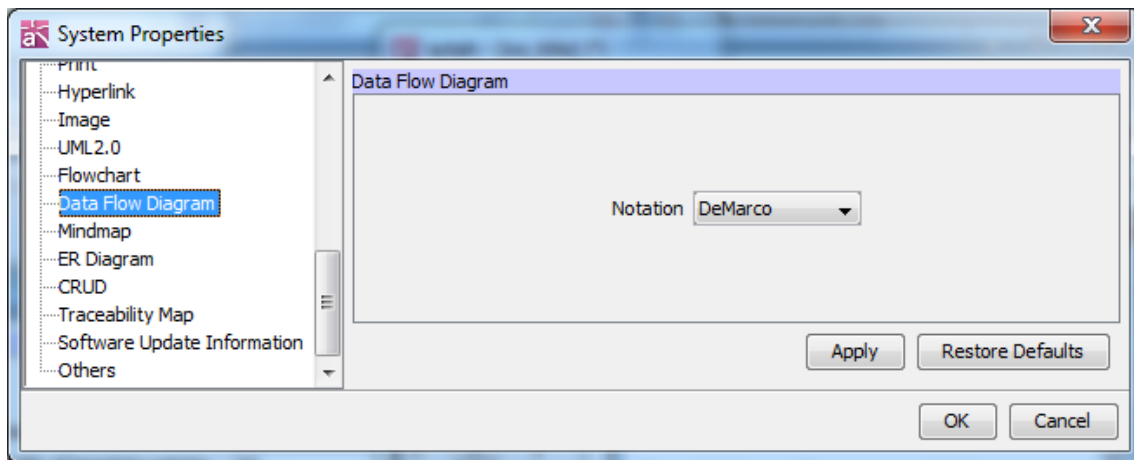
#### c. Show item names of Template Palette

Check this option on to display all Flow symbol Names.

**Default [ON]**

## 41\_System Properties

### 41.22. Data Flow Diagram [P]



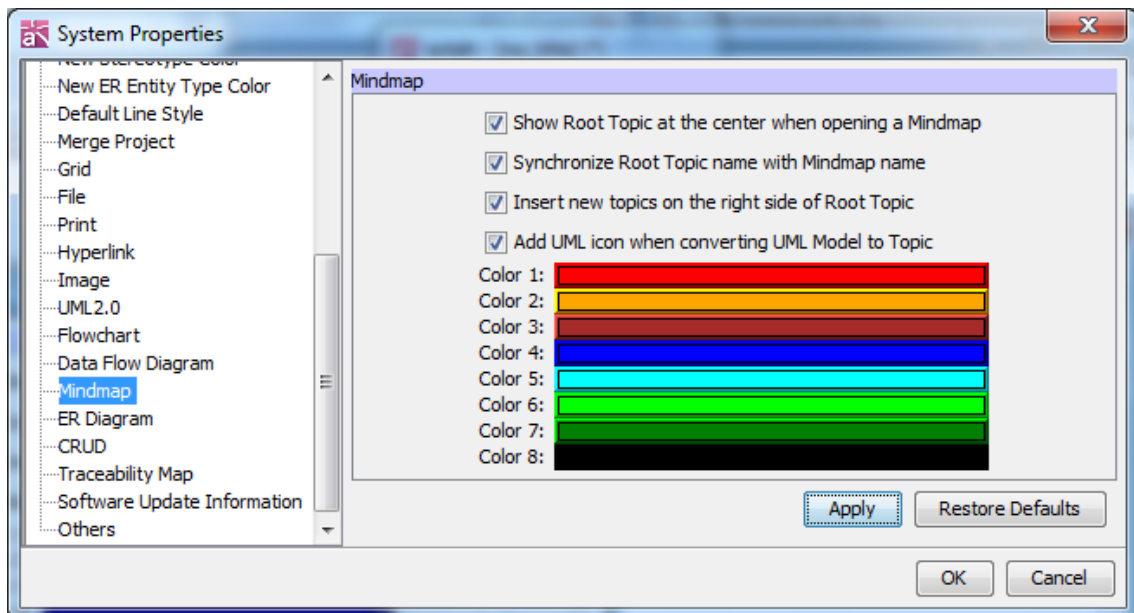
The setting of Data Flow Diagram can be set in this segment.

#### a. Notation

Set the notation of Data Flow Diagram (DeMarco / Gane/Sarson).

**Default [DeMarco]**

### 41.23. Mindmap



The settings of Mind Maps can be set in this segment.

## 41\_System Properties

### a. Show Root Topic at the center when opening a Mindmap

Check this option to place Root Topic at the center

Default [ON]

### b. Synchronize Root Topic name with Mindmap name

Check this option to synchronize Root Topic name with Mind map name.

Default [ON]

### c. Insert new topics on the right side of Root Topic

Check this option to insert new topics on the right side of Root Topic always.

Default [ON]

### d. Add UML icon when converting UML Model to Topic

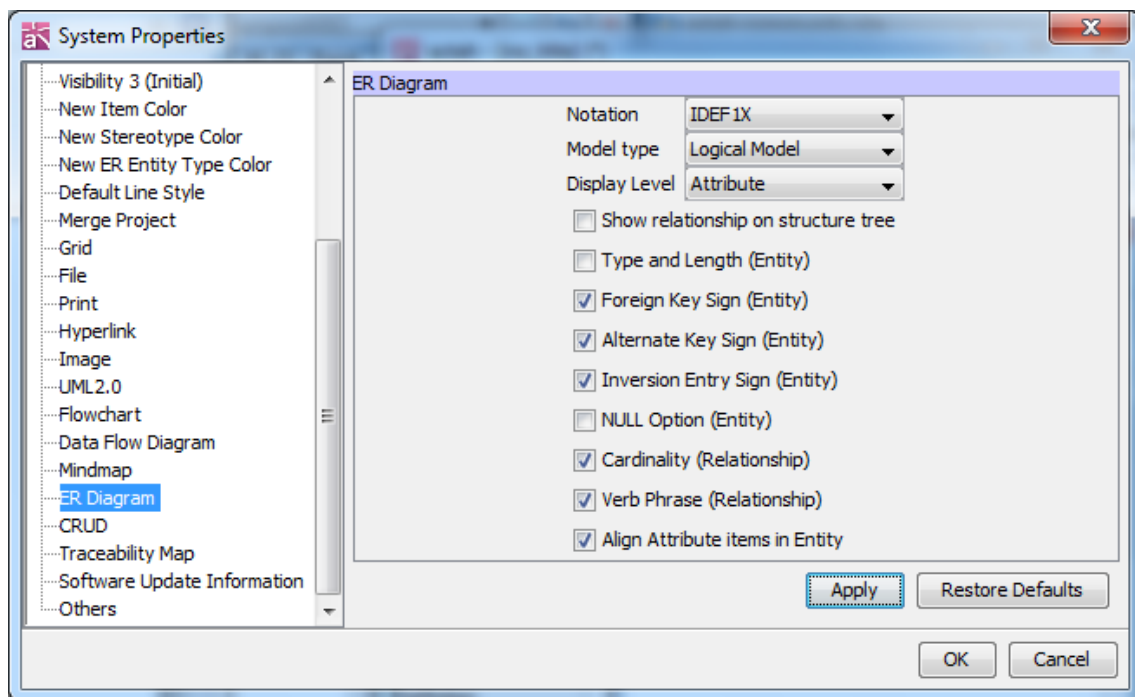
Check this option to show a UML icon when converting UML Model to Topic.

Default [ON]

### c. Edge Color

Set default Edge color.

## 41. 24. ER Diagram [P]



The settings of ER Diagrams can be set in this segment.

## **41\_System Properties**

### **a. Notation**

Set the notation of ER Diagram.

**Default [IDEF1X]**

### **b. Model Type**

Set the Model type of ER Diagram.

**Default [Logical Model]**

### **c. Display Level**

Set the Display level of Entity for ER Diagram.

**Default [Attribute]**

### **d. Show relationship on the structure tree**

Check this option to display the Relationship on the Structure Tree.

**Default [OFF]**

### **e. Type and Length (Entity)**

Check this option to show Type and Length (Entity).

**Default [OFF]**

### **f. Foreign Key Sign (Entity)**

Check this option to show Foreign Key Sign (Entity).

**Default [ON]**

### **g. Alternate Key Sign (Entity)**

Check this option to show Alternate Key Sign (Entity).

**Default [ON]**

### **h. Inversion Entry Sign (Entity)**

Check this option to show Inversion Entry Key Sign (Entity).

**Default [OB]**

### **I. NULL Option (Entity)**

Check this option to show NULL Option (Entity).

**Default [OFF]**

### **J. Cardinality (Relationship)**

Check this option to show Cardinality (Relationship).

**Default [ON]**

## 41\_System Properties

### k. Verb Phrase (Relationship)

Check this option to show Verb Phrase (Relationship).

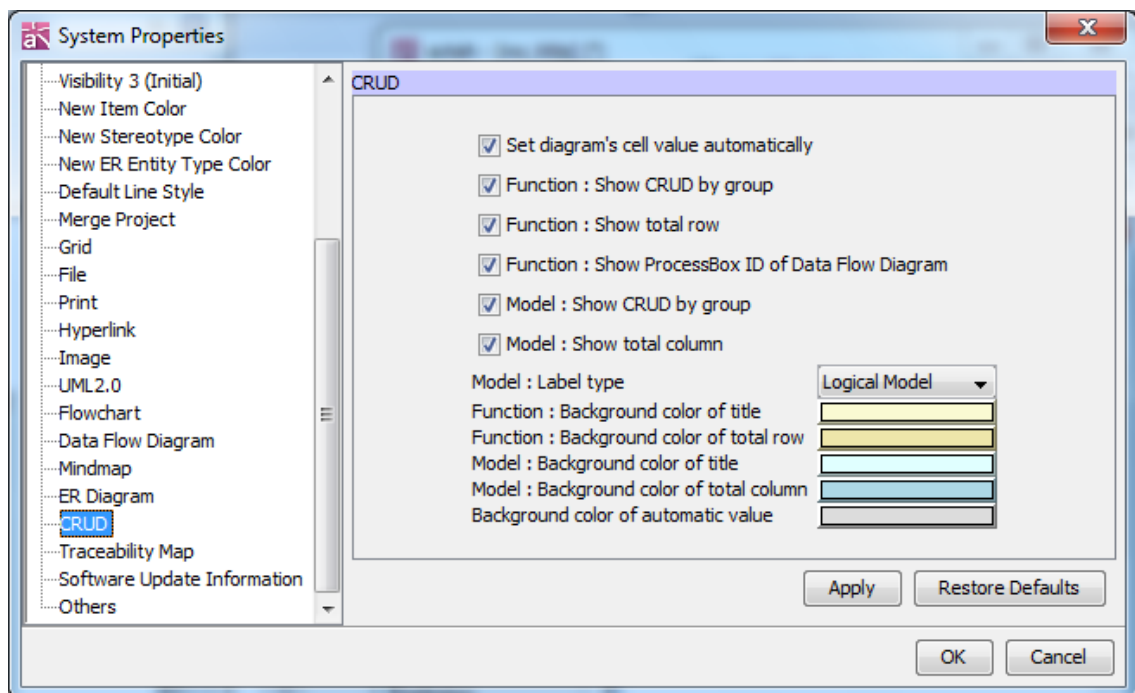
Default [ON]

### l. Align Attribute items in Entity

Check this option to align the display of Attribute items in Entity.

Default [ON]

## 41. 25. CRUD [P]



The settings of CRUDs can be set in this segment.

### a. Set diagram's cell value automatically

Check this option to set diagram's cell value automatically.

Default [ON]

### b. Function : Show CRUD by group

Check this option to show items by group.

Default [ON]

### c. Function : Show total row

Check this option to show the total row at the bottom.

## 41\_System Properties

**Default [ON]**

**d. Function : Show ProcessBox ID of Data Flow Diagram**

Check this option to show ProcessBox ID in Data Flow Diagram.

**Default [ON]**

**e. Model : Show CRUD by group**

Check this option to show items by group.

**Default [ON]**

**f. Model : Show total column**

Check this option to show the total column at the bottom right.

**Default [ON]**

**g. Model : Label Type**

Choose Logical Name or Physical Name for label in CRUD.

**Default [Logical Type]**

**h. Function : Background color of title**

Set the background color of titles in the function column.

**i. Function : Background color of total row**

Set the background color of total rows in the function column.

**j. Model : Background color of title**

Set the background color of titles in the model column.

**k. Model : Background color of total column**

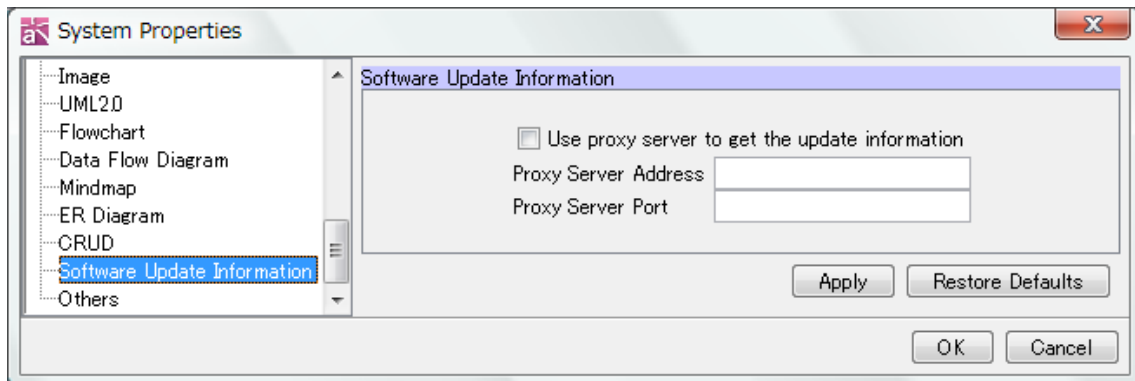
Set the background color of total columns in the function column.

**l. Background color of automatic value**

Set the background color of automatic values.

## 41\_System Properties

### 41.26. Traceability Map



The settings of Traceability Map can be set in this segment.

#### a. Show Target Elements

Check this option to display the Target Elements.

**Default [ON]**

#### b. Show Source Elements

Check this option to display the Source Elements.

**Default [ON]**

#### c. Show Related Diagrams

Check this option to display the related diagrams.

**Default [ON]**

#### d. Show Target Hyperlinks

Check this option to display the target hyperlinks.

**Default [OFF]**

#### e. Show Source Hyperlinks

Check this option to display the source hyperlinks.

**Default [OFF]**

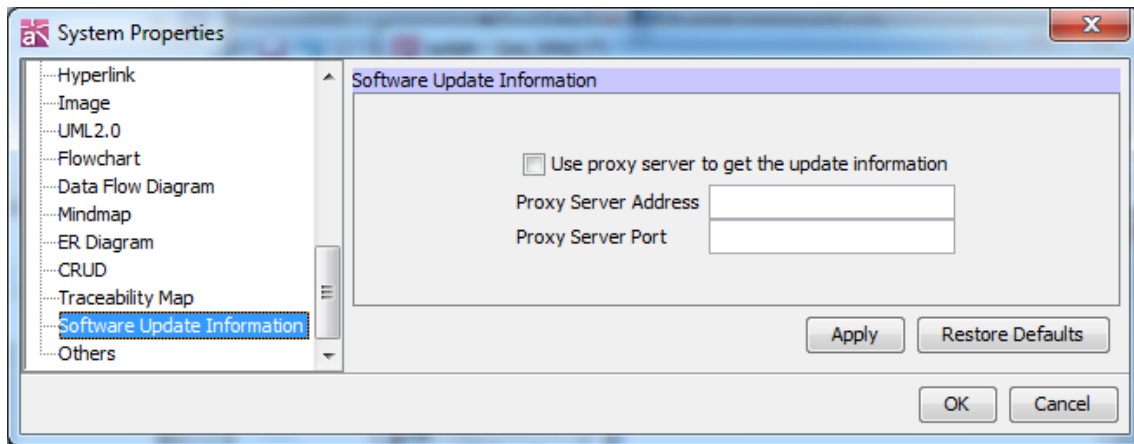
#### f. Hierarchy (from 1 to 50)

Specify the hierarchy of traceability map from 1 upto 50.

**Default [2]**

## 41\_System Properties

### 41.27. Software Update Information



The settings of CRUDs can be set in this segment.

#### a. Use proxy server to get the update information

Check this option to proxy server to get the update information.

**Default [OFF]**

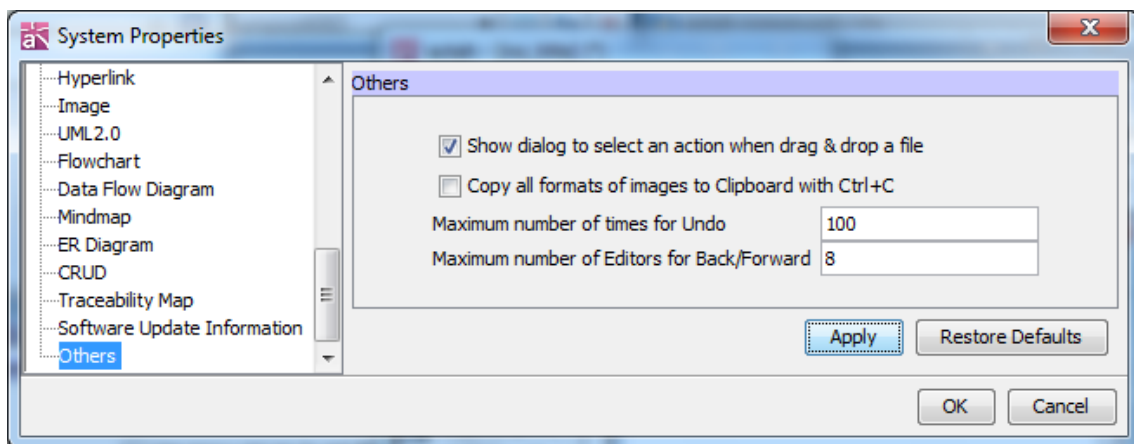
#### b. Proxy Server Address

Set the proxy server address.

#### c. Proxy Server Port

Set the proxy server port.

### 41.28. Others



The other settings can be set in this segment.



## **41\_System Properties**

### **a. Show a dialog to select an action when drag & drop a file**

Check this option to show a dialog to select how to use a file when by Drop and Drag into a Diagram.

**Default [ON]**

### **b. Copy all formats of images to Clipboard with Ctrl+C**

Check this option to copy the Image format and the EMF format to the Clipboard when copying (Ctrl+C). This option will consume a large amount of memory when a large Diagram is copied. To paste to Excel™ and other programs, [Paste Special] must be selected.

**Default [OFF]**

### **c. Maximum number of times for Undo**

Set the maximum number of times for Undo.

**Default [100]**

### **d. Maximum number of Editors for Back/Forward**

Set the maximum number of Editors for Back/Forward.

**Default [8]**

## 42. Programming Language Setting (Java, C#, C++)

### 42. Programming Language Setting (Java, C#, C++)

The programming language for the project can be specified in astah\*. By setting the language, skeleton code in the selected language can be exported and also models with specific attributes that are defined by the language are created.

#### 42. 1. Setting programming language

##### 42. 1. 1. Setting programming language

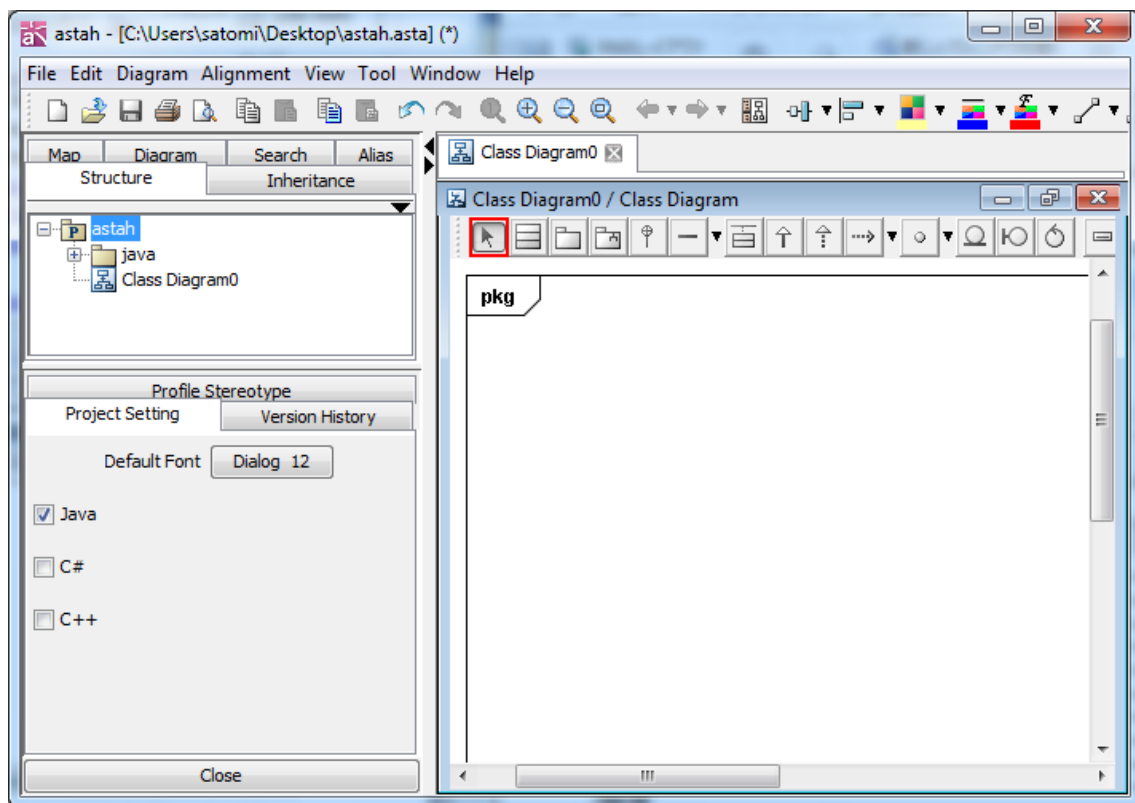
Language can be set by simply checking on the checkbox on the [Project Setting] of Project's property. Once language is specified, setting of specific information defined by language is available on the properties of Class, Attribute and Operation.

To see Project property, go to [Project File Properties - \[Project Setting\] Tab](#).

To see Class language property, go to [Class Properties - \[Language\] Tab](#).

To see Attribute language property, go to [Attribute Properties \(Class Diagram\) - \[Language\] Tab](#).

To see Operation language property, go to [Operation Properties - \[Language\] Tab](#).



No programming language is specified for files that are created with version 5.2.x or earlier. This can be set on [Project Setting] Tab of Project's property in version 5.3 or later.

## **42. Programming Language Setting (Java, C#, C++)**

### **42. 1. 2. Applying and removing language setting**

#### **1) Applying language setting**

By checking on the checkbox of language on the [Project Setting] Tab of Project Property View, the checked language will apply to the whole project. Java/C#/C++ language information can be specified in the [Language] Tab of Classes, Attributes and Operations.

#### **2) Removing language setting**

By checking off the checkbox on the [Project setting] Tab of Project Property View, the language setting will be removed from the project.

### **42. 1. 3. Setting default programming language for new projects**

The default language can be specified in the [System Property - File](#) tab.

### **42. 1. 4. Specifying Primitive Type**

Primitive types are included in the list of types of Attribute or Return Value of Operation and so on. If no programming language is specified, Java primitive types are shown as default.

## **42. 2. Importing source code**

### **1) Importing Java**

To import Java source code, select [Tool] - [Java] - [Import Java] from Main Menu.

## **42. 3. Exporting skeleton code**

### **1) Exporting Java**

To export Java skeleton code, select [Tool] - [Java] - [Export Java] from Main Menu.

### **2) Exporting C#**

To export C# skeleton code, select [Tool] - [C#] - [Export C#] from Main Menu.

### **3) Exporting C++**

To export C++ skeleton code, select [Tool] - [C++] - [Export C++] from Main Menu.

### **43. astah\* API**

#### **43. astah\* API**

astah\* API can be used to develop application software for use of astah\* model data.

[Reference API]

astah\* API obtains main model information of Class Diagrams, UseCase Diagrams, Statemachine Diagrams, Activity Diagrams, Sequence Diagrams, Flowchart, Data Flow Diagrams, ER Diagrams, CRUD and topic information of Mind Maps.

[Edit API]

Models in Class diagrams, UseCase Diagrams, ER Diagrams[P] and Mindmaps can be edited by using astah\* API.

Please refer to API User Guide for detail.

(Go to [Start] in Windows - [Program] - [astah professional(UML)] - [API User Guide])

#### 44. Appendix: FAQ

#### **44. Appendix : FAQ**

Please refer to astah\* website (<http://astah.change-vision.com/>) for the answers to frequently asked questions.