StarUML Documentation

Release 2.0.0

MKLab

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Contents

Note: This documentation is a work in progress.

Contents:

Basic Concepts

Project

Project is a top-level element stored as a single file.

Modeling a software system requires describing multiple models because it is not enough to describe the system with a single perspective, so we typically make multiple models such as *Use-Case Model*, *Design Model*, *Component Model*, *Deployment Model*, or others in a *Project*.

Typically *Project* is organized as a set of *UMLModels*, *UMLPackages*, or *UMLSubsystems*. If you want to know more about UML Elements, please refer to OMG UML Specification.

See also:

Organizing Project See the Organizing Project section.

Model vs. Diagram

Many users are confusing the difference between *diagramming or drawing* tools such as Microsoft Visio and *modeling* tools such StarUML or Rational Software Architect. First you need to understand a diagram is not a model.

Model or *software model* is a description of any aspect of a software system such as structure, behavior, requirement, and so on. A software model can be represented in textual, mathmatical or visual form. A *Model element* is a building block of a software model.

A *Diagram* is a visual geometric symbolic representation of a software model. A software model can be represented in one or more diagrams with different aspects. For example, a diagram can focus on class hierarchical structure while another diagram can focus on interaction between objects. Diagrams consists of *view elements*, which are visual representations of a *model element*.

A *model element* typically has multiple corresponding *view elements*. A model element has its own data such as *name*, *stereotype*, *type*, etc. A view element just renders the corresponding model element in a diagram. View elements may exists multiple times in a diagram or in different diagrams. If the *name* of a model element changed, all corresponding view elements reflect the changes in their diagrams.

Fragment

A fragment is a part of a project saved as a separate file with the extension name `.mfj`. Any element can be exported as a fragment, but typically *UMLPackage*, *UMLModel*, and *UMLSubsystem* are the candidates. Once a fragment is exported as a file, the fragment can be reused by importing in a project.

See also:

Import Fragment To import a fragment file.

Export Fragment To export an element to a fragment file.

Profile

UML (Unified Modeling Language) is so general-purpose modeling language that could be used to express any kinds of software-intensive systems. In this reason, using UML for a specific domain or platform is not sufficient, so you may need to define UML Profile. StarUML provides UML profiles which can be used to expand UML. For example, UML profiles can be used for the following purposes.

- Profiles for specific programming languages (C/C++, Java, C#, Python, etc.)

- Profiles for specific development methodologies (RUP, Catalysis, UML Components, etc.)

- Profiles for specific domains (EAI, CRM, SCM, ERP, etc.)

Extension

An extension is a package which adds new features to StarUML. For example, an extension can extend menus, UIs, dialogs, modeling notations, preferences, etc. An extension can be written in JavaScript, CSS3, and HTML5 and can use Node.js integrated in StarUML. Extensions can be easily installed, uninstalled, and updated via the main extension registry.

See also:

Managing Extensions To use extensions.

Managing Project

New Project

To create a modeling project, press `Ctrl+n` or select **File | New**. If you want create a project from templates, select a template under **File | New From Template | <TemplateName>**.

Open Project

If you have model files (`.mdj`), you can open it in StarUML. To open a model file, press `Ctrl+o` or select **File | Open...** and then select a file in Open Dialog.

Open StarUML V1 File

If you have StarUML V1 model files (`.uml`), you can import by selecting **File | Import | StarUML 1 File (.uml)...**.

Save Project

You can save the working project into a file by pressing `Ctrl+s` or selecting **File | Save**. If you want to save as another file, press `Ctrl+Shift+s` or select **File | Save As...**.

Close Project

To close working project, select **File | Close**. If you didn't saved the project, you will be asked to save or not.

Export Fragment

To export a part of the project as a fragment, select **File | Export | Fragment...** and then select an element to export in **Element Picker Dialog**.

Import Fragment

To import a fragment into the project, select **File | Import | Fragment...**. The fragment will be included as a child of the project.

Editing Elements and Diagrams

Contents

Editing Diagrams

Create Diagram

To create a Diagram:

1. Select first an element where a new Diagram to be contained as a child in **Explorer**.

2. Select **Model | Add Diagram | <DiagramType>** in Menu Bar or select **Add Diagram | <DiagramType>** in Context Menu.

Delete Diagram

To delete a Diagram:

1. Select a Diagram to delete in **Explorer**.

2. Press `Ctrl+Delete` or select **Edit | Delete from Model** in Menu Bar or **Delete from Model** in Context Menu.

Open Diagram

To open a diagram, double-click a diagram in **Explorer**.

Close Diagram

To close a diagram, click the close icon (x mark) of a diagram in **Working Diagrams** or press F4 or select **View |
Close Diagram** in Menu Bar.

To close other diagram except a active diagram, press Ctrl+F4 or select **View | Close Other Diagrams** in Menu
Bar.

To close all diagrams, press Shift+F4 or select **View | Close All Diagrams** in Menu Bar.

Change Active Diagram

To change active diagram, select a diagram in **Working Diagram**.

To activate the next diagram, press Ctrl+Shift+] or select **View | Next Diagram**.

To activate the previous diagram, press Ctrl+Shift+[or select **View | Previous Diagram**.

Zoom In and Out

To zoom in the diagram, press Ctrl++ or select **View | Zoom In** in Menu Bar.

To zoom out the diagram, press Ctrl+- or select **View | Zoom Out** in Menu Bar.

To set zoom level to actual size, press Ctrl+0 or select **View | Actual Size** in Menu Bar.

You can check the current zoom level in **StatusBar**.

Editing Elements

Create Element

You have following options to create Model Elements and View Elements.

To create an Element from **Toolbox**:

1. Select **<ElementType>** in **Toolbox**.

2. Drag on the diagram as the size of element, or link two elements if the element is a kind of relationship.

Note: In most cases, creating an element from **Toolbox** means creating the both Model Element and View Element.
For example, if you create a Class in a Diagram from Toolbox, a Class Model Element and a Class View Model which
referencing the Model Element will be created. See *Model vs. Diagram*

If you have already Model Elements, you can create View Elements referencing the Model Element on a Diagram.

To create a View Model by Drag-and-Drop:

1. Select a Model Element in **Explorer**.

2. Drag the Model Element and drop on a Diagram.

To create a Model Element in **Explorer**:

1. Select first an element where a new Model Element to be contained as a child in **Explorer**.

2. Select **Model | Add | <ElementType>** in Menu Bar or select **Add | <ElementType>** in Context Menu.

Delete Elements

See also:

Model vs. Diagram Before deleting elements, you need to distinguish the difference of Model Element, View Element, and Diagram.

To delete View Elements in a Diagram.

1. Select View Elements to be deleted in a Diagram.

2. Press Delete or Select **Edit | Delete** in Menu Bar or **Delete** in Context Menu.

Note: Deleting View Elements do not delete Model Elements.

To delete Model Elements:

1. Select Elements to be deleted in a Diagram or in **Explorer**.

2. Press Ctrl+Delete or Select **Edit | Delete from Model** in Menu Bar or **Delete from Model** in Context Menu.

Note: Model Elements are always deleted with corresponding View Elements.

Select Elements

To select view elements in **Diagram Editor**:

You can select an Element in Diagram just by clicking on an Element. If you want to select additional elements while keeping current selections, click on element with pressing Shift. When you drag an area, Elements overlaps the area will be selected. Pressing Shift also work with dragging.

If you want to select all elements in the Diagram, press Ctrl+A or select **Edit | Select All** in Menu Bar or **Select All** in Context Menu.

Note: Selecing an Element on a Diagram means selection of the both Model Element and View Element.

To select a model element in **Explorer**:

In **Explorer**, you can select a Model Element by clicking on an Element.

If you want to select an element in **Explorer** corresponding to the a selected element in Diagram, press Ctrl+E or select **Edit | Select In Explorer** in Menu Bar or **Select In Explorer** in Context Menu.

Copy and Paste

When copying or cutting elements for pasting, a clear distinction has to be made between model elements and view elements. If a model element is copied, it has to be pasted under a model element. In this case, all the sub-elements contained in the selected element are copied together. View elements can be copied within the same diagram or to different diagrams. Copied view elements can be pasted in diagrams only; they cannot be pasted to model elements. Copying and pasting may also be restricted depending on the view element types and diagram types.

To copy and paste view elements in **Diagram Editor**

1. Select view elements in a diagram to copy. (You can select multiple elements. See *Select Elements*)

2. Press `Ctrl+C` or select **Edit | Copy** in Menu Bar or **Copy** in Context Menu. (To cut view elements, press `Ctrl+X` or select **Edit | Cut** in Menu Bar or **Cut** in Context Menu)

3. Open the diagram where the copied view elements to be pasted. (See open diagram??)

4. Press `Ctrl+V` or select **Edit | Paste** in Menu Bar or **Paste** in Context Menu. The copied view elements will be pasted to the active diagram.

To copy and paste a model element in **Explorer**:

1. Select a model element to copy in **Explorer**.

2. Press `Ctrl+C` or select **Edit | Copy** in Menu Bar or **Copy** in Context Menu. (To cut view elements, press `Ctrl+X` or select **Edit | Cut** in Menu Bar or **Cut** in Context Menu)

3. Select a model element where the copied element will be pasted in **Explorer**.

4. Press `Ctrl+V` or select **Edit | Paste** in Menu Bar or **Paste** in Context Menu. The copied view elements will be pasted to the active diagram. The copied model element can be pasted in where an element is able to contain.

Note: Some elements are not allowed to copy, cut, and paste.

Undo and Redo

To undo an action, press `Ctrl+Z` or select **Edit | Undo** in Menu Bar.

To redo an undo-ed action, press `Ctrl+Y` or select **Edit | Redo** in Menu Bar.

Edit Properties

You can edit properties of model elements in ui-property-editor.

Documenting Elements

You can edit documentation of model elements in ui-documentation-editor.

Formatting View Elements

Change Font

To change font face, size, and color of view elements:

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1. Select view elements in diagram.

2. Show **FontDialog** by pressing `Ctrl+Shift+F` or selecting **Format | Font...** in Menu Bar or Context Menu.

3. Select font face, size or color and press **OK** button.
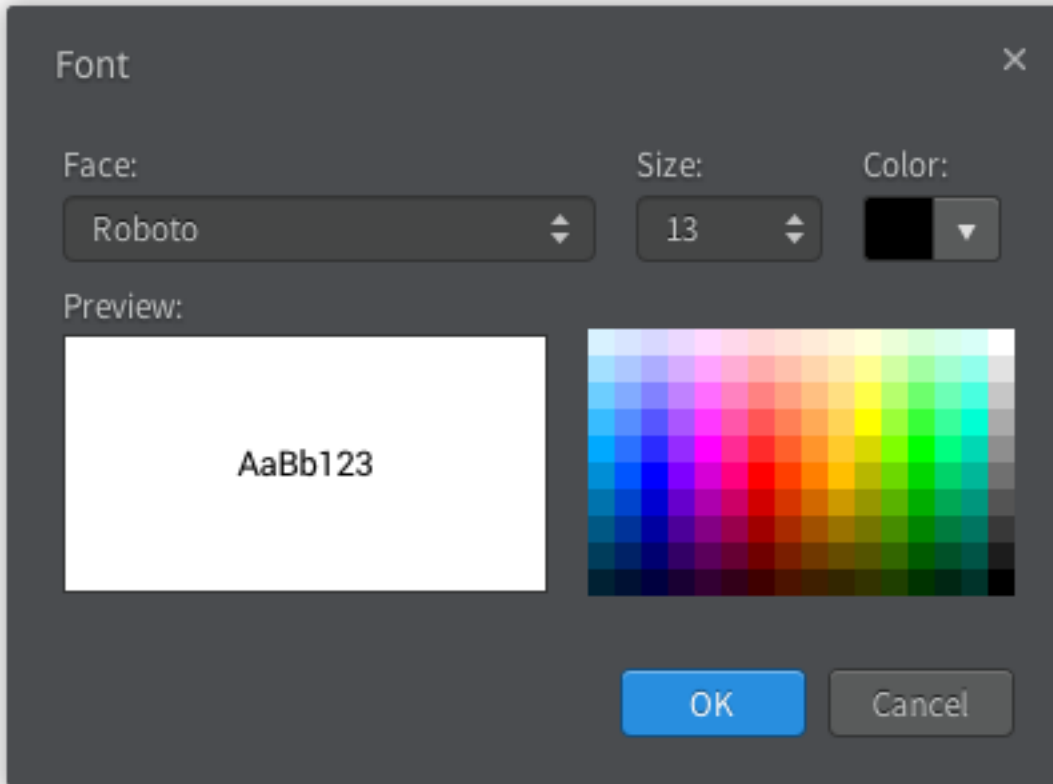
You can also use ui-style-editor to change Font face, size, and color.

Change Line Color

To change line color of view elements:

1. Select view elements in diagram.

2. Show **ColorDialog** for line color by pressing `Ctrl+Shift+L` or selecting **Format | Line Color...** in Menu Bar or Context Menu.

3. Select line color and press **OK** button.
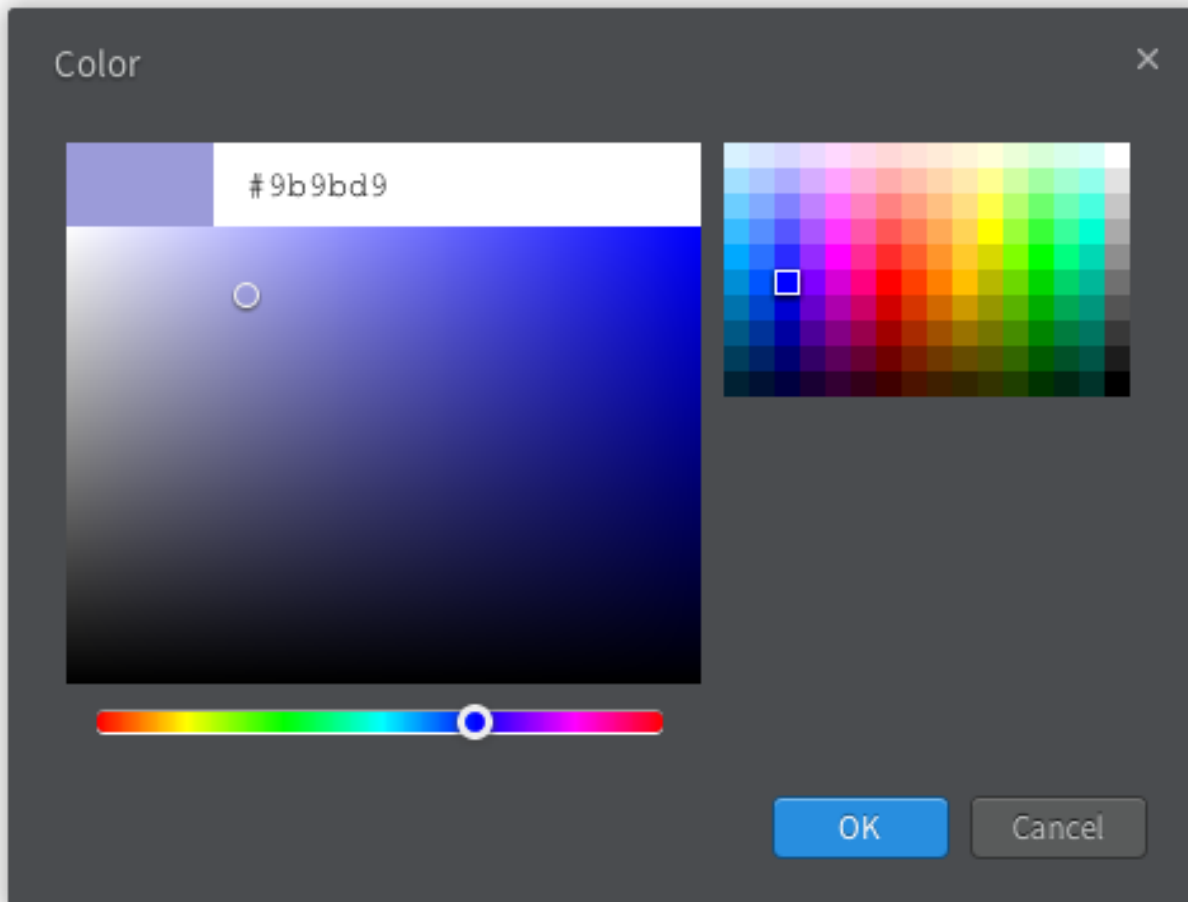
You can also use ui-style-editor to change line color.

Change Fill Color

To change fill color of view elements:

1. Select view elements in diagram.

2. Show **ColorDialog** for fill color by pressing `Ctrl+Shift+I` or selecting **Format | Fill Color...** in Menu Bar or Context Menu.

3. Select fill color and press **OK** button.

You can also use ui-style-editor to change fill color.

Change Line Style
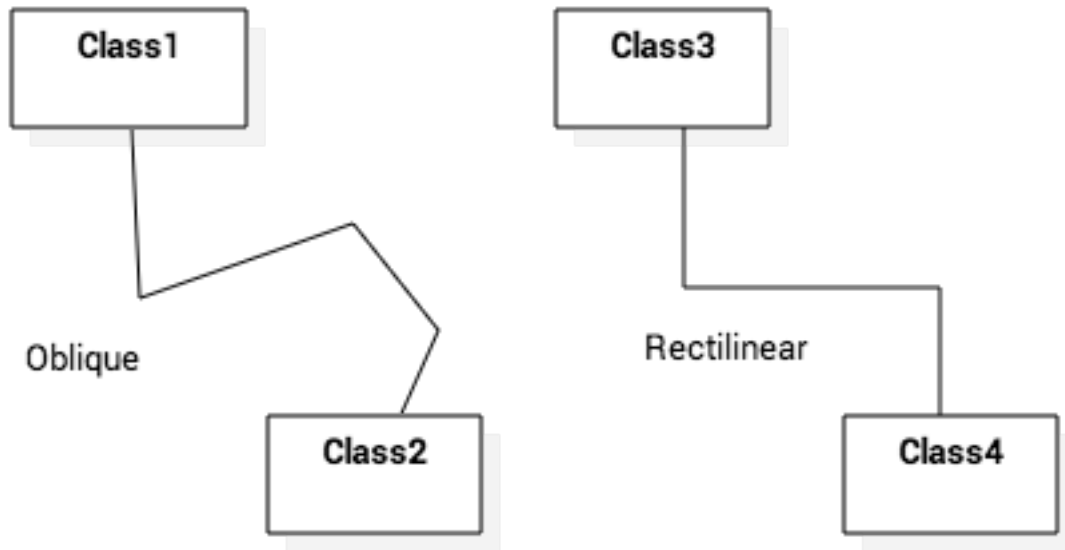
To change line style of view elements:

1. Select view elements in diagram.
2. **Select one of line styles.**

    - Rectilinear - Press `Ctrl+L` or select **Format | Line Style | Rectilinear** in Menu Bar or Context Menu.
    - Oblique - Press `Ctrl+B` or select **Format | Line Style | Oblique** in Menu Bar or Context Menu.

You can also use ui-style-editor to line style.

Set Auto Resize

To set view elements always resize automatically:

1. Select view elements in diagram.
2. Press `Ctrl+Shift+R` or check (or uncheck) **Format | Auto Resize** in Menu Bar or Context Menu.

You can also use ui-style-editor to line style.

Set Word Wrap

To allow text can be shown in multiple lines:

1. Select view elements in diagram.
2. Press `Ctrl+Shift+W` or check (or uncheck) **Format | Word Wrap** in Menu Bar or Context Menu.

Stereotype Display

An element has six alternative representations based on the stereotype. To change stereotype display:

1. Select view elements in diagram.

2. Press `Ctrl+Shift+0` ~ `Ctrl+Shift+5` or select **Format | Stereotype Display | <StereotypeDisplayKind>** in Menu Bar or Context Menu.

Supported stereotype display kinds are follow:

- None (`Ctrl+Shift+0`) : Do not show stereotype.
- Label (`Ctrl+Shift+1`) : Show stereotype as a label.
- Decoration (`Ctrl+Shift+2`) : Show stereotype as a decorated icon on the top left.
- Decoration with Label (`Ctrl+Shift+3`) : Show stereotype as a label with a decorated icon.
- Icon (`Ctrl+Shift+4`) : Show element as a icon.
- Icon with Label (`Ctrl+Shift+5`) : Show element as a icon with label.

None	Label	Decoration	Decoration with Label	Icon	Icon with Label
Interface1	«interface» Interface1	Interface1 ◯	«interface» Interface1 ◯	◯ Interface1	◯ «interface» Interface1

Show Visibility

To show (or hide) visibilities:

1. Select view elements in diagram.
2. Press `Ctrl+Shift+V` or check (or uncheck) **Format | Show Visibility** in Menu Bar or Context Menu.

Show Namespace

To show (or hide) namespace:

1. Select view elements in diagram.
2. Press `Ctrl+Shift+N` or check (or uncheck) **Format | Show Namespace** in Menu Bar or Context Menu.

Show Property

To show (or hide) properties:

1. Select view elements in diagram.
2. Press `Ctrl+Shift+P` or check (or uncheck) **Format | Show Property** in Menu Bar or Context Menu.

Show Type

To show (or hide) types:

1. Select view elements in diagram.
2. Press `Ctrl+Shift+Y` or check (or uncheck) **Format | Show Type** in Menu Bar or Context Menu.

Show Multiplicity

To show (or hide) multiplicities:

1. Select view elements in diagram.

2. Press `Ctrl+Shift+M` or check (or uncheck) **Format | Show Multiplicity** in Menu Bar or Context Menu.

Show Operation Signature

To show (or hide) operation signature:

1. Select view elements in diagram.

2. Press `Ctrl+Shift+G` or check (or uncheck) **Format | Show Operation Signature** in Menu Bar or Context Menu.
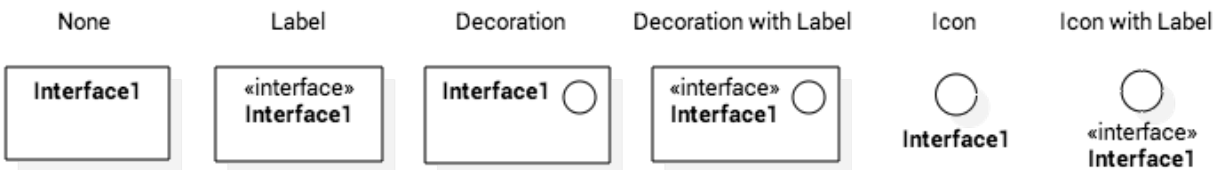
Suppress Attributes

To suppress attributes:

1. Select view elements (e.g. Class) in diagram.

2. Press `Ctrl+Shift+A` or check (or uncheck) **Format | Suppress Attributes** in Menu Bar or Context Menu.

Suppress Operations

To suppress operations:

1. Select view elements (e.g. Class) in diagram.

2. Press `Ctrl+Shift+O` or check (or uncheck) **Format | Suppress Operations** in Menu Bar or Context Menu.

Suppress Literals

To suppress literals:

1. Select Enumeration view elements in diagram.

2. Press `Ctrl+Shift+T` or check (or uncheck) **Format | Suppress Literals** in Menu Bar or Context Menu.

Aligning View Elements

To bring view elements on the front:

1. Select view elements in diagram.

2. Select **Format | Alignment | Bring to Front** in Menu Bar or **Alignment | Bring to Front** in Context Menu.

Or, to send view elements to the back:

1. Select view elements in diagram.

2. Select **Format | Alignment | Send to Back** in Menu Bar or **Alignment | Send to Back** in Context Menu.

And, you can align two or more view elements:

1. Select view elements in diagram.

2. **Select Format | Alignment | <AlignmentKind> in Menu Bar or Alignment | <AlignmentKind> in Context Menu.**

- Align Left : Align selected view elements to the left.

- Align Right : Align selected view elements to the right.

- Align Middle : Center selected view elements horizontally.

- Align Top : Align selected view elements to the top.

- Align Bottom : Align selected view elements to the bottom.

- Align Center : Center selected view elements vertically.

Layout Diagram

To layout diagram automatically:

1. Open the diagram to be layout.

2. Select **Format | Layout | Auto** in Menu Bar.

If you want to layout diagram in a particular direction:

1. Open the diagram to be layout.

2. Select **Format | Layout | <Direction>** in Menu Bar. Supported directions are **Top to Bottom**, **Bottom to Top**, **Left to Right** and **Right to Left**.

Extending Elements

Assign Stereotype

To assign defined stereotype to elements (e.g. defined in UML Standard Profile):

1. Select model elements to assign stereotype.

2. Click the magnifier icon on the right side of *stereotype* property in ui-property-editor.

3. Select a stereotype in ui-element-picker-dialog.

To assign temporal stereotype to elements:

1. Select model elements to assign stereotype.

2. Enter stereotype name in *stereotype* property in ui-property-editor.

Add Constraints

To add a Constraint to an element:

1. Select model elements to add a constraint.

2. Select **Model | Add | Constraint** in Menu Bar or select **Add | Constraint** in Context Menu.

3. Edit constraint in *specification* property in ui-property-editor.

Add Tags

Tag is an element to add extended properties to Model Elements

To add a Tag to an element:

1. Select an Element in **Explorer** or in a Diagram.

2. Select **Model | Add | Tag** in Menu Bar or select **Add | Tag** in Context Menu.

Properties of Tag:

name Name of Tag

kind Kind of Tag. `kind` could be one of `string`, `reference`, `boolean`, `number`, or `hidden`. if `hidden` is chosen, this Tag will not be shown on View Element.

value Value of Tag when `kind` is `string`.

reference Reference value of Tag when `kind` is `reference`.

checked Boolean value of Tag when `kind` is `boolean`.

number Number value of Tag when `kind` is `number`.

To show or hide Tags on View Elements, see *Show Property*.

Finding Model Elements

To find model elements by keyword:

1. Press `Ctrl+F` or Select **Model | Find...** in Menu Bar.

2. Enter keyword in Edit Box.

3. Check **Case sensitive** if you want to find keyword case sensitively, and check **Find in documentation** if you want to find keyword in documentation of elements.

4. Matched elements will be shown on a Bottom Panel.

Modeling with UML

Organizing Project

A system is typically described in multiple perspectives.

Start from Template

You can start a modeling project by selecting a template. To start a project with a template, select **File | New From Template | <TemplateName>**. StarUML supports 4 default templates:

- **UMLMinimal** - A single model with UML Standard Profile.

- **UMLConventional** - Use Case Model, Analysis Model, Design Model, Implementation Model, and Deployment Model with UML Standard Profile.

- **4+1 View Model** - Pilippe Kruchten's 4+1 Architectural View Model.

- **Rational** : Approach of Rational Rose Tool.

If you don't want to use pre-defined templates, you need to make your own project structure.

Applying Profiles

To include UML Standard Profile, select **Model | Apply Profile | UML Standard Profile (v2)** in Menu Bar.

Working with Class Diagrams

To create a Class Diagram:

1. First select an element where a new Class Diagram to be contained as a child.

2. Select **Model | Add Diagram | Class Diagram** in the Menu Bar or select **Add Diagram | Class Diagram** in Context Menu.

In Class Diagram, you can use following elements.

- *Class*
- *Attribute*
- *Operation*
- *Parameter*
- *Template Parameter*
- *Interface*
- *Association*
- *Aggregation*
- *Composition*
- *Dependency*
- *Generalization*
- *Interface Realization*
- *Signal*
- *DataType*
- *PrimitiveType*
- *Enumeration*
- *AssociationClass*
- *Package*
- *Model*
- *Subsystem*
- *Containment*

See also:

UML Class Diagram For more information about UML Class Diagram.

Class

To create a Class:

1. Select **Class** in **Toolbox**.
2. Drag on the diagram as the size of Class.

To create a Class (model element only) by Menu:

1. Select an Element where a new Class to be contained.
2. Select **Model | Add | Class** in Menu Bar or **Add | Class** in Context Menu.

To edit a Class, you can do following actions:

- Use *Quick Edit for Classifier* by double-click or press Enter on a selected Class.

- Add Attribute - See *Attribute*.
- Add Operation - See *Operation*.
- Add Template Parameter - See *Template Parameter*.

To suppress Attributes, see *Suppress Attributes*.

To suppress Operations, see *Suppress Operations*.

To hide Operation signatures, see *Show Operation Signature*.

Attribute

To add an Attribute:

1. Select a Classifier.
2. Select **Model | Add | Attribute** in Menu Bar or **Add | Attribute** in Context Menu.

To edit an Attribute, you can do following actions:

- Use *Quick Edit for Attribute* by double-click or press Enter on a selected Attribute.

Operation

To add an Operation:

1. Select a Classifier.
2. Select **Model | Add | Operation** in Menu Bar or **Add | Operation** in Context Menu.

To edit an Operation, you can do following actions:

- Use *Quick Edit for Operation* by double-click or press Enter on a selected Operation.
- Add Parameter - See *Parameter*.

To hide Operation signatures, see *Show Operation Signature*.

Parameter

To add a Parameter:

1. Select an Operation.
2. Select **Model | Add | Parameter** in Menu Bar or **Add | Parameter** in Context Menu.

Template Parameter

To add a Template Parameter:

1. Select an Element.
2. Select **Model | Add | Template Parameter** in Menu Bar or **Add | Template Parameter** in Context Menu.

To edit an Template Parameter, you can do following actions:

- Use *Quick Edit for Template Parameter* by double-click or press Enter on a selected Template Parameter.

Interface

To create an Interface:

1. Select **Interface** in **Toolbox**.

2. Drag on the diagram as the size of Interface.

To create an Interface (model element only) by Menu:

1. Select an Element where a new Interface to be contained.

2. Select **Model | Add | Interface** in Menu Bar or **Add | Interface** in Context Menu.

To edit an Interface, you can do following actions:

- Use *Quick Edit for Classifier* by double-click or press Enter on a selected Interface.

- Add Attribute - See *Attribute*

- Add Operation - See *Operation*

- Add Template Parameter - See *Template Parameter*

To show an Interface as Lollipop notation, Interface should be realized (See *Interface Realization*) and then change Stereotype Display to Icon or Icon with Label (See *Stereotype Display*).

To show an Interface as Socket notation, Interface should have dependants (See *Dependency*) and then change Stereotype Display to Icon or Icon with Label (See *Stereotype Display*).

To suppress Attributes, see *Suppress Attributes*.

To suppress Operations, see *Suppress Operations*.

To hide Operation signatures, see *Show Operation Signature*.

Generalization

To create a Generalization:

1. Select **Generalization** in **Toolbox**.

2. Drag from an element (to be special) and drop on another element (to be general).

Association

To create an Association (or Directed Association):

1. Select **Association** (or **Directed Association**) in **Toolbox**.

2. Drag from an element and drop on another element.

Aggregation

To create an Aggregation:

1. Select **Aggregation** in **Toolbox**.

2. Drag from an element (to be a part) and drop on another element (to be whole).

Note: Aggregation is an association whose `aggregation` propery is `shared`.

Composition

To create a Composition:

1. Select **Composition** in **Toolbox**.

2. Drag from an element (to be a part) and drop on another element (to be whole).

Note: Composition is an association whose `aggregation` propery is `composite`.

Dependency

To create an Dependency:

1. Select **Dependency** in **Toolbox**.

2. Drag from an element (client) and drop on another element (supplier).

Interface Realization

To create an Interface Realization:

1. Select **Interface Realization** in **Toolbox**.

2. Drag from an element (realizing) and drop on an interface (to be realized).

Signal

To create a Signal:

1. Select **Signal** in **Toolbox**.

2. Drag on the diagram as the size of Signal.

To create a Signal (model element only) by Menu:

1. Select an Element where a new Signal to be contained.

2. Select **Model | Add | Signal** in Menu Bar or **Add | Signal** in Context Menu.

To edit a Signal, you can do following actions:

- Use *Quick Edit for Classifier* by double-click or press `Enter` on a selected Signal.

- Add Attribute - See *Attribute*

- Add Operation - See *Operation*

- Add Template Parameter - See *Template Parameter*

DataType

To create a DataType:

1. Select **DataType** in **Toolbox**.

2. Drag on the diagram as the size of DataType.

To create a DataType (model element only) by Menu:

1. Select an Element where a new DataType to be contained.

2. Select **Model | Add | DataType** in Menu Bar or **Add | DataType** in Context Menu.

To edit a DataType, you can do following actions:

*   Use *Quick Edit for Classifier* by double-click or press Enter on a selected DataType.

*   Add Attribute - See *Attribute*

*   Add Operation - See *Operation*

*   Add Template Parameter - See *Template Parameter*

PrimitiveType

To create a PrimitiveType:

1. Select **PrimitiveType** in **Toolbox**.

2. Drag on the diagram as the size of PrimitiveType.

To create a PrimitiveType (model element only) by Menu:

1. Select an Element where a new PrimitiveType to be contained.

2. Select **Model | Add | PrimitiveType** in Menu Bar or **Add | PrimitiveType** in Context Menu.

To edit a PrimitiveType, you can do following actions:

*   Use *Quick Edit for Classifier* by double-click or press Enter on a selected PrimitiveType.

*   Add Attribute - See *Attribute*

*   Add Operation - See *Operation*

*   Add Template Parameter - See *Template Parameter*

Enumeration

To create an Enumeration:

1. Select **Enumeration** in **Toolbox**.

2. Drag on the diagram as the size of Enumeration.

To create an Enumeration (model element only) by Menu:

1. Select an Element where a new Enumeration to be contained.

2. Select **Model | Add | Enumeration** in Menu Bar or **Add | Enumeration** in Context Menu.

To edit a Enumeration, you can do following actions:

*   Use *Quick Edit for Enumeration* by double-click or press Enter on a selected Enumeration.

- Add EnumerationLiteral - See *Enumeration Literal*

- Add Attribute - See *Attribute*

- Add Operation - See *Operation*

- Add Template Parameter - See *Template Parameter*

To suppress Literals, see *Suppress Literals*.

Enumeration Literal

To add an Enumeration Literal:

1. Select a Classifier.

2. Select **Model | Add | Enumeration Literal** in Menu Bar or **Add | Enumeration Literal** in Context Menu.

To edit an Enumeration Literal, you can do following actions:

- Use *Quick Edit for Enumeration Literal* by double-click or press Enter on a selected Enumeration Literal.

AssociationClass

To create an Association Class by linking two Classifiers:

1. Select **Association Class** in **Toolbox**.

2. Drag from an element and drop on another element.

3. An Association and a Class connected to the association will be created.

To create an Association Class by linking Association and Class:

1. Select **Association Class** in **Toolbox**.

2. Drag from an Association (or Class) and drop on a Class (or Association).

3. The Class will be connected to the Association.

Working with Package Diagram

To create a Package Diagram:

1. Select first an element where a new Package Diagram to be contained as a child.

2. Select **Model | Add Diagram | Package Diagram** in Menu Bar or select **Add Diagram | Package Diagram** in Context Menu.

In Package Diagram, you can use the following elements:

- *Package*

- *Model*

- *Subsystem*

- *Containment*

- *Dependency*

See also:

UML Package Diagram For more information about UML Package Diagram.

Package

To create a Package on a diagram:

1. Select **Package** in **Toolbox**.

2. Drag on the diagram as the size of Package.

To create a Package (model element only) by Menu:

1. Select an Element where a new Package to be contained.

2. Select **Model | Add | Package** in Menu Bar or **Add | Package** in Context Menu.

To edit a Package, you can do following actions:

- Use *Quick Edit for General Element* by double-click or press Enter on a selected Class.

Model

To create a Model on a diagram:

1. Select **Model** in **Toolbox**.

2. Drag on the diagram as the size of Model.

To create a Model (model element only) by Menu:

1. Select an Element where a new Model to be contained.

2. Select **Model | Add | Model** in Menu Bar or **Add | Model** in Context Menu.

To edit a Model, you can do following actions:

- Use *Quick Edit for General Element* by double-click or press Enter on a selected Class.

Subsystem

To create a Subsystem on a diagram:

1. Select **Subsystem** in **Toolbox**.

2. Drag on the diagram as the size of Subsystem.

To create a Subsystem (model element only) by Menu:

1. Select an Element where a new Subsystem to be contained.

2. Select **Model | Add | Subsystem** in Menu Bar or **Add | Subsystem** in Context Menu.

To edit a Subsystem, you can do following actions:

- Use *Quick Edit for General Element* by double-click or press Enter on a selected Class.

Containment

To show an Containment:

1. Select **Containment** in **Toolbox**.

2. Drag from an element (to be contained) and drop on a container element.

Note: There is no Containment model element. The Containment view element only show the containment relationship between two elements. (Contained elements are shown as children in **Explorer**)

Working with Composite Structure Diagram

To create a Composite Structure Diagram:

1. Select first an element where a new Composite Structure Diagram to be contained as a child.

2. Select **Model | Add Diagram | Composite Structure Diagram** in Menu Bar or select **Add Diagram | Composite Structure Diagram** in Context Menu.

In Composite Structure Diagram, you can use following elements.

- *Class*
- *Interface*
- *Association*
- *Aggregation*
- *Composition*
- *Dependency*
- *Generalization*
- *Interface Realization*
- *Signal*
- *DataType*
- *PrimitiveType*
- *Enumeration*
- *AssociationClass*
- *Collaboration*
- *Port*
- *Part*
- *Connector*
- *Collaboration Use*
- *Role Binding*

See also:

UML Composite Structure Diagram For more information about UML Composite Structure Diagram.

Collaboration

To create a Collaboration:

1. Select **Collaboration** in **Toolbox**.

2. Drag on the diagram as the size of Collaboration.

To create a Collaboration (model element only) by Menu:

1. Select an Element where a new Collaboration to be contained.

2. Select **Model | Add | Collaboration** in Menu Bar or **Add | Collaboration** in Context Menu.

To edit a Collaboration, you can do following actions:

• Use *Quick Edit for General Element* by double-click or press Enter on a selected Collaboration.

• Add Template Parameter - See *Template Parameter*.

Port

To create a Port:

1. Select **Port** in **Toolbox**.

2. Click on the element (e.g. Class) where Port to be contained.

To create a Port (model element only) by Menu:

1. Select an Element where a new Port to be contained.

2. Select **Model | Add | Port** in Menu Bar or **Add | Port** in Context Menu.

To edit a Port, you can do following actions:

• Use *Quick Edit for General Element* by double-click or press Enter on a selected Port.

Part

To create a Part:

1. Select **Part** in **Toolbox**.

2. Click on the element (e.g. Class) where Part to be contained.

To edit a Part, you can do following actions:

• Use *Quick Edit for General Element* by double-click or press Enter on a selected Part.

Note: Actually, Part is equivalent to Attribute but represented differently on diagrams.

Connector

To create an Connector:

1. Select **Connector** in **Toolbox**.

2. Drag from an element (e.g. Port) and drop on another element (e.g. Part).

Collaboration Use

To create a Collaboration Use:

1. Select **Collaboration Use** in **Toolbox**.

2. Drag on the diagram as the size of Collaboration Use.

To edit a Collaboration Use, you can do following actions:

- Use *Quick Edit for General Element* by double-click or press `Enter` on a selected Collaboration Use.

Role Binding

To create an Role Binding:

1. Select **Role Binding** in **Toolbox**.

2. Drag from a Collaboration Use and drop on an element (e.g. Part).

Working with Object Diagram

To create a Object Diagram:

1. Select first an element where a new Object Diagram to be contained as a child.

2. Select **Model | Add Diagram | Object Diagram** in Menu Bar or select **Add Diagram | Object Diagram** in Context Menu.

In Object Diagram, you can use following elements.

- *Object*
- *Slot*
- *Artifact Instance*
- *Component Instance*
- *Node Instance*
- *Link*

See also:

UML Object Diagram For more information about UML Object Diagram.

Object

To create a Object:

1. Select **Object** in **Toolbox**.

2. Drag on the diagram as the size of Object.

To edit a Object, you can do following actions:

- Use *Quick Edit for Instance* by double-click or press `Enter` on a selected Object.
- Add Slot - See *Slot*.

Slot

To add an Slot:

1. Select an Instance.

2. Select **Model | Add | Slot** in Menu Bar or **Add | Slot** in Context Menu.

To edit an Slot, you can do following actions:

- Use *Quick Edit for Slot* by double-click or press Enter on a selected Slot.

Artifact Instance

To create a Artifact Instance:

1. Select **Artifact Instance** in **Toolbox**.

2. Drag on the diagram as the size of Artifact Instance.

To edit a Artifact Instance, you can do following actions:

- Use *Quick Edit for Instance* by double-click or press Enter on a selected Artifact Instance.

- Add Slot - See *Slot*.

Component Instance

To create a Component Instance:

1. Select **Component Instance** in **Toolbox**.

2. Drag on the diagram as the size of Component Instance.

To edit a Component Instance, you can do following actions:

- Use *Quick Edit for Instance* by double-click or press Enter on a selected Component Instance.

- Add Slot - See *Slot*.

Node Instance

To create a Node Instance:

1. Select **Node Instance** in **Toolbox**.

2. Drag on the diagram as the size of Node Instance.

To edit a Node Instance, you can do following actions:

- Use *Quick Edit for Instance* by double-click or press Enter on a selected Node Instance.

- Add Slot - See *Slot*.

Link

To create an Link (or Directed Link):

1. Select **Link** (or **Directed Link**) in **Toolbox**.

2. Drag from an instance and drop on another instance.

Working with Component Diagram

To create a Component Diagram:

1. Select first an element where a new Component Diagram to be contained as a child.

2. Select **Model | Add Diagram | Component Diagram** in Menu Bar or select **Add Diagram | Component Diagram** in Context Menu.

In Component Diagram, you can use following elements.

- *Component*
- *Artifact*
- *Interface*
- *Dependency*
- *Interface Realization*
- *Component Realization*
- *Node*
- *Deployment*
- *Communication Path*
- *Object*
- *Artifact Instance*
- *Component Instance*
- *Node Instance*
- *Link*

See also:

UML Component Diagram For more information about UML Component Diagram.

Component

To create a Component:

1. Select **Component** in **Toolbox**.

2. Drag on the diagram as the size of Component.

To create a Component (model element only) by Menu:

1. Select an Element where a new Component to be contained.

2. Select **Model | Add | Component** in Menu Bar or **Add | Component** in Context Menu.

To edit a Component, you can do following actions:

- Use *Quick Edit for Classifier* by double-click or press `Enter` on a selected Component.
- Add Attribute - See *Attribute*.
- Add Operation - See *Operation*.

To suppress Attributes, see *Suppress Attributes*.

To suppress Operations, see *Suppress Operations*.

To hide Operation signatures, see *Show Operation Signature*.

Artifact

To create a Artifact:

1. Select **Artifact** in **Toolbox**.

2. Drag on the diagram as the size of Artifact.

To create a Artifact (model element only) by Menu:

1. Select an Element where a new Artifact to be contained.

2. Select **Model | Add | Artifact** in Menu Bar or **Add | Artifact** in Context Menu.

To edit a Artifact, you can do following actions:

- Use *Quick Edit for Classifier* by double-click or press Enter on a selected Artifact.

- Add Attribute - See *Attribute*.

- Add Operation - See *Operation*.

To suppress Attributes, see *Suppress Attributes*.

To suppress Operations, see *Suppress Operations*.

To hide Operation signatures, see *Show Operation Signature*.

Component Realization

To create an Component Realization:

1. Select **Component Realization** in **Toolbox**.

2. Drag from an element (realizing) and drop on a Component (to be realized).

Working with Deployment Diagram

To create a Deployment Diagram:

1. Select first an element where a new Deployment Diagram to be contained as a child.

2. Select **Model | Add Diagram | Deployment Diagram** in Menu Bar or select **Add Diagram | Deployment Diagram** in Context Menu.

In Deployment Diagram, you can use following elements.

- *Component*

- *Artifact*

- *Interface*

- *Dependency*

- *Interface Realization*

- *Component Realization*
- *Node*
- *Deployment*
- *Communication Path*
- *Object*
- *Artifact Instance*
- *Component Instance*
- *Node Instance*
- *Link*

See also:

UML Deployment Diagram For more information about UML Deployment Diagram.

Node

To create a Node:

1. Select **Node** in **Toolbox**.
2. Drag on the diagram as the size of Node.

To create a Node (model element only) by Menu:

1. Select an Element where a new Node to be contained.
2. Select **Model | Add | Node** in Menu Bar or **Add | Node** in Context Menu.

To edit a Node, you can do following actions:

- Use *Quick Edit for Classifier* by double-click or press Enter on a selected Node.
- Add Attribute - See *Attribute*.
- Add Operation - See *Operation*.

To suppress Attributes, see *Suppress Attributes*.

To suppress Operations, see *Suppress Operations*.

To hide Operation signatures, see *Show Operation Signature*.

Deployment

To create an Deployment:

1. Select **Deployment** in **Toolbox**.
2. Drag from an element (to be deployed) and drop on a Node.

Communication Path

To create an Communication Path:

1. Select **Communication Path** in **Toolbox**.

2. Drag from a Node and drop on another Node.

Working with Use Case Diagram

To create a Use Case Diagram:

1. Select first an element where a new Use Case Diagram to be contained as a child.

2. Select **Model | Add Diagram | Use Case Diagram** in Menu Bar or select **Add Diagram | Use Case Diagram** in Context Menu.

In Use Case Diagram, you can use following elements.

- *Package*
- *Use Case Subject*
- *Actor*
- *Use Case*
- *Extension Point*
- *Association*
- *Dependency*
- *Generalization*
- *Include*
- *Extend*

See also:

UML Use Case Diagram For more information about UML Use Case Diagram.

Use Case Subject

To create an Use Case Subject:

1. Select **Use Case Subject** in **Toolbox**.

2. Drag on the diagram as the size of Use Case Subject.

Actor

To create an Actor:

1. Select **Actor** in **Toolbox**.

2. Drag on the diagram as the size of Actor.

To create an Actor (model element only) by Menu:

1. Select an Element where a new Actor to be contained.

2. Select **Model | Add | Actor** in Menu Bar or **Add | Actor** in Context Menu.

To edit an Actor, you can do following actions:

- Use *Quick Edit for Classifier* by double-click or press `Enter` on a selected Actor.
- Add Attribute - See *Attribute*
- Add Operation - See *Operation*

To suppress Attributes, see *Suppress Attributes*.

To suppress Operations, see *Suppress Operations*.

To hide Operation signatures, see *Show Operation Signature*.

Use Case

To create an Use Case:

1. Select **Use Case** in **Toolbox**.
2. Drag on the diagram as the size of Use Case.

To create an Use Case (model element only) by Menu:

1. Select an Element where a new Use Case to be contained.
2. Select **Model | Add | Use Case** in Menu Bar or **Add | Use Case** in Context Menu.

To edit an Use Case, you can do following actions:

- Use quick-edit-usecase by double-click or press `Enter` on a selected Use Case.
- Add Extension Point - See *Extension Point*.

To suppress Attributes, see *Suppress Attributes*.

To suppress Operations, see *Suppress Operations*.

To hide Operation signatures, see *Show Operation Signature*.

Extension Point

To add an Extension Point:

1. Select an Use Case.
2. Select **Model | Add | Extension Point** in Menu Bar or **Add | Extension Point** in Context Menu.

To edit an Extension Point, you can do following actions:

- Use *Quick Edit for Extension Point* by double-click or press `Enter` on a selected Extension Point.

Include

To create an Include:

1. Select **Include** in **Toolbox**.
2. Drag from a Use Case and drop on another Use Case (to be included).

Extend

To create an Extend:

1. Select **Extend** in **Toolbox**.

2. Drag from a Use Case (to be extended) and drop on another Use Case.

Working with Sequence Diagram

To create a Sequence Diagram:

1. Select first an element where a new Sequence Diagram to be contained as a child.

2. Select **Model | Add Diagram | Sequence Diagram** in Menu Bar or select **Add Diagram | Sequence Diagram** in Context Menu.

In Sequence Diagram, you can use following elements.

- *Lifeline*
- *Message*
- *Endpoint*
- *Gate*
- *State Invariant*
- *Continuation*
- *Combined Fragment*
- *Interaction Use*

See also:

UML Sequence Diagram For more information about UML Sequence Diagram.

Lifeline

To create a Lifeline:

1. Select **Lifeline** in **Toolbox**.

2. Drag on the diagram as the size of Lifeline.

To create a Lifeline from a Classifier (Class, Interface, etc.) by Drag-and-Drop:

1. Drag a Classifier from **Explorer**.

2. Drop on the diagram.

To edit a Lifeline, you can do following actions:

- Use *Quick Edit for Lifeline* by double-click or press `Enter` on a selected Lifeline.

Message

To create a Message (or Self Message):

1. Select **Message** (or **Self Message**) in **Toolbox**.

2. Drag from a Lifeline and drop on another Lifeline. (Just click on a Lifeline if you want to create a self message.)

You can change the kind of message by setting *messageSort* property in **Property Editor**:

- *synchCall* : Synchronous Call
- *asynchCall* : Asynchronous Call
- *asynchSignal* : Asynchronous Signal
- *createMessage* : Create Message
- *deleteMessage* : Delete Message
- *reply* : Reply Message

To edit a Message, you can do following actions:

- Use *Quick Edit for Message* by double-click or press Enter on a selected Message.

Endpoint

To create an Endpoint:

1. Select **Endpoint** in **Toolbox**.

2. Click at the position on the diagram.

Gate

To create a Gate:

1. Select **Gate** in **Toolbox**.

2. Click at the position on the diagram.

State Invariant

To create a State Invariant:

1. Select **State Invariant** in **Toolbox**.

2. Click on a Lifeline where the State Invariant to be attached.

Continuation

To create a Continuation:

1. Select **Continuation** in **Toolbox**.

2. Drag on the diagram as the size of Continuation.

Combined Fragment

To create a Combined Fragment:

1. Select **Combined Fragment** in **Toolbox**.

2. Drag on the diagram as the size of Combined Fragment.

To edit a Combined Fragment, you can do following actions:

- Use *Quick Edit for Combined Fragment* by double-click or press `Enter` on a selected Combined Fragment.

Interaction Use

To create a Interaction Use:

1. Select **Interaction Use** in **Toolbox**.

2. Drag on the diagram as the size of Interaction Use.

Working with Communication Diagram

To create a Communication Diagram:

1. Select first an element where a new Communication Diagram to be contained as a child.

2. Select **Model | Add Diagram | Communication Diagram** in Menu Bar or select **Add Diagram | Communication Diagram** in Context Menu.

In Communication Diagram, you can use following elements.

- *Lifeline*
- *Connector*
- *Forward Message*
- *Reverse Message*

See also:

UML Communication Diagram For more information about UML Communication Diagram.

Connector

To create an Connector (or Self Connector):

1. Select **Connector** (or **Self Connector**) in **Toolbox**.

2. Drag from a Lifeline and drop on another Lifeline. (Just click on a Lifeline if you want to create a Self Connector.)

Forward Message

To create a Forward Message:

1. Select **Forward Message** in **Toolbox**.

2. Click on a Connector.

To edit a Message, you can do following actions:

- Use *Quick Edit for Message* by double-click or press `Enter` on a selected Message.

Reverse Message

To create a Reverse Message:

1. Select **Reverse Message** in **Toolbox**.

2. Click on a Connector.

To edit a Message, you can do following actions:

- Use *Quick Edit for Message* by double-click or press `Enter` on a selected Message.

Working with Statechart Diagram

To create a Statechart Diagram:

1. Select first an element where a new Statechart Diagram to be contained as a child.

2. Select **Model | Add Diagram | Statechart Diagram** in Menu Bar or select **Add Diagram | Statechart Diagram** in Context Menu.

In Statechart Diagram, you can use following elements.

- *State*
- *Internal Activity*
- *Region*
- *Initial State*
- *Final State*
- *Choice*
- *Join*
- *Fork*
- *Junction*
- *Shallow History*
- *Deep History*
- *Entry Point*
- *Exit Point*
- *Terminate*
- *Connection Point Reference*
- *Transition*

See also:

UML Statechart Diagram For more information about UML Statechart Diagram.

State

To create a Simple State:

1. Select **Simple State** in **Toolbox**.

2. Drag on the diagram as the size of Simple State.

To create a Composite State:

1. Select **Composite State** in **Toolbox**.

2. Drag on the diagram as the size of Composite State.

To create a Submachine State:

1. Select **Submachine State** in **Toolbox**.

2. Drag on the diagram as the size of Submachine State.

3. Select a StateMachine in **Element Picker Dialog**.

To create an Orthogonal State:

1. Select **Orthogonal State** in **Toolbox**.

2. Drag on the diagram as the size of Orthogonal State.

To edit a State, you can do following actions:

- Use *Quick Edit for State* by double-click or press `Enter` on a selected State.

- Add Entry Activity - See *Internal Activity*.

- Add Do Activity - See *Internal Activity*.

- Add Exit Activity - See *Internal Activity*.

- Add Region - See *Region*.

Internal Activity

To add an Entry Activity:

1. Select a State.

2. Select **Model | Add | Entry Activity** in Menu Bar or **Add | Entry Activity** in Context Menu.

3. Select a kind of Activity to create.

To add a Do Activity:

1. Select a State.

2. Select **Model | Add | Do Activity** in Menu Bar or **Add | Do Activity** in Context Menu.

3. Select a kind of Activity to create.

To add an Exit Activity:

1. Select a State.

2. Select **Model | Add | Exit Activity** in Menu Bar or **Add | Exit Activity** in Context Menu.

3. Select a kind of Activity to create.

Region

To add a Region:

1. Select a State.

2. Select **Model | Add | Region** in Menu Bar or **Add | Region** in Context Menu.

Initial State

To create a Initial State:

1. Select **Initial State** in **Toolbox**.

2. Click at the position on the diagram.

Final State

To create a Final State:

1. Select **Final State** in **Toolbox**.

2. Click at the position on the diagram.

Choice

To create a Choice:

1. Select **Choice** in **Toolbox**.

2. Click at the position on the diagram.

Join

To create a Join:

1. Select **Join** in **Toolbox**.

2. Drag on the diagram as the size of Join.

Fork

To create a Fork:

1. Select **Fork** in **Toolbox**.

2. Drag on the diagram as the size of Fork.

Junction

To create a Junction:

1. Select **Junction** in **Toolbox**.

2. Click at the position on the diagram.

Shallow History

To create a Shallow History:

1. Select **Shallow History** in **Toolbox**.

2. Click at the position on the diagram.

Deep History

To create a Deep History:

1. Select **Deep History** in **Toolbox**.

2. Click at the position on the diagram.

Entry Point

To create a Entry Point:

1. Select **Entry Point** in **Toolbox**.

2. Click at the position on the diagram.

Exit Point

To create a Exit Point:

1. Select **Exit Point** in **Toolbox**.

2. Click at the position on the diagram.

Terminate

To create a Terminate:

1. Select **Terminate** in **Toolbox**.

2. Click at the position on the diagram.

Connection Point Reference

To create a Connection Point Reference:

1. Select **Connection Point Reference** in **Toolbox**.

2. Click on a State where Connection Point Reference to be contained.

Transition

To create a Transition (or Self Transition):

1. Select **Transition** (or **Self Transition**) in **Toolbox**.

2. Drag from a State and drop on another State. (Just click on a State if you want to create a Self Transition.)

To edit a Transition, you can do following actions:

- Use *Quick Edit for Transition* by double-click or press `Enter` on a selected Transition.

Working with Activity Diagram

To create a Activity Diagram:

1. Select first an element where a new Activity Diagram to be contained as a child.

2. Select **Model | Add Diagram | Activity Diagram** in Menu Bar or select **Add Diagram | Activity Diagram** in Context Menu.

In Activity Diagram, you can use following elements.

- *Action*
- *Event*
- *Initial*
- *Activity Final*
- *Fork*
- *Join*
- *Merge*
- *Decision*
- *Swimlane (Partition)*
- *Input Pin*
- *Output Pin*
- *Send Signal*
- *Accept Signal*
- *Flow Final*
- *Object Node*
- *Control Flow*
- *Object Flow*

See also:

UML Activity Diagram For more information about UML Activity Diagram.

Action

To create an Action:

1. Select **Action** in **Toolbox**.

2. Drag on the diagram as the size of Action.

To edit an Action, you can do following actions:

- Use *Quick Edit for Action* by double-click or press `Enter` on a selected Action.

- Add Trigger - See *Event*.

Event

To add an Event:

1. Select an Action.

2. Select **Model | Add | Trigger** in Menu Bar or **Add | Trigger** in Context Menu.

Initial

To create an Initial:

1. Select **Initial** in **Toolbox**.

2. Click at the position on the diagram.

Activity Final

To create an Activity Final:

1. Select **Activity Final** in **Toolbox**.

2. Click at the position on the diagram.

Fork

To create a Fork:

1. Select **Fork** in **Toolbox**.

2. Drag on the diagram as the size of Fork.

Join

To create a Join:

1. Select **Join** in **Toolbox**.

2. Drag on the diagram as the size of Join.

Merge

To create a Merge:

1. Select **Merge** in **Toolbox**.

2. Click at the position on the diagram.

Decision

To create a Decision:

1. Select **Decision** in **Toolbox**.

2. Click at the position on the diagram.

Swimlane (Partition)

To create a Swimlane (Vertical or Horizontal):

1. Select **Swimlane (Vertical)** or **Swimlane (Horizontal)** in **Toolbox**.

2. Drag on the diagram as the size of Swimlane.

Input Pin

To create an Input Pin:

1. Select **Input Pin** in **Toolbox**.

2. Click on an Action where Input Pin to be attached.

Output Pin

To create an Output Pin:

1. Select **Output Pin** in **Toolbox**.

2. Click on an Action where Output Pin to be attached.

Send Signal

To create a Send Signal:

1. Select **Send Signal** in **Toolbox**.

2. Drag on the diagram as the size of Send Signal.

Accept Signal

To create an Accept Signal:

1. Select **Accept Signal** in **Toolbox**.

2. Drag on the diagram as the size of Accept Signal.

Flow Final

To create a Flow Final:

1. Select **Flow Final** in **Toolbox**.

2. Click at the position on the diagram.

Object Node

To create a Object Node:

1. Select **Object Node** in **Toolbox**.

2. Drag on the diagram as the size of Object Node.

Control Flow

To create a Control Flow:

1. Select **Control Flow** in **Toolbox**.

2. Drag from a node and drop on another node.

Object Flow

To create a Object Flow:

1. Select **Object Flow** in **Toolbox**.

2. Drag from a node and drop on another node.

Working with Profile Diagram

To create a Profile Diagram:

1. Select first an element where a new Profile Diagram to be contained as a child.

2. Select **Model | Add Diagram | Profile Diagram** in Menu Bar or select **Add Diagram | Profile Diagram** in Context Menu.

In Profile Diagram, you can use following elements.

- *Profile*
- *MetaClass*
- *Stereotype*
- *Extension*
- *Generalization*

See also:

UML Profile Diagram For more information about UML Profile Diagram.

Profile

To create a Profile (model element only) by Menu:

1. Select an Element where a new Profile to be contained.

2. Select **Model | Add | Profile** in Menu Bar or **Add | Profile** in Context Menu.

MetaClass

To create a MetaClass:

1. Select **MetaClass** in **Toolbox**.

2. Drag on the diagram as the size of MetaClass.

To create a MetaClass (model element only) by Menu:

1. Select an Element where a new MetaClass to be contained.

2. Select **Model | Add | MetaClass** in Menu Bar or **Add | MetaClass** in Context Menu.

To edit a MetaClass, you can do following actions:

- Use *Quick Edit for General Element* by double-click or press Enter on a selected MetaClass.

Stereotype

To create a Stereotype:

1. Select **Stereotype** in **Toolbox**.

2. Drag on the diagram as the size of Stereotype.

To create a Stereotype (model element only) by Menu:

1. Select an Element where a new Stereotype to be contained.

2. Select **Model | Add | Stereotype** in Menu Bar or **Add | Stereotype** in Context Menu.

To edit a Stereotype, you can do following actions:

- Use *Quick Edit for Classifier* by double-click or press Enter on a selected Stereotype.
- Add Attribute - See *Attribute*.
- Add Operation - See *Operation*.

To suppress Attributes, see *Suppress Attributes*.

To suppress Operations, see *Suppress Operations*.

To hide Operation signatures, see *Show Operation Signature*.

Extension

To create a Extension:

1. Select **Extension** in **Toolbox**.

2. Drag from a Stereotype and drop on a MetaClass.

Managing Extensions

Install Extension

To install an extension from Extension Registry:

1. Show Extension Manager by selecting **Tools | Extension Manager...**.

2. Select **Registry** button.

3. Find an extension to install by search.

4. Press **Install** button of the extension.

To install an extension directly from Github repository:

1. Show Extension Manager by selecting **Tools | Extension Manager...**.

2. Select **Install From Url** button.

3. Enter Url of the Github project on input box

4. press **Install** button.

To install an extension manually:

1. Get an extension as a `.zip` file.

2. **Extract the file on the extensions path.**

    - `/Users/<user>/Library/Application Support/StarUML/extensions/user` for Mac OS.

    - `C:\Users\<user>\AppData\Roaming\StarUML\extensions\user` for Windows.

3. Check a folder in the extensions path and `main.js` file in the folder.

4. Restart StarUML.

Uninstall Extension

To uninstall an extension:

1. Show Extension Manager by selecting **Tools | Extension Manager...**.
2. Select **Installed** button.
3. Find an extension to uninstall by search.
4. Press **Remove** button of the extension.

To install an extension manually:

1. **Go to the extensions path.**
    - `/Users/<user>/Library/Application Support/StarUML/extensions/user` for Mac OS.
    - `C:\Users\<user>\AppData\Roaming\StarUML\extensions\user` for Windows.
2. Remove the extension folder to uninstall.
3. Restart StarUML.

Update Extension

To uninstall an extension:

1. Show Extension Manager by selecting **Tools | Extension Manager...**.
2. Select **Registry** button.
3. **Update** button will be shown if the extension has updates.
4. Press **Update** button of the extension.

To update an extension manually:

1. Uninstall extension of old version manually.
2. Install extension of new version manually.
3. Restart StarUML.

Reference

Quick Edits

Quick Edit is a dialog to support editing elements quickly. To show Quick Edit, double-click or press `Enter` on a selected Class.

Quick Edit for General Element

Quick Edit for General Element allows following actions:

- Change `visibility` - Select visibility in the dropdown button.
- Edit name expression - Refer to *Syntax of Name Expression*.

Syntax of Name Expression

```
[ "<<" stereotype ">>" ] [ visibility ] name
```

stereotype Stereotype name of element.

visibility = "+" | "#" | "-" | "~" + (public), # (protected), – (private), or ~ (package).

name Name of element.

Quick Edit for Classifier

Applicable to Classifier element (Class, Interface, Signal, DataType, PrimitiveType, Enumeration, Component, Node, Artifact, Use Case, and Actor).

Support following actions:

- Change `visibility` - Select visibility in the dropdown button.

- Edit name expression - Refer to *Syntax of Name Expression*.
- Add Attribute - Click Add Attribute button.
- Add Operation - Click Add Operation button.

Quick Edit for Attribute

- Change `visibility` - Select a visibility kind in the dropdown.
- Edit attribute expression
- Add - Press Add button or press `Ctrl+Enter`.
- Delete - Press Delete button or press `Ctrl+Delete`.
- Move Up - Press Move Up button or press `Ctrl+Up`.
- Move Down - Press Move Down button or press `Ctrl+Down`.

Quick Edit for Operation

- Change `visibility` - Select a visibility kind in the dropdown.
- Edit operation expression
- Add - Press Add button or press `Ctrl+Enter`.
- Delete - Press Delete button or press `Ctrl+Delete`.
- Move Up - Press Move Up button or press `Ctrl+Up`.
- Move Down - Press Move Down button or press `Ctrl+Down`.

Quick Edit for Template Parameter

- Change `visibility` - Select a visibility kind in the dropdown.
- Edit template parameter expression
- Add - Press Add button or press `Ctrl+Enter`.
- Delete - Press Delete button or press `Ctrl+Delete`.
- Move Up - Press Move Up button or press `Ctrl+Up`.
- Move Down - Press Move Down button or press `Ctrl+Down`.

Quick Edit for Enumeration

Applicable to Enumeration.

Support following actions:

- Change `visibility` - Select visibility in the dropdown button.
- Edit name expression - Refer to *Syntax of Name Expression*.
- Add Enumeration Literal - Click Add Literal button.

Quick Edit for Enumeration Literal

Applicable to Enumeration Literals.

Support following actions:

- Change `visibility` - Select a visibility kind in the dropdown.
- Edit name expression
- Add - Press Add button or press `Ctrl+Enter`.
- Delete - Press Delete button or press `Ctrl+Delete`.
- Move Up - Press Move Up button or press `Ctrl+Up`.
- Move Down - Press Move Down button or press `Ctrl+Down`.

Quick Edit for Instance

Applicable to Instances (Object, ArtifactInstance, ComponentInstance, NodeInstance).

Support following actions:

- Change `visibility` - Select visibility in the dropdown button.
- Edit name expression - Refer to *Syntax of Name Expression*.
- Add Slot - Click Add Slot button.

Quick Edit for Slot

Applicable to Slots.

Support following actions:

- Change `visibility` - Select a visibility kind in the dropdown.
- Edit name expression
- Add - Press Add button or press `Ctrl+Enter`.
- Delete - Press Delete button or press `Ctrl+Delete`.
- Move Up - Press Move Up button or press `Ctrl+Up`.
- Move Down - Press Move Down button or press `Ctrl+Down`.

Quick Edit for Use Case

Applicable to Use Case.

Support following actions:

- Change `visibility` - Select visibility in the dropdown button.
- Edit name expression - Refer to *Syntax of Name Expression*.
- Add Extension Point - Click Add Extension Point button.

Quick Edit for Extension Point

Applicable to Extension Points.

Support following actions:

- Change `visibility` - Select a visibility kind in the dropdown.
- Edit name expression
- Add - Press Add button or press `Ctrl+Enter`.
- Delete - Press Delete button or press `Ctrl+Delete`.
- Move Up - Press Move Up button or press `Ctrl+Up`.
- Move Down - Press Move Down button or press `Ctrl+Down`.

Quick Edit for Lifeline

Applicable to Lifeline.

Support following actions:

- Edit lifeline expression
- Select Type - Press Select Type button.
- Create Type - Press Create Type button.

Quick Edit for Message

Applicable to Message.

Support following actions:

- Edit message expression
- Select Operation - Press Select Operation button.
- Create Operation - Press Create Operation button.
- Select Signal - Press Select Signal button.
- Create Signal - Press Create Signal button.

Quick Edit for Combined Fragment

Applicable to Combined Fragment.

Support following actions:

- Edit name expression
- Add Operand - Press Add Operand button.

Quick Edit for State

Applicable to State.

Support following actions:

- Edit name expression

- Add Region - Press Add Region button.

- Add Entry Activity - Press Add Entry Activity button.

- Add Do Activity - Press Add Do Activity button.

- Add Exit Activity - Press Add Exit Activity button.

Quick Edit for Transition

Applicable to Transition.

Support following actions:

- Edit name expression

- Add Trigger Event - Press Add Trigger Event button.

- Add Behavior Effect - Press Add Behavior Effect button.

Quick Edit for Action

Applicable to Action.

Support following actions:

- Edit name expression

- Add Trigger Event - Press Add Trigger Event button.

UML Validation Rules

UMLModelElement

(UML001) Name expected.

- Element should have a name.

- Applies to: `UMLModelElement`.

- Exceptions: `UMLParameter (only if direction === 'return')`, `UMLDirectedRelationship`, `UMLRelationshipEnd`, `UMLUndirectedRelationship`, `UMLAssociationClassLink`, `UMLRegion`, `UMLPseudostate`, `UMLFinalState`, `UMLControlNode`, `UMLEndpoint`, `UMLGate`, `UMLImage`.

(UML002) Name is already defined.

- If element has a name, then it should be unique in the namespace.

- Applies to: `UMLModelElement`.

- Exceptions: `UMLOperation`.

UMLAttribute

(UML003) Conflict with inherited attributes.

- Applies to: `UMLAttribute`.

UMLOperation

(UML004) Signature conflict.

- Same signature is not allowed in a classifier.
- Applies To: `UMLOperation`.

UMLClassifier

(UML006) Final and leaf element must not have child.

- If `isFinalSpecifiction` or `isLeaf` is true, then it should not have child.
- Applies to: `UMLClassifier`.

(UML007) Duplicated generalizations.

- Do not make duplicated generalizations from the same element.
- Applies to: `UMLClassifier`.

(UML008) Circular generalizations.

- Do not generalize from one of the children.
- Applies to: `UMLClassifier`.

(UML009) Duplicated realizations.

- Applies to: `UMLClassifier`.

(UML010) Duplicated role names of associated classifiers.

- Applies to: `UMLClassifier`.

UMLInterface

(UML011) All attributes and operations of interface must be public.

- All attributes and operations of an interface should have public visibility.
- Applies to: `UMLInterface`.

UMLAssociation

(UML012) Aggregation must be one in an association.

- Applies to: `UMLAssociation`.

UMLArtifactInstance

(UML013) Type of an artifact instance must be an artifact.

- Applies to: `UMLArtifactInstance`.

UMLComponentInstance

(UML014) Type of a component instance must be a component.

- Applies to: `UMLComponentInstance`.

UMLNodeInstance

(UML015) Type of a node instance must be a node.

- Applies to: `UMLNodeInstance`.

UMLMetaClass

(UML016) A metaclass must have name defined in metamodel.

- Applies to: `UMLMetaClass`

UMLStereotype

(UML017) A stereotype must inherits from stereotype.

- Applies To: `UMLStereotype`

(UML018) A stereotype must contained by a profile.

- Applies To: `UMLStereotype`

UMLActor

(UML019) An actor only can associate with use cases, components, and classes.

- Applies To: `UMLActor`

UMLUseCase

(UML020) A use case cannot include use cases that directly or indirectly include it.

- Applies To: `UMLUseCase`

UMLPseudostate

(UML021) An initial vertex can have at most one outgoing transition.

- Applies To: `UMLPseudostate (kind = 'initial')`

(UML022) The outgoing transition from an initial vertex must not have a trigger or guard.

- Applies To: `UMLPseudostate (kind = 'initial')`

(UML023) History vertices can have at most one outgoing transition.

- Applies To: `UMLPseudostate (kind = 'deepHistory' | 'shallowHistory'`

(UML024) A join vertex must have at least two incoming transitions and exactly one outgoing transition.

- Applies To: `UMLPseudostate (kind = 'join')`

(UML025) A fork vertex must have at least two outgoing transitions and exactly one incoming transition.

- Applies To: `UMLPseudostate (kind = 'fork')`

(UML026) A junction vertex must have at least one incoming and one outgoing transition.

- Applies To: `UMLPseudostate (kind = 'junction')`

(UML027) A choice vertex must have at least one incoming and one outgoing transition.

- Applies To: `UMLPseudostate (kind = 'choice')`

UMLState

(UML028) Only submachine states can have connection point references.

- Applies To: `UMLState`

(UML029) A state is not allowed to have both a submachine and regions.

- Applies To: `UMLState`

UMLRegion

(UML030) A region can have at most one initial vertex.

- Applies To: `UMLRegion`

(UML031) A region can have at most one deep history vertex.

- Applies To: `UMLRegion`

(UML032) A region can have at most one shallow history vertex.

- Applies To: `UMLRegion`

UMLFinalState

(UML033) A final state cannot have any outgoing transitions.

- Applies To: `UMLFinalState`

(UML034) A final state cannot have regions.

- Applies To: `UMLFinalState`

(UML035) A final state cannot reference a submachine.

- Applies To: `UMLFinalState`

(UML036) A final state has no entry behavior.

- Applies To: `UMLFinalState`

(UML037) A final state has no exit behavior.

- Applies To: `UMLFinalState`

(UML038) A final state has no state (doActivity) behavior.

- Applies To: `UMLFinalState`

UMLTransition

(UML039) A fork segment must not have guards or triggers.

- Applies To: `UMLTransition`

(UML040) A join segment must not have guards or triggers.

- Applies To: `UMLTransition`

(UML041) A fork segment must always target a state.

- Applies To: `UMLTransition`

(UML042) A join segment must always originate from a state.

- Applies To: `UMLTransition`

(UML043) Transitions outgoing pseudostates may not have a trigger (except for those coming out of the initial pseudostate).

- Applies To: `UMLTransition`

UMLStateMachine

(UML044) The classifier context of a state machine cannot be an interface.

- Applies To: `UMLStateMachine`

UMLDecisonNode

(UML045) A decision node has one or two incoming edges and at least one outgoing edge.

_ Applies To: `UMLDecisionNode`

UMLMergeNode

(UML046) A merge node has one outgoing edge.

- Applies To: `UMLMergeNode`

(UML047) The edges coming into and out of a merge node must be either all object flows or all control flows.

- Applies To: `UMLMergeNode`

UMLInitialNode

(UML048) An initial node has no incoming edges.

- Applies To: `UMLInitialNode`

(UML049) Only control edges can have initial nodes as source.

- Applies To: `UMLInitialNode`

UMLFinalNode

(UML050) A final node has no outgoing edges.

- Applies To: `UMLFinalNode`

UMLForkNode

(UML051) A fork node has one incoming edge.

- Applies To: `UMLForkNode`

(UML052) The edges coming into and out of a fork node must be either all object flows or all control flows.

- Applies To: `UMLForkNode`

UMLJoinNode

(UML053) A join node has one outgoing edge.

- Applies To: `UMLJoinNode`

(UML054) The edges coming into and out of a join node must be either all object flows or all control flows.

- Applies To: `UMLJoinNode`

UMLObjectNode

(UML055) All edges coming into or going out of object nodes must be object flow edges.

- Applies To: `UMLObjectNode`

UMLControlFlow

(UML056) Control flows may not have object nodes at either end, except for object nodes with control type.

- Applies To: `UMLControlFlow`

UMLObjectFlow

(UML057) Object flows may not have actions at either end.

- Applies To: `UMLObjectFlow`

CHAPTER 7

Indices and tables

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- modindex
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