

2. Star UML Installation and Modeling

Aim: To install Star UML and to learn it for modeling software systems.

Description:

StarUML is a sophisticated software modeler (Modeling tool) aimed to support agile and concise modeling. UML (Unified Modeling Language) is a general-purpose modeling language that could be used to express any kinds of software-intensive systems. Example modeling tools are StarUML, IBM Rational Software Architect etc.

Installation:

1. Open Web Browser
2. Type Star UML
3. Open the first link : <https://staruml.io/>
4. Download Star UML
5. Install StarUML

Modeling:

a. Project

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

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.

b. Model vs View

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, mathematical 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.

c. Profile

Using UML for a specific domain or platform is not sufficient, so you may need to define UML Profile.

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.)

2. Working with Star UML Tool

a. New Project:

To create a modeling project, press Ctrl+N or select File | New.

OR

New Project 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.

Data Model : A simple data modeling project.

b. 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.

c. Applying Profiles

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

d. Managing Diagrams

To create a Diagram:

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

Select Model | Add Diagram | [DiagramType] in Menu Bar or select Add Diagram | [DiagramType] in Context Menu.

To delete a Diagram:

Select a Diagram to delete in Model Explorer.

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

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

3. User Interface

Main Window

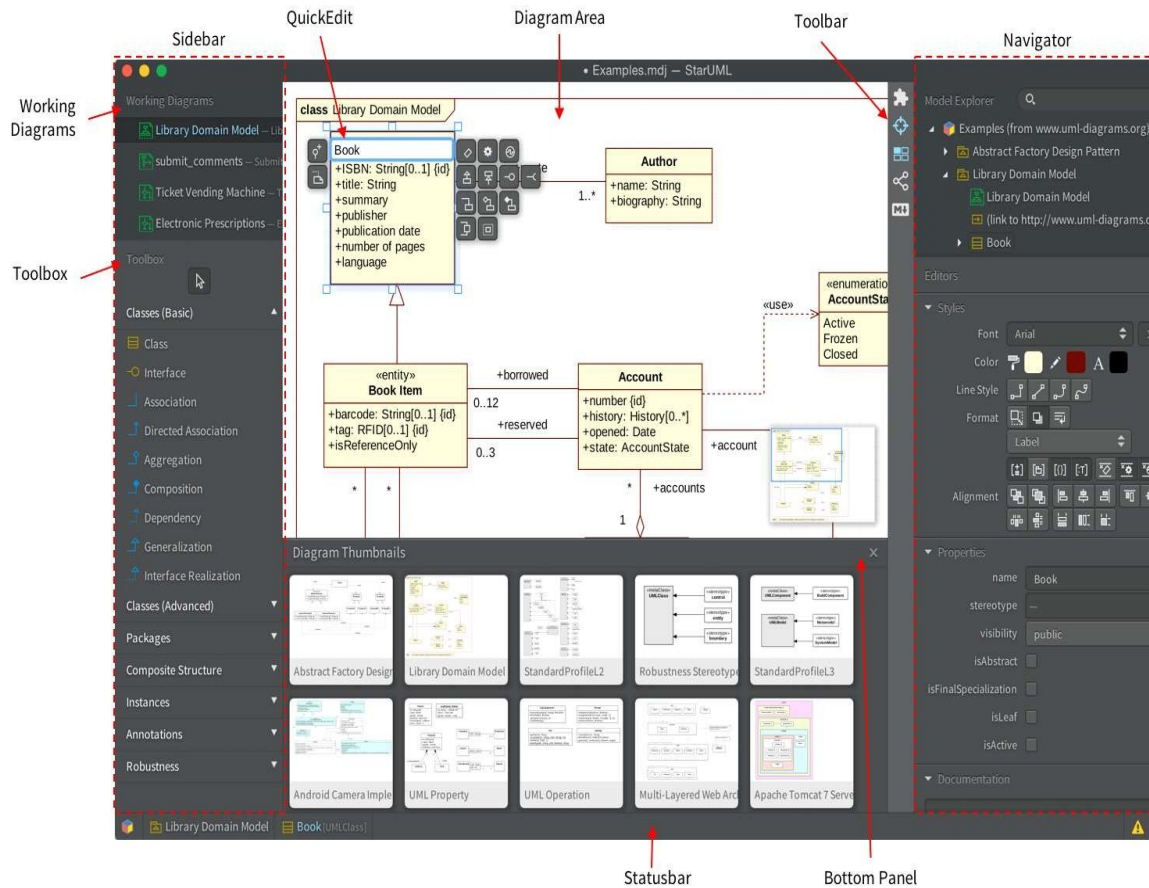


Diagram Area shows the currently selected diagram.

Sidebar is the area left containing Working Diagrams panel and Toolbox.

Working Diagrams panel shows a list of the opened working diagram. The selected diagram is shown in the Diagram Area.

Toolbox shows elements which can be created in the selected diagram.

Navigator is the right area containing Model Explorer and Editors.

Model Explorer shows the tree structure of model elements.

Editors (Holder) contains editors to edit properties of model and view elements. It includes Style Editor, Property Editor, and Documentation Editor.

Style Editor allows to edit styles of selected view elements.

Property Editor allows to edit properties of selected model elements.

Documentation Editor allows to edit documentation property of a selected model element.

Toolbar shows tool buttons typically provided from default or installed third-party extensions.

Bottom Panel is a panel shown below Diagram Area typically provided from default or installed third-party extensions including Find Results, Diagram Thumbnails, Validation Results, Markdown Editor and etc.

To show or hide Statusbar, press Ctrl+4 or check (or uncheck) View | Statusbar in Menu Bar.