

An open source modeling software that is used in Unified Modelling Language where system and software modeling is supported with the UML concept to generate code for different languages by providing different types of UML diagram to develop fast and flexible UML platform so that requirements and design is given before starting the project where it is called as a big upfront design approach for the users who require the software designs to improve their project and hence to support their UML design diagrams in the system.

How StarUML works?

Below are the points explain the works of starUML:

- StarUML is an open source software that can be installed directly from the homepage of the website and it is licensed under GNU Public License. On the home page, a new project by approach link is available from where an empty project can be selected. Set as the default approach should be unchecked so that users can create projects of customized versions. On the model explorer, by selecting the untitled model, go to Add or Design model, and Add or Design diagrams. This will help to create the diagrams of the user's taste and modify it based on the functionalities.

- The profile can be set which gives different symbols and conventions to be used. It is important to include Java profile in the project so that java code is generated. If multiple users are working on the same project, it is good to give a description for better understanding. Save the project in a suitable location to access it easily. The class can be created from the toolbox and proper name can be given to the same. Attributes can be added to the same. The data type should be selected and the design model can be expanded to see the full view of the project created. An interface is created by selecting the interface and suppressing the operations option. This will make the user to see the interface with the diagrams in view.
- UML class diagrams can be created easily with the help of StarUML. While creating the diagram, java stub code is easily generated in the diagrams and hence if any changes has to be made in the diagram, it can be done by modifying the diagram in the backend. While creating the diagram, code is generated but not specifically on the class structures. To modify the structures, the code can be edited and the functionalities on the structure can be added. Thus, the code describes what each structure does in the diagram.
- There are many options available to modify the diagram drawn. It is easy to draw it with the options given and once familiar, anyone can draw it easily.

Benefits of StarUML

Below are the benefits of staruml in detail:

- An advantage that is most important is that the user can generate codes from the diagram drawn. If anyone who is not interested in front end diagram, they can use the backend coding to add the functionality and change the diagram to their need and modify it as per the usage by changing the Java code. This makes reverse engineering possible i.e. generating a diagram from the code that is formed initially from the diagram drawn.
- The user interface is known to all as it uses visual studio along with other coding languages such as C and C#. Also, the diagrams drawn in UML software can be exported into JPG.XMI formats which helps the user to identify and check the patterns in different format and to explore more options.
- StarUML is faster, flexible and can be extended to accommodate other codes in the diagram. And the extensive features make the users to fall in love with the application. If any mistakes happen, we can undo and make necessary changes. This feature is not applicable in some other UML tools.
- The framework can be easily understood by anyone and hence the architecture can be modified for the extensive use of software. Performance and security can be tracked easily with the help of StarUML. Documentation is provided with proper guidelines as how to improve and communicate the business processes to others who use the software. We can say that StarUML is the visual language

that communicates the information to the users in a diagrammatic manner.

- The tools in StarUML helps to know the requirements in the system and to apply the design patterns so that proper analysis can be done to understand and modify the diagrams. These tools are open source and for more highly requirements, tools can be purchased from the software vendors.

Applications of StarUML in various fields

- Unified modeling diagrams and class diagrams can be created easily in StarUML that can be used in design industry to know the flow of the product from one field to another and also to analyze the product's usage in different fields. Properties of the product can be incorporated within the diagram so that the user can easily understand the product and modify the properties if needed. Data modeling helps to know the product and apply the properties to other streams.
- In the manufacturing industry, the number of products with its varieties can be known by the user. With the knowledge of inventory in the industry, product manufacturing can be controlled and directed efficiently. Diagrams direct the user about the steps to be done and manage the goods to shipment and do the transaction from the customers. These understandings can be done with the help of a single diagram rather than using an entire record.

- In the hospitality sector and hospitals, the UML diagram can be used to direct the visitors to proper places. The doctors in hospitals can be made to go through the diagram once to know the routine timetable they should follow on a daily basis. In hotels, available provisions can be drawn with the help of a UML diagram so that the visitors will get to know the privileges in a glance.

Diagrams help to save time and to understand the process flow better.

StarUML helps to know the class diagrams and to know the process so that the users can change or get the knowledge of the same.