UNIFIED MODELING LANGUAGE (UML)

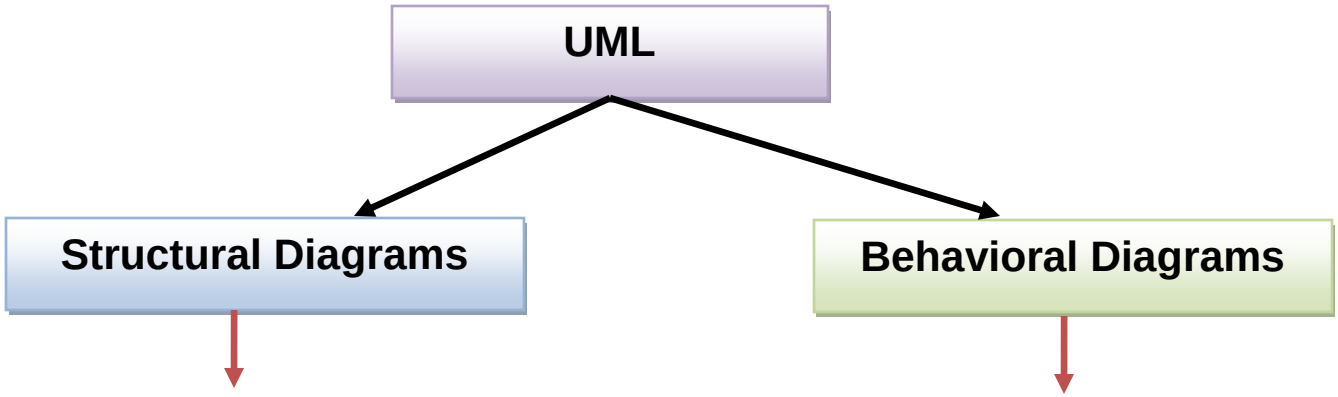
- UML is a standard language for specifying, visualizing, constructing, and documenting the artifacts of software systems.
- UML was created by Object Management Group and UML 1.0 specification draft was proposed to the OMG in January 1997
- UML is a graphical notation for modeling various aspects of software systems

UML DIAGRAM TYPES

❖ UML diagrams are divided into two types

I. Structural Diagrams : represent the static aspect of the system

II. Behavioral Diagrams : basically capture the dynamic aspect of a system.



Examples

1. Class diagram
2. Object diagram
3. Package diagram
4. Component diagram
5. Deployment diagram

Examples

1. Activity diagram
2. State Transition diagram
3. Use case diagram
4. Interaction diagrams

1. Class Diagram

- It shows the relationships between classes & pertinent information about classes themselves

2. Object Diagram

- Object diagrams can be described as an instance of class diagram. So these diagrams are more close to real life scenarios where we implement a system.
- Object diagrams are a set of objects and their relationships just like class diagrams and also represent the static view of the system.
- The usage of object diagrams is similar to class diagrams but they are used to build prototype of a system from practical perspective.

3. Use Case Diagram

- It shows actors, use-cases and the relationships between them

4. Interaction Diagram

- It shows an interaction between a group of collaborating objects
- It has two types of diagrams like **sequence diagram** & **collaboration diagram**

5. Activity Diagram

- Very similar to flow chart
- It shows actions & decision points but with the ability to accommodate concurrency

6. State Transition Diagram

- It describes behavior of instances of a class in terms of states, transitions & events

7. Package Diagram

- It shows system structure at the library or package level

8. Deployment Diagram

- It shows configuration of hardware and software in a distributed system.

USAGES OF UML

- UML has been used in following areas
  - Enterprise information systems
  - Transportation
  - Telecommunications
  - Retail
  - Science & Research
  - Banking & financial services