"The Unified Modeling Language (UML) is a language for

Specifying,

Visualizing,

Constructing and

Documenting the artifacts of software systems.

UML is a graphical notation for modeling various aspects of software systems.

UML is Architectural blueprints including elements such as activities, Actors, Business processes,

UML diagrams represent two different views of a system model:

* **Static (or structural) view:** emphasizes the static structure of the system using objects, attributes, operations and relationships. The structural view includes class diagrams and composite structure diagrams.
* **Dynamic (or behavioral) view:** emphasizes the dynamic behavior of the system by showing collaborations among objects and changes to the internal states of objects. This view includes sequence diagrams, activity diagrams and state machine diagrams.

#### Structure Diagrams

Structure diagrams emphasize the things that must be present in the system being modeled. Since structure diagrams represent the structure, they are used extensively in documenting the software architecture of software systems.

* **Class diagram**: describes the structure of a system by showing the system's classes, their attributes, Operations and the relationships among the classes.
* **Component diagram:** describes how a software system is split up into components and shows the dependencies among these components.
* **Deployment diagram**: describes the hardware used in system implementations and the execution environments and artifacts deployed on the hardware.

#### Behavior Diagrams

Behavior diagrams emphasize what must happen in the system being modeled. Since behavior diagrams illustrate the behavior of a system, they are used extensively to describe the functionality of software systems.

* **Use case diagram:** describes the functionality provided by a system in terms of actors, their goals represented as use cases, and any dependencies among those use cases.
* **Activity diagram:** describes the business and operational step-by-step workflows of components in a system. An activity diagram shows the overall flow of control.

#### Interaction Diagrams

Interaction diagrams, a subset of behavior diagrams, emphasize the flow of control and data among the things in the system being modeled:

* **Sequence diagram**: shows how objects communicate with each other in terms of a sequence of messages. Also indicates the life spans of objects relative to those messages.
* **Collabaration diagram:** provides an overview in which the nodes represent communication diagrams.