The Diagrams of UML 2.0

Understanding the thirteen diagrams of UML 2.x is an important part of understanding OO development. Although there is far more to modeling than just the UML the reality is the UML defines the standard modeling artifacts when it comes to object technology.

There are three classifications of UML diagrams:

- **Behavior diagrams**. A type of diagram that depicts behavioral features of a system or business process. This includes activity, state machine, and use case diagrams as well as the four interaction diagrams.

- **Interaction diagrams**. A subset of behavior diagrams which emphasize object interactions. This includes communication, interaction overview, sequence, and timing diagrams.

- **Structure diagrams**. A type of diagram that depicts the elements of a specification that is irrespective of time. This includes class, composite structure, component, deployment, object, and package diagrams.

The table below summarizes the thirteen, up from nine in UML 1.x, diagram types of UML 2.x The learning priority column indicates how important it is for a business application developer to learn the artifact.

Diagram	Description	Learning Priority
Activity Diagram	Depicts high-level business processes, including data flow, or to model the logic of complex logic within a system.	High
Class Diagram	Shows a collection of static model elements such as classes and types, their contents, and their relationships.	High
Communication Diagram	Shows instances of classes, their interrelationships, and the message flow between them. Communication diagrams typically focus on the structural organization of objects that send and receive messages. Formerly called a Collaboration Diagram	Low
Component Diagram	Depicts the components that compose an application, system, or enterprise. The components, their interrelationships, interactions, and their public interfaces are depicted.	Medium
Composite Structure Diagram	Depicts the internal structure of a classifier (such as a class, component, or use case), including the interaction points of the classifier to other parts of the system.	Low
Deployment Diagram	Shows the execution architecture of systems. This includes nodes, either hardware or software execution environments, as well as the middleware connecting them.	Medium
Interaction Overview Diagram	A variant of an activity diagram which overviews the control flow within a system or business process. Each node/activity within the diagram can represent another interaction diagram.	Low
Object Diagram	Depicts objects and their relationships at a point in time, typically a special case of either a class diagram or a communication diagram.	Low
Package Diagram	Shows how model elements are organized into packages as well as the dependencies between packages. See Package diagram guidelines.	Low
Sequence Diagram	Models the sequential logic, in effect the time ordering of messages between classifiers	High
State Machine Diagram	Describes the states an object or interaction may be in, as well as the transitions between states. Formerly referred to as a state diagram, state chart diagram, or a state-transition diagram.	Medium
Timing Diagram	Depicts the change in state or condition of a classifier instance or role over time. Typically used to show the change in state of an object over time in response to external events.	Low
Use Case Diagram	Shows use cases, actors, and their interrelationships.	Medium