**UML**

**(Unified Modeling Language)**

The Unified Modeling Language includes a set of graphic notation techniques to create [visual models](http://en.wikipedia.org/wiki/Visual_modeling) of [object-oriented software](http://en.wikipedia.org/wiki/Object-oriented_programming) systems.

Class Diagram:

It is static structure diagram that describes the structure of a system by showing the system's [classes](http://en.wikipedia.org/wiki/Class_(computer_science)), their attributes, operations (or methods), and the relationships among objects. Class diagram is useful to implement application ligic

|  |
| --- |
| **Class Name** |
| **Attributes**  **Properties** |
| **Methods** |

Use case Diagrams:

It is the simplest way to represent user interaction with system.  A use case diagram can draw the different types of users of a system and the various ways that they interact with the system.

Sequence Diagrams:

A **sequence diagram** is an [interaction diagram](http://en.wikipedia.org/wiki/Interaction_diagram) that shows how processes operate with one another and in what order. It shows object interactions arranged in time sequence.

Collaboration Diagrams:

A collaboration diagram, also called a communication diagram or interaction diagram. It shows the roles, functionality and behavior of individual objects as well as the overall operation of the system. Objects are shown as rectangles with naming labels inside.

Activity Diagrams:

Activity diagrams are basically flow charts; it represents the flow from one activity to another activity. The activity can be described as an operation of the system.

Here flow can be 3 ways

Sequential

Disjoint (fork)

Concurrent (join)

DFD Diagrams:

A **data flow diagram** (**DFD**) is a graphical representation of the "flow" of data through an [information system](http://en.wikipedia.org/wiki/Information_system). It contains mainly 3 levels

0th level (or) Contextual Level - It describes the total system

1st Level – It describes the particular user functionalities

2nd Level – It describes how the particular functionality done by the user in 1st Level

ER-Diagram:

 It also called an entity-relationship (ER) diagram, a graphical representation of entities and their relationships to each other, typically used in the organization of [data](http://www.webopedia.com/TERM/D/data.html) within [databases](http://www.webopedia.com/TERM/D/database.html) or information systems. ER- Diagram is use to construct Database