UML:

* Unified Modeling Language is way of represent things in design diagram
* UML makes understanding the feature easier and easy to implement
* It is a graphical way of representing relationship between classes

There are 2 types of UML:

* Structural (concern on the structure of the code)
  + Class Diagram (imp)
  + Component Diagram
  + Package Diagram
  + Object Diagram
* Behavioral (concern on how the system works and interacts)
  + Sequential Diagram (imp)
  + Use Case Diagram
  + Activity Diagram (imp)

Important UML Diagrams in LLD:

**Use Case Diagram:**

* Visual representation of how users interact with the system
* Helpful for understanding functional requirement in user perspective

Notations:

* Actor:
  + External Entities who interacts with the system. They initiates the usecases
* Use Case:
  + These are the actual functionalities of the system
* System Boundary:
  + Limits of the system

Association Relationships:

* The Association Relationship represents a communication or interaction between an actor and a use case.

Steps to Draw a usecase diagram:

1. Identify Actors
2. Identify Use Cases
3. Connect Actors and Use cases
4. Add System Boundary
5. Define Relationships
6. Review and Refine
7. Validate

Example Online Shopping System

