Introduction to Architectures
Pre-read

Relevel
by Unacademy

Things I need to know before this session

- **Design vs Development:** Design is making the look and feel of the website (the front end) whereas Development is introducing functionality to it (the back end)
- **Interface**: It is defined as the place where independent and unrelated systems connect or communicate with each other
- **Database:** It is a setup or storage for easy management, access, and updating.
- **Model:** A model determines the logical structure of a database.
- **Coupling/Cohesion:** Coupling is defined as the degree of interdependence between software modules whereas Cohesion is defined as the degree to which the elements inside a module belong together.
- **Distributed application:** It is a program that runs on more than one computer and communicates with each other through a network.
- **Authorization:** It is the function of specifying access rights/privileges to resources.
- **Frontend/Backend:** Frontend is something that a user can see, interact and experience. Backend or Backend development is like behind the scenes of a movie or show or in our case, the frontend.
- **Boot time:** The time is taken by a device to start and be ready to use after the power has been turned on.
- **Modular Approach:** To break problems into smaller parts and solve them is a modular approach.

What will be taught in this session?

- Introduction to Architectures
- Building blocks of an Architectural Design
- Types of Architectural Patterns of Software Engineering
- Monolithic Architecture
  - What? Detailed Explanation
  - Advantages
  - Disadvantages/Challenges
- Service-Oriented Architecture
  - What? Detailed Explanation
  - Advantages
  - Disadvantages/Challenges
- Microservices Architecture
  - What? Detailed Explanation
  - Advantages
  - Disadvantages/Challenges
- Differences b/w Microservices and SOA
- Case Study: Industry Example
  - Rainyday Grocer

How are these concepts being used in the industry for building applications?

Software architecture is a sort of plan of the system and is used for the understanding, negotiation, and communication between all the stakeholders (user-side, customer, management, etc.). It makes it easier to understand the whole system and makes the decision-making process more efficient.