Backend and Client-Server Architecture

1. What is Backend?

- Backend is the brain of a website/app that works behind the scenes.

- It stores data, processes requests, handles logic, and communicates with databases.

- Backend is not visible to users; frontend shows the UI.

- Example: User logs in → Backend checks password → Sends success/failure.

Backend Components:

1. Server – Runs backend code (Node.js, Java, Python)

2. Database – Stores data (MongoDB, MySQL)

3. Application Logic – Handles rules like login, payment, product checkout

2. Client-Server Architecture:

- Client: Device/browser that sends requests.

- Server: Machine that receives requests and sends responses.

Flow:

1. Client sends request (GET, POST, etc.)

2. Server processes it and fetches data from database

3. Server sends response (usually JSON)

4. Client displays result on UI

Real World Example:

- You (Client) order food → Kitchen (Server) prepares → Food (Response) comes back.

Key Points:

- Client asks → Server answers

- Frontend displays → Backend processes

- Browser = Client, Node.js/Java/Python = Server, Database stores data