How The Backend Works

A simply study note to refer

Overview

The backend of web development is crucial for handling requests from clients and generating appropriate responses. It consists of three main components: **Server**, **Application**, and **Database**. Additionally, the **API** (Application Programming Interface) plays a vital role in facilitating communication between the client and server.

Components of the Backend

1. Server

•**Definition**: The server is a computer that receives requests from clients. It runs an application that contains the logic for responding to different requests.

•**Functionality**: The server processes incoming requests and sends back the necessary information or resources.

2. Application

•**Role**: The application is responsible for handling the logic of how to respond to requests. It interacts with the database to retrieve or store information as needed.

•**Example**: If a client requests user data, the application queries the database and formats the response.

3. Database

•**Purpose**: The database is where all the information is stored. It allows the application to access and manipulate data.

•**Interaction**: The application accesses the database to get the information it needs to generate responses for the client 1.

4. API (Application Programming Interface)

•**Definition**: An API defines how clients should make requests and how the server should respond. It includes information about endpoints and data formats.

Analogy: Think of the API like a postal service. Just as you need the correct address to send a letter, a client must use the correct endpoint to retrieve information from the server.

Communication Flow

1. **Client Request**: A client sends a request to the server via the API.
2. **Server Processing**: The server receives the request and processes it using the application.
3. **Database Access**: The application may access the database to retrieve or store information.
4. **Response Generation**: The server generates a response based on the application logic and sends it back to the client.

Cloud Computing

- **Definition**: Many servers today run on cloud platforms, which are virtual devices that provide resources over the Internet. This makes them more accessible and reliable than traditional physical servers.

Examples of Cloud Services: AWS, Google Cloud, Microsoft Azure, and NAVER Cloud are popular options for hosting backend services.

Key Points to Remember

- The backend consists of the server, application, database, and API.
- The API is essential for communication between the client and server.
- Cloud services enhance the accessibility and reliability of backend systems.

This guide should help you understand the fundamental components and processes involved in backend web development!

THANK YOU! HAVE A GREAT DAY ☺