**1. What is a Website?**

A website is a collection of web pages that users can access through the internet using a web browser. Websites are categorized into:

* **Static Websites:** Simple pages with fixed content (e.g., portfolio websites).
* **Dynamic Websites:** Websites that update content dynamically (e.g., social media platforms, e-commerce sites).

A website consists of three core parts:

**A. Frontend (Client-Side)**

* **HTML (HyperText Markup Language):** The structure of a webpage.
* **CSS (Cascading Style Sheets):** Styling and layout.
* **JavaScript:** Adds interactivity and dynamic behavior.

**B. Backend (Server-Side)**

* The logic and database management behind the website.
* Backend languages: **Node.js, Python, PHP, etc.**

**C. Database**

* Stores user data, transactions, and other content.
* Examples: **MongoDB, MySQL, PostgreSQL.**

**2. How a Website Loads: Step-by-Step Process**

**Step 1: User Requests a Web Page**

* The user enters a URL (e.g., www.example.com) in their browser.
* The browser contacts the **DNS (Domain Name System)** to get the website’s IP address.
* An **HTTP/HTTPS request** is sent to the web server.

**Step 2: Server Processes the Request**

* If it’s a **static website**, the server sends back an HTML file.
* If it’s a **dynamic website**, the server runs backend code, fetches data from the database, and then generates an HTML response.

**Step 3: Browser Receives and Renders the Page**

* The browser downloads the **HTML, CSS, and JavaScript** files.
* It processes them in the following order:
  1. **Parses HTML** and builds the **DOM (Document Object Model)**.
  2. **Processes CSS** and creates the **CSSOM (CSS Object Model).**
  3. **Combines DOM and CSSOM** to form the **Render Tree.**
  4. **Executes JavaScript** to modify the page dynamically.
  5. **Paints the final webpage** on the screen.