WEB DEVELOPMENT

Introduction to web development

R.A: **Assad Ullah Khan**

in assadullahkhan

AssadUllahKhan

What is web development ?

- **Web development** is the process of creating websites and web applications. It involves two main parts: **front-end** and **back-end** development.

- Web development also includes working with **databases** to store and retrieve information. Commonly used databases include **MySQL**, **PostgreSQL**, **MongoDB**, and **SQLite**.

- Developers interact with **databases** through query languages like **SQL** (Structured Query Language) to perform **CRUD** operations (Create, Read, Update, Delete) on data.

- Additionally, web development involves **deploying** and **hosting** websites on **servers** or **cloud** platforms. This includes setting up **domain** names, configuring web servers

Front-end Development

- **Front-end development:** focuses on how a website looks and works on the user's device (like a computer or a phone). Front-end developers use **HTML**, **CSS**, **Bootstrap** and **JavaScript** to create web pages with text, images, buttons, and interactive features.

Back-end Development

- **Back-end development:** deals with the behind-the-scenes work that makes a website function. Back-end developers use programming languages like **PHP**, **Django**, or **Node JS** to build the server-side of the website.

server

- **Web Server:** A web server is specifically designed to host websites and deliver web pages to client devices. It processes **HTTP** (Hypertext Transfer Protocol) requests and responds with HTML **documents**, **images**, **CSS**, **JavaScript**, or other resources needed to render a web page in a browser.

Database Server

- A **database** server is dedicated to storing and managing data. It provides access to a **database management system** (**DBMS**) that allows **users** or applications to **store**, **retrieve**, and **manipulate** data. **Database** servers handle **queries**, **transactions**, and ensure **data integrity**.

File Server

- A **file server** stores and manages **files**, making them accessible to client devices over a network. It allows users to centrally **store** and **retrieve files**, such as **documents**, **images**, **videos**, or **software** packages. File servers often use protocols like **FTP** (File Transfer Protocol).

Windows Server

samba

S3 Bucket

Mail Server

- A mail server handles the **sending**, **receiving**, and **storage** of email messages. It uses protocols like **SMTP** (Simple Mail Transfer Protocol) and **POP3** (Post Office Protocol version 3) or **IMAP** (Internet Message Access Protocol) to manage **email** communication between clients.

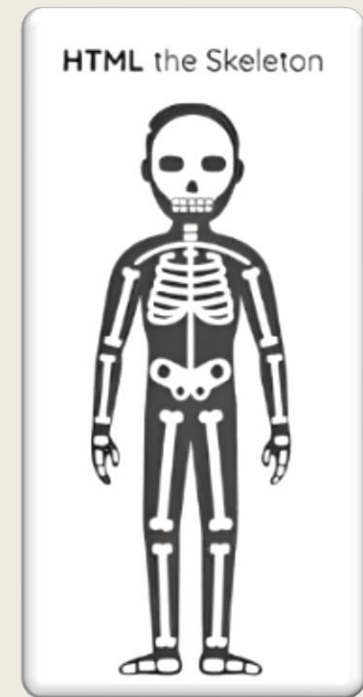Microsoft Exchange Server

Zimbra Collaboration Suite

Send mail

Example

- To simplify it further, think of web development like building a house. **Front-end development** is like **designing** and **decorating** the rooms, making them look **attractive** and **comfortable** for people to use.

- **Back-end development** is like the **plumbing**, **electrical wiring**, and **infrastructure** that make the house function properly, handling tasks behind the scenes.

- Both **front-end** and **back-end** development are essential for creating a complete and functional website or web application.
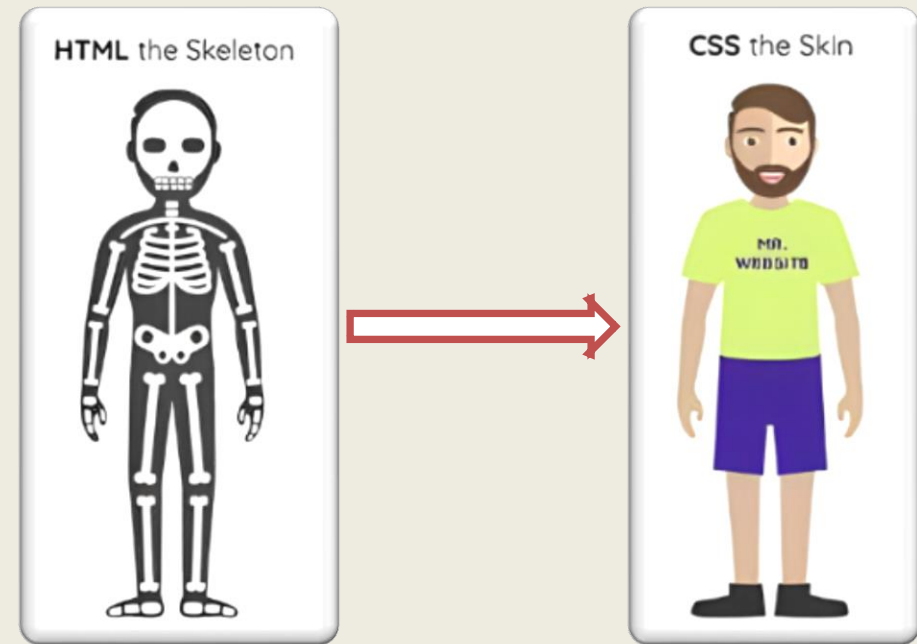
What is HTML?

- **HTML** stands for Hypertext Markup Language. It is the standard **markup** language used to create the **structure** and **content** of web pages on the **World Wide Web**. **HTML** uses a set of **tags** and **elements** to define the various components of a web page, such as **headings**, **paragraphs**, **images**, **links**, **tables**, **forms**, and **more**.

- Here are a few reasons why we use HTML in websites:
  - ✓ **Structure**
  - ✓ **Content Display**
  - ✓ **Hyperlinks**
  - ✓ **Images and Media**
  - ✓ **Forms and User Input**
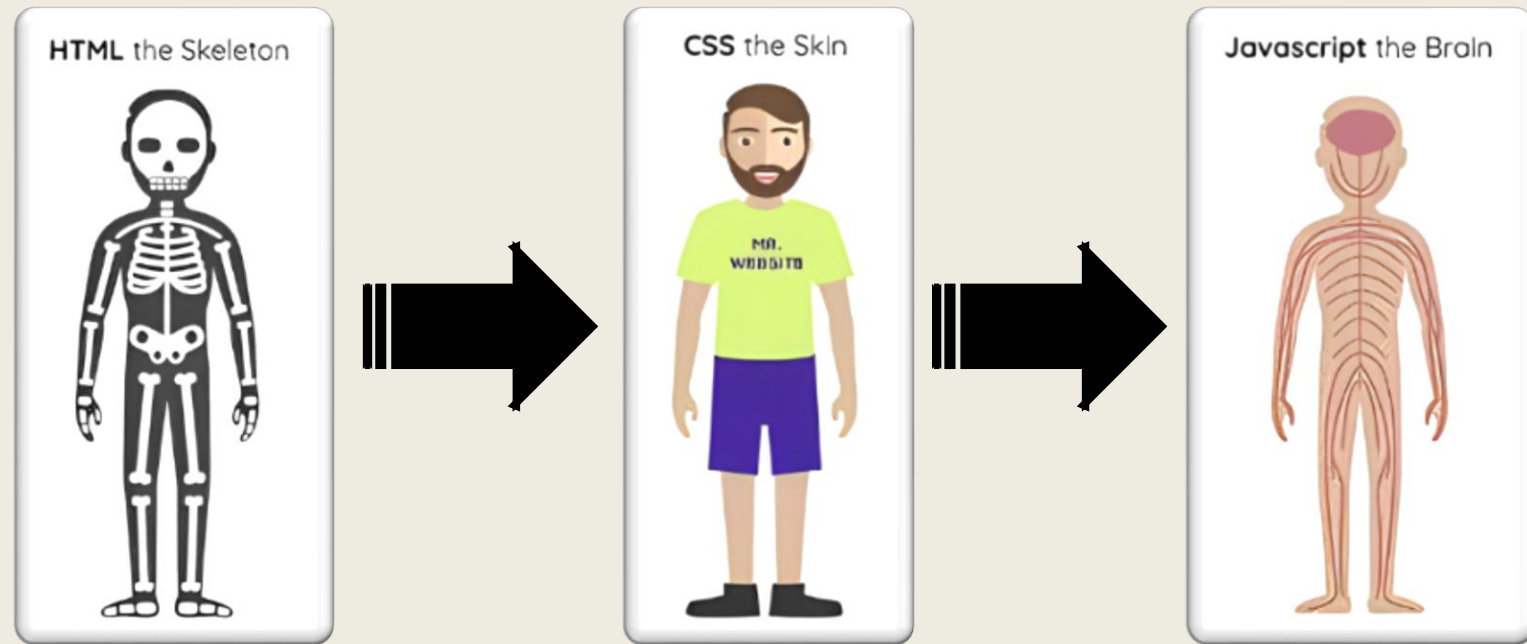
HTML the Skeleton

What is CSS ?

- **CSS** stands for **Cascading Style Sheets**. It is a styling language used to describe the **presentation** and **visual appearance** of a web page written in **HTML**. **CSS** allows you to define how elements on a web page should be displayed, including their **layout**, **colors**, **fonts**, **spacing**, and other **visual properties**.

HTML the Skeleton

CSS the Skin

What is JavaScript ?

- **JavaScript** is a **high-level** programming language primarily used for **client-side** web development. It allows developers to add **dynamic** and **interactive** behavior to web pages. JavaScript is supported by all modern web browsers and is a key component in creating rich and engaging web experiences.

HTML the Skeleton → CSS the Skin → Javascript the Brain

What is Bootstrap ?

- **Bootstrap** is a popular **front-end** framework used for building **responsive** and **mobile-first** websites and web applications. It provides a collection of **CSS** styles, **JavaScript** components, and **pre-built** UI elements that help developers create **visually** appealing and **consistent** designs with ease.

End

I hope this slide will help you to clear your idea about web development
Thanks For Reading