

# Introduction to Web Technology

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Web technology refers to the tools, techniques, and systems used to create, deliver, and manage content and applications on the internet. It is the backbone of how we interact online, supporting websites, web applications, and all forms of digital communication. Here's a brief overview:

## Key Components of Web Technology:

1. **HTML (HyperText Markup Language):** The standard language used to create and structure content on web pages.
2. **CSS (Cascading Style Sheets):** A styling language used to control the layout, colors, fonts, and overall appearance of web pages.
3. **JavaScript:** A programming language that enables interactivity on websites, such as dynamic content updates, animations, and form validation.
4. **Web Servers:** Systems that store and deliver website data to users when requested, e.g., through browsers.
5. **Web Browsers:** Applications like Chrome, Firefox, or Safari that interpret and display web content.
6. **HTTP/HTTPS (HyperText Transfer Protocol/Secure):** The protocols that allow communication between web browsers and servers. HTTPS includes encryption for secure communication.
7. **Databases:** Systems used to store and manage website data, often paired with backend technologies.
8. **Backend Technologies:** Server-side frameworks and languages like PHP, Python, Ruby, or Node.js that handle data processing and functionality.
9. **APIs (Application Programming Interfaces):** Sets of rules that allow applications to communicate with each other, enabling services like online payments or social media integration.

## Evolution of Web Technology:

Web technology has evolved significantly over the years, moving from simple, static web pages to complex, dynamic, and interactive web applications. Notable advancements include:

- ❖ The introduction of **Web 2.0**, which focuses on user interaction (social media, blogs).
- ❖ Emerging trends like **Web 3.0**, emphasizing decentralization and technologies such as blockchain.

## **Applications of Web Technology**

1. **E-Commerce:** Online stores and marketplaces like Amazon and eBay.
2. **Social Networking:** Platforms for connecting people (e.g., Facebook, Instagram).
3. **Education:** E-learning platforms and virtual classrooms.
4. **Entertainment:** Streaming services (e.g., Netflix, Spotify).
5. **Communication:** Chat applications and video conferencing tools.