Frontend

What is Web Development?

- Process of creating websites and web applications.
- Involves web design, web content development, client-side/server-side scripting.
- Includes network security configuration.
- Ranges from simple webpages to complex applications like social networks and e-commerce sites.

Introduction to the Entire Course

- Provides a comprehensive understanding of web development.
- Covers HTML, CSS, JavaScript, front-end and back-end frameworks.
- Includes databases and version control systems.
- Aims to equip students with practical skills to build dynamic web applications.

Career Path after Web Development

- Front-End Developer: Focuses on user interface and visual aspects.
- Back-End Developer: Manages server-side logic, databases, and application integration.
- Full-Stack Developer: Skilled in both front-end and back-end development.
- Web Designer: Specializes in design and layout of websites.
- Web Administrator: Manages web servers and ensures website performance and security.

Overview of Internet and Its Fundamentals

- HTTP/HTTPS: Protocols for transferring web pages.
- IP Addresses: Unique identifiers for devices on the internet.
- DNS: System that translates domain names into IP addresses.
- Web Hosting: Services that store and serve websites.
- Browsers: Software applications for accessing and interacting with websites.

Client-Server Architecture

- Client: End user's device that interacts with the server.
- Server: Centralized computer providing resources and services to clients.
- Request/Response: Clients send requests, servers respond with data.
- Statelessness: Each request from a client to a server is independent.

Text Editor and IDE

- Text Editor: Simple tool for writing code (e.g., Notepad++, Sublime Text).
- IDE: Robust environment with features like debugging, version control, project management (e.g., Visual Studio Code, IntelliJ IDEA).

Extensions

- Add-ons for text editors and IDEs enhancing functionality.
- Include syntax highlighting, code snippets, linters, debuggers.
- Streamline development process and improve productivity.

Web Browser with Developer Tools

- Browsers like Chrome and Firefox with built-in developer tools.
- Allow inspection of HTML/CSS, debugging of JavaScript.
- Monitor network requests and analyze performance.

VCS (Version Control System) like Git

- Tracks changes to files over time.
- Enables collaboration among multiple developers.
- Provides features like branching, merging, version history.
- Ensures efficient management of changes.