**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.