

Lesson 1: Introduction to HTML, CSS

Overview of Web Development

Difference Between Frontend and Backend

- **Frontend (Client-side):** This refers to the parts of the website that users interact with directly. Everything that you can see on a webpage, such as text, images, buttons, and navigation menus, is part of the frontend. Frontend developers use HTML, CSS, and JavaScript to build and design the user interface (UI).
 - **Example:** The structure of the webpage, such as headings, paragraphs, and navigation menus, is built using HTML. CSS is used to style those elements, like changing colors and fonts. JavaScript adds interactivity, such as click events or form validation.
- **Backend (Server-side):** This refers to the part of web development that deals with data storage, security, and the logic behind the scenes. Backend developers work with databases, servers, and APIs to handle requests from the frontend and provide the necessary data. Technologies like **PHP**, **Python**, and **Node.js** are used to build the backend.
 - **Example:** When you submit a contact form on a website, the backend processes the form data, stores it in a database, and sends an email confirmation.

Frontend Technologies

- **HTML (HyperText Markup Language):** HTML is the foundation of web development. It structures the content of a webpage, including headings, paragraphs, images, links, and more. Think of it as the skeleton of a webpage.
- **CSS (Cascading Style Sheets):** CSS controls the appearance of a webpage. It allows you to change fonts, colors, layouts, and spacing. If HTML is the skeleton, CSS is the skin and clothing that makes it look appealing.

Setting up a Development Environment

1. Installing VS Code, Browser, and Live Server

- **VS Code** is a free, open-source code editor that is widely used for web development. It supports various programming languages and provides many extensions to enhance productivity.
 - Install VS Code from [here](#).
- **Browser:** A web browser (e.g., Google Chrome, Microsoft Edge) is required to view your web pages. The browser will render the HTML and CSS you write and allow you to see your web pages live.

- **Live Server** is an extension for VS Code that allows you to instantly view your changes in the browser as you code. It refreshes the page automatically every time you save your file, making the development process faster and smoother.
 - Install the Live Server extension from the VS Code marketplace. To use it, right-click on your HTML file and select "Open with Live Server."

2. Introduction to VS Code Features

- **Extensions: VS Code** has a wide range of extensions that enhance its functionality. Some useful extensions for web development are:
 - **Prettier (for code formatting)**
 - **Emmet (for faster HTML and CSS writing)**
 - **Live Server (for viewing changes in real-time)**
- **Shortcuts:** VS Code has several keyboard shortcuts that can speed up your coding workflow. Some common ones include:
 - **Ctrl + P:** To open files quickly.
 - **Ctrl + /:** To comment/uncomment code.
 - **Alt + Shift + F:** To format your code.
- **Emmet:** Emmet is a plugin that helps you write HTML and CSS faster. It allows you to use abbreviations like `div>ul>li*5` to generate a list of 5 items in seconds.

Task: Install VS Code and Create a Simple HTML File

- **Step 1:** Install VS Code and the Live Server extension.
- **Step 2:** Create a new file in VS Code and name it `index.html`.
- **Step 3:** Right-click the `index.html` file and select "Open with Live Server" to view the webpage in your browser.
- **Step 4:** Edit the file by changing the text in the `<h1>` and `<p>` tags. As you save, the browser will automatically update, showing the changes in real-time.