

Building Websites from Scratch - An Introduction to HTML, CSS, and Web Development

Introduction

In the digital age, websites are an integral part of our lives, providing information, entertainment, and services at our fingertips. Understanding how websites work and how to create them is a valuable skill. This introduction will cover the basics of web development, including HTML, CSS, static and dynamic websites, frontend and backend development, databases, and essential tools like Visual Studio Code. We will also explore the doctype declaration and the basic structure of HTML.

What is HTML and CSS?

HTML (Hypertext Markup Language) and CSS (Cascading Style Sheets) are the fundamental building blocks of web development.

- HTML: HTML is a markup language used to structure the content of a web page. It defines elements like headings, paragraphs, links, and images. HTML provides the framework on which a webpage is built.

- CSS: CSS is a stylesheet language used to control the presentation and layout of HTML elements. It specifies how the content is styled, including aspects like fonts, colors, spacing, and positioning.

Static and Dynamic Websites

- Static Websites: Static websites consist of fixed web pages that display the same content to all users. They are simple and easy to host but lack interactivity. Changes require manual editing of HTML files.

- Dynamic Websites: Dynamic websites generate content on the fly, often pulling data from databases or external sources. They offer interactivity and personalized experiences, making them suitable for complex applications.

Frontend and Backend Development

- Frontend: Frontend development involves creating the user interface and client-side functionality of a website. Developers work with HTML, CSS, and JavaScript to build what users see and interact with in their browsers.

- Backend: Backend development focuses on the server-side logic and database management. It handles tasks like data storage, processing, and user authentication. Common backend technologies include Python, Ruby, PHP, and Node.js.

Database

Databases are structured repositories for storing and managing data. In web development, databases are crucial for dynamic websites. Popular database systems include MySQL, PostgreSQL, MongoDB, and SQLite.

Installing Visual Studio Code and Extensions

Visual Studio Code (VS Code) is a popular code editor for web development. It offers a range of extensions that enhance productivity. To get started, download VS Code from the official website (<https://code.visualstudio.com/>) and explore extensions for HTML, CSS, and web development.