Web Development with HTML, CSS & JavaScript – Complete Course Roadmap

1. Introduction & Description

- **What is Web Development?**
  Web development is the process of building and maintaining websites and web applications. It consists of **Frontend (client-side)** and **Backend (server-side)** development.
- **Why learn HTML, CSS & JavaScript?**
  - **HTML** → The structure of a webpage (headings, paragraphs, images, links).
  - **CSS** → The style of a webpage (colors, layouts, fonts, responsiveness).
  - **JavaScript** → The interactivity of a webpage (buttons, forms, animations, logic).
- **Where is Web Development used?**
  - Websites and blogs
  - E-commerce platforms
  - Portfolio & business websites
  - Interactive web applications (social media, dashboards)

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2. 10-Week Learning Roadmap

Week 1: Introduction to Web Development

- How the web works (Client-Server model)
- HTML, CSS, JS basics
- Setting up VS Code, Browser Dev Tools

📌 Project → **Basic personal homepage with HTML**

Week 2: HTML Fundamentals

- HTML structure (`<!DOCTYPE html>`)
- Headings, paragraphs, lists, links
- Images, audio, video
- Forms (input, textarea, select, checkbox, radio)

📌 Project → **Contact form webpage**

Week 3: CSS Fundamentals

- Inline, internal & external CSS
- Colors, fonts, borders, margins, padding
- CSS selectors & pseudo-classes
- Box model

📌 Project → **Styled profile card**

Week 4: Advanced CSS

- Flexbox & Grid layout
- CSS transitions & animations
- Media queries (responsive design)
- CSS variables

📌 Project → **Responsive landing page**

Week 5: Introduction to JavaScript

- Variables & data types
- Operators & expressions
- Functions
- DOM (Document Object Model) basics

📌 Project → **Interactive counter app**

Week 6: JavaScript – Events & DOM Manipulation

- Event listeners (click, input, keydown)
- Changing HTML & CSS with JS
- Form validation
- Local storage basics

📌 Project → **To-Do list app**

Week 7: JavaScript – Advanced Concepts

- Arrays & objects
- Loops (for, while, forEach)
- Conditional logic
- ES6 features (let, const, arrow functions, template literals)

📌 Project → **Quiz app with JavaScript**

Week 8: Responsive Web Design & Best Practices

- Mobile-first design
- Responsive navbars
- Accessibility (alt text, semantic tags)
- SEO basics (meta tags, titles)

📌 Project → **Responsive portfolio website**

Week 9: JavaScript Projects & API Integration

- Fetch API basics
- JSON data
- Using third-party APIs

📌 Project → **Weather App using OpenWeather API**

Week 10: Final Capstone Project

Bring everything together into a large project:

📌 **Capstone → Full personal portfolio website (multi-page, styled with CSS, interactive with JS, responsive, hosted online)**

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3. Interview Prep (Common Questions)

- Difference between HTML, CSS, and JavaScript.
- What is the difference between inline, internal, and external CSS?
- Explain the CSS box model.
- Difference between `id` and `class` in HTML.

- How does the DOM work in JavaScript?
- What is the difference between `var`, `let`, and `const`?
- What are media queries in CSS?
- How do you make a website responsive?

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4. Resources

- MDN Web Docs: https://developer.mozilla.org
- W3Schools Web Development tutorials
- FreeCodeCamp Web Development course
- "HTML & CSS" by Jon Duckett (book)
- CSS Tricks (website for CSS examples)