{WEB DEVELOPMENT}

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Week 1

Introduction to Web Development

- Overview of Web Development
    - Frontend vs Backend
    - Tools of the Trade

Setting Up the Development Environment

- Installing VS Code
- Extensions for VS Code (Live Server, Prettier, GitLens, etc.)
- Introduction to Browsers and Developer Tools

Weeks 2-3

HTML (Beginner to Intermediate)

- Basics of HTML
    - Structure of an HTML Document
    - Common Tags (headings, paragraphs, links, images, lists, etc.)
    - Attributes and Their Usage
- Semantic HTML
    - Importance of Semantic Tags (header, footer, article, section, etc.)
    - Accessibility in HTML
- Forms and Inputs
    - Form Elements
    - Validation Basics
- Media Elements
    - Embedding Images, Videos, and Audio

Weeks 4-6

CSS (Beginner to Intermediate)

- CSS Basics
  - Syntax, Selectors, and Properties
  - Colors, Units, and Fonts
- Box Model
  - Margins, Padding, and Borders
  - Width and Height
- Positioning and Layout
  - Flexbox
  - Grid System
- Responsive Design
  - Media Queries
  - Mobile-First Design
  - Introduction to Bootstrap Framework

Weeks 7-9

JavaScript (Beginner to Intermediate)

- JavaScript Basics
  - Variables, Data Types, and Operators
  - Loops, Conditionals, and Functions
- DOM Manipulation
  - Selecting and Modifying Elements
  - Event Listeners
- Fetch API
  - Basics of HTTP Requests
  - Working with JSON Data

Week 10

SCSS/SASS (Intermediate)

- Preprocessing Basics
    - Installing and Using SCSS
    - Variables, Nesting, and Partials
- Mixins and Functions
- Extends and Placeholders
- Advanced Concepts (Control Directives and Loops)

Weeks 11-13

PHP (Beginner to Intermediate)

- PHP Basics
    - Syntax, Variables, and Data Types
    - Conditionals and Loops
    - Functions and Arrays
- Form Handling
    - $_GET and $_POST
    - Validation and Sanitization
- File Handling
    - Reading and Writing Files
    - Uploading Files

Weeks 14-15

MySQL (Beginner to Intermediate)

- Basics of Databases
    - Tables, Rows, and Columns
    - Primary and Foreign Keys
- CRUD Operations
    - Create, Read, Update, Delete
    - Using PHP with MySQL (PDO)
- Joins and Relationships

Week 16

Version Control with Git and GitHub

- Basics of Git
    - Installation and Setup
    - Commands: init, add, commit, push, pull, clone
- Working with GitHub
    - Creating and Managing Repositories
    - Branching and Merging
    - Resolving Conflicts
- Collaboration
    - Pull Requests
    - Issues and Discussions

Weeks 17-20

Capstone Projects Frontend Projects

- Static Portfolio Website
    - Using HTML, CSS, and Bootstrap
- Interactive To-Do List
    - Adding JavaScript for Dynamic Functionality
- Responsive E-commerce Landing Page
    - Media Queries and Bootstrap Components

Full Stack Projects

- Blog Website
    - Frontend: HTML, CSS, JavaScript
    - Backend: PHP and MySQL
    - User Authentication and CRUD for Posts
- Online Store
    - Frontend: Responsive Design with SCSS
    - Backend: PHP with MySQL for Products and Orders
    - GitHub Integration for Version Control

Week 21

Advanced Topics (Optional)

- AJAX with JavaScript
- Deployment Basics
    - Using Hosting Services (Netlify for Frontend, PHP Hosting for Backend)
    - Database Deployment with MySQL

Week 22

Final Project