

# Frontend Development with HTML, CSS, JavaScript

## 1. HTML (HyperText Markup Language)

### Module1: Basics

- What is HTML?
- HTML Structure & Syntax
- Doctype declaration
- HTML Tags: <!DOCTYPE>, <html>, <head>, <body>

### Module2:Text Formatting Tags

- Headings (<h1> to <h6>)
- Paragraphs, Links, Images, Lists
- Inline vs Block elements

### Module3:HTML Elements

- Tables
- Forms (input, textarea, checkbox, radio, select, etc.)
- Semantic Elements (<article>, <section>, <nav>, <aside>, <footer>, <header>)
- Audio & Video embedding

### Module4:Advanced HTML

- HTML5 Features (forms, media, storage)
- Meta Tags
- Accessibility (ARIA tags)

## 2. CSS (Cascading Style Sheets)

### Module5: Basics

- What is CSS?
- Inline, Internal, and External CSS
- Syntax: Selectors, Properties, Values

### Module6:Selectors

- Element, Class, ID selectors
- Grouping, Descendant, Child, Pseudo selectors (:hover, :nth-child)

### Module7:Box Model

- Margin, Border, Padding, Content

## **Module8:Layout Techniques**

- Positioning (static, relative, absolute, fixed, sticky)
- Display types: block, inline, inline-block, none
- Flexbox (main axis, cross axis, properties)
- CSS Grid (rows, columns, areas)

## **Module8:Styling**

- Fonts, Colors, Backgrounds
- Borders, Shadows, Opacity
- Transitions and Animations
- Media Queries (Responsive Design)

## **Module9:Advanced CSS**

- Custom properties (CSS Variables)
- Calc function
- BEM (Block Element Modifier) Naming
- SCSS/SASS (optional preprocessor)

## **3. JavaScript (JS)**

## **Module10:Basics**

- What is JavaScript?
- Adding JS to HTML (script tag, external file)
- Variables (var, let, const)
- Data Types
- Operators

## **Module11:Control Structures**

- If-Else, Switch
- Loops (for, while, do-while)
- Break and Continue

## **Module12:Functions**

- Function declarations & expressions
- Arrow functions
- Callback functions
- IIFE (Immediately Invoked Function Expressions)

## **Module13:DOM Manipulation**

- What is the DOM?
- Accessing Elements (getElementById, querySelector, etc.)
- Changing content & styles

- Event Listeners (onclick, addEventListener)
- Creating, appending, removing elements

#### **Module14:Events**

- Types of events: click, input, submit, etc.

Event bubbling & delegation

#### **Module15:Arrays & Objects**

- Creating and manipulating arrays
- Array methods: map, filter, reduce, forEach
- Objects: creation, properties, methods

#### **Module16:ES6+ Features**

- Template literals
- Destructuring
- Spread & Rest operators
- Modules (import/export)
- Promises & Async/Await

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**END**

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