

Frontend Development

Course Curriculum (60 Hours)

Introduction to Web Development:

- What is Web Design?
- What is Web Development?
- What is the difference between Web Design and Web Development?
- Technologies used for Web Development.
- Tools used for Web Design.
- Importance and Usage of Text editors.

HTML5:

Introduction:

- History and Importance of HTML
- Basic HTML syntax
- The current state of HTML
- HTML resources
- Choosing a code editor

Basic Page Structure:

- Exploring an HTML document
- DOCTYPE declarations
- Document head



- Document body
- Understanding content models

Formatting Page Content:

- Formatting content with HTML
- Headings
- Paragraphs
- Emphasizing text
- Displaying special characters
- Whitespaces
- Images

Creating Lists:

- Unordered lists
- Ordered lists
- Definition lists

Structuring Content:

- Value of structure
- Document outlines
- Nav element
- Article element
- Section element
- Aside element
- Div element



- Other semantic elements

Creating Links:

- Anchor element
- Page internal linking
- Linking to external pages
- Linking to downloadable
- Linking to page regions

Controlling styling:

- HTML and CSS
- Creating inline styles
- Style element
- Controlling typography
- Adding color
- Externalizing styles

Basic Scripting:

- HTML and JavaScript
- The script element
- Writing a function
- Using the DOM
- Listening for an event
- Responding to events
- Externalizing JavaScript

CSS3:

Getting started:

- HTML overview
- Default browser styles
- Browser support and inconsistencies
- Inline, internal and external CSS
- Naming conventions

CSS Core:

- Syntax, terminology, and naming conventions
- Type, class, and id selectors
- Combinator selectors
- Selectors: Best practices

Typography:

- Web-safe fonts and the font-family property
- Web fonts and Google fonts
- The font-size property
- Practicing with web fonts and font-size
- The font-style and font-weight properties
- The color, line height, and text properties
- Adjusting the font-weight property

Layouts:

- Block vs. inline display
- The box model
- Margin and page layouts
- Practicing layouts
- Practicing with padding and spacing
- Floats
- Practicing with floats
- The box model fix
- Practicing with columns
- Box model review
- Float and display review
- Horizontal navs with the display property
- Horizontal navs with the float property
- Practicing with the nav element
- Positioning
- Practicing with fixed navigation
- Practicing with positioning elements
- Float, display, and position
- Layers and the z-index property

Advanced layout:

- Design with a grid



- Intro to CSS Grid
- CSS Grid example
- Intro to flexbox
- CSS Flexbox

Hands-on :

- **Building Paytm clone Page**
- **Building own Portfolio page**

JavaScript:

Introduction:

- What is JavaScript?
- How does JavaScript relate to Java?
- History of JavaScript
- Navigating the JavaScript landscape

Basics:

- Tools for JavaScript development
- Introducing the browser console
- Add inline JavaScript to an HTML document
- Add JavaScript in an external file

Writing JavaScript:

- Basic syntax & comments
- Declarations
- Arithmetic operators and math
- Working with strings and numbers





- Variable scope
- Variable hoisting
- Data structures and types
- Literals

Control flow:

- Conditional statements and logic
- Advanced conditions and logic
- if..else
- Switch

Arrays:

- Arrays
- Typed arrays

Loops and iteration:

- for
- while
- do..while
- break/continue
- for..in
- for..of

Functions:

- Defining functions
- Calling functions





- Function scope
- Closures
- Arguments & parameters
- Arrow functions

Essential JavaScript Built-in methods:

- Number Methods
- Boolean Methods
- String Methods
- Array Methods
- Math Methods
- RegExp Methods

Writing JavaScript-Advanced:

- Text formatting - String literals
- String object
- Template literals
- Regular expressions

Objects:

- Creating objects
- Objects and properties
- Defining methods





Keyed collections:

- Map
- Set

JavaScript modules:

- Exporting
- Importing
- Default exports
- Renaming features
- Aggregating modules
- Dynamic module loading

JavaScript and the DOM:

- Intro to DOM
- Target elements in the DOM with querySelector methods
- Access and change elements
- Access and change classes
- Access and change attributes
- Add DOM elements
- Apply inline CSS to an element
- DOM events
- Typical DOM events



Hands-on Projects with Deployment:

1. Creating a website in which we can upload files, displaying data in a table format, and adding CSS to it from the front end.
2. Creating a simple College website using HTML, CSS, JS. In which we can move from one page to another page, building a registration page.
3. Creating a simple speech recognition template through which we can store the information that we speak and we can send that data also to a server.