

## Module 1: HTML

### 1.1 HTML 4 & Older Versions

- HTML Fundamentals Introduction
- Headings
- Tags and Types
- Elements and Types
- Diff b/w inline and block
- White spaces
- Lists and types
- Tables and Examples
- Formatting Tables
- Spanning Columns and Rows
- Nested Elements
- Links & different ways of linking
- Images, absolute and relative paths

### 1.2 HTML Forms Fundamentals

- Basics of forms
- Form Attributes
- Form Elements/inputs and usage

### 1.3 HTML 5 & Overview

- Introduction To HTML5
  - Limitations of HTML4 and older versions
  - Overview and benefits of HTML5
  - Importance of Doctype
  - Details of new features of HTML 5
  - Overview of semantic elements
  - Page layout and structure
  - Benefits of semantic elements
  - Header & Footer
  - Section and Articles, Aside & Nav
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## Module 2: Form Elements & Attributes

- New Input Elements
  - New Elements in Forms
  - New Attributes in Form Elements
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## Module 3: CSS2 & CSS3

- Introduction To CSS3
  - Ways to apply CSS
  - Selectors & Examples
    - - Global Selectors
    - - Tag/Element Selectors
    - - Class Selectors
    - - ID Selectors
    - - Attribute selectors & Types
    - - Child Selectors & Types
    - - Sibling Selectors & Types
    - - Pseudo Selectors & Types
    - - Latest Selectors
  - All Properties
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## Module 4: JavaScript

- Introduction
  - Data types and data structures in JS
  - Control structures (if, if-else, while, for, switch case statements)
  - Dynamic creation and manipulation of DOM elements using JS
  - Adding dynamic event listeners to DOM elements
  - Event capturing and event bubbling
  - Validations using key char codes
  - Strings and predefined methods
  - Arrays
  - Predefined methods in arrays
  - Objects
  - JSON
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## Module 5: ES6 – ES9

- History of JavaScript
- What is ES6
- A word on babel
- Block scope, let & const
- Template literals
- Arrow functions
- Spread and Rest operators
- Object literal improvements
- Destructuring
- Classes
- Inheritance
- Static properties and methods
- Promises
- Iterators and Iterables
- Generators
- Modules

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## Module 6: ReactJS

### 6.1 Introduction to React

- What is React?
- Why React?
- React version history
- React 16 vs React 15
- Just React – Hello World
- Using create-react-app
- Anatomy of react project
- Running the app
- Debugging first react app

## **6.2 Templating using JSX**

- Working with React. createElement
- Expressions
- Using logical operators
- Specifying attributes
- Specifying children and Fragments

## **6.3 It's all about components**

- Significance of component architecture
- Types of components
- Functional
- Class based
- Pure Component
- Component Composition

## **6.4 Working with State & Props**

- What is state and its significance.
- Read state and set state.
- Passing data to component using props
- Validating props using prop Types
- Supplying default values to props using default Props

## **6.5 Rendering Lists**

- Using react key prop.
- Using map function to iterate on arrays to generate elements.

## **6.6 Event handling in React**

- Understanding React event system
- Understanding Synthetic event
- Passing arguments to event handlers

## **6.7 Understanding component lifecycle and handling errors**

- Understand the lifecycle methods.
- Handle errors using error boundaries.

## 6.8 Working with Forms

- Controlled components
- Uncontrolled components
- Understand the significance to default Value prop.
- Using react ref prop to get access to DOM element.

## 6.9 Context

- What is context
- When to use context
- Create Context
- Context.Provider
- Context.Consumer
- Reading context in class

## 6.10 Hooks

- What are hooks
- Why do you need hooks
- Different types of hooks
- Using state and effect hooks
- Rules of hooks

## 6.11 Routing with React Router

- Setting up react router
- Understand routing in single page applications
- Working with Browser Router and Hash Router components
- Configuring route with Route component

## 6.11 Just Redux

- What is redux
- Why redux
- Redux principles
- Install and setup redux
- Creating actions, reducer and store



## 6.12 React Redux

- What is React Redux
- Why React Redux
- Install and setup
- Presentational vs Container components
- Understanding high order component
- Understanding mapStateToProps and mapDispatchToProps usage

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**\*\*\*Note:** This outline is comprehensive and can be tailored based on course duration, depth of coverage, and the participants expertise levels. As technology continues to evolve, it is crucial to review and update the content regularly to incorporate emerging tools, practices, and industry best standards.

