

React JS Course Curriculum

HTML 5, CSS, BOOTSTRAP JS & TS Curriculum

- Introduction - Web
- What are the different Types of Web Apps overview?
- Introduction to HTML
- Define HTML Structure
- Difference between Tag vs Element
- Difference between Semantic vs Non-semantic elements
- Difference between Block level elements vs Inline elements
- HTML Elements
- HTML Forms & its Attributes
- HTML Input Elements
- HTML Global Attributes
- HTML Element Specific Attributes

CSS

- What is CSS?
- Understanding the CSS Syntax.
- CSS Selectors.
- How To Add CSS in HTML.
- Cascading Order.
- CSS Colors.
- CSS Backgrounds.
- CSS Borders
- CSS Margins
- CSS Padding
- CSS Height and Width
- CSS Text, Fonts, Links, Tables
- CSS – Float and Clear
- The display: inline-block Value

BOOTSTRAP

- What is Bootstrap?
- Get Start with Bootstrap
- Containers
- Grid System
- Structure of a Bootstrap Grid
- Bootstrap Colors
- Bootstrap Tables

- Bootstrap Jumbotron
- Bootstrap Alerts
- Bootstrap Buttons
- Bootstrap Navs
- Define Navigation Bars
- Bootstrap Forms
- Bootstrap Modal

Javascript Course Content

Chapter 1: Introduction – Javascript

- Introduction
- What is JavaScript?
- JavaScript Features
- JavaScript Libraries
- Understanding HTML, CSS, JavaScript
- JavaScript Version
- ES5
- ES6/ES2015
- ES7/ES2016
- ES8/ES2017
- Data Types
- Number
- String
- Boolean
- Undefined
- Null
- Variable Mutation
- Basic Operator
- Operator Precedence
- Shorthand operator
- Problem statement
- Decision making statement-if else
- if else – example
- Comparing the problem statement solution
- Switch statement – example
- Boolean logic
- Boolean logic example
- Ternary operator
- Ternary operator example
- Tips
- Functions

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- Function statement
- Function Statement Example
- What is Array
- Real world Problem Ecommerce
- Real world problem transport
- Space and the Complexity
- Built in function Complexity
- Examples of Array
- Objects, When to use it
- Objects and Methods
- Loops and Iteration
- For Loop
- Continue and Break Statement

Chapter 2: ES6 JavaScript

- History of JavaScript
- Features
- let & const and its example
- Arrow Functions
- Alternative
- Tips and Arrow Functions
- Exports and Imports
- Tips for exports and imports
- Classes
- Classes example
- Inheritance
- Spread and rest Parameter
- Destructuring

React JS Course Content

Section 1: Getting Started with React

- What is ReactJS?
- Installation or Setup
- Create React App
- Advantages Of React JS
- Workflow Of React JS
- Node Setup
- How to use NPM and its purpose
- ES6 Introduction
- JS vs JSX vs TS vs TSX

Section 2: Components

- Creating Components
- Basic Component
- Nesting Components
- Higher order components

Section 3: OVERVIEW OF JSX

- Introduction of Virtual DOM.
- Difference between JS and JSX.
- Why use JSX?
- JSX Attributes
- JSX Styling

Section 4: Props in React

- Introduction
- Default props
- PropTypes
- Passing down props using spread operator
- Props.children and component composition
- Detecting the type of Children components
- Props Drilling

Section 5: State in React

- Basic State
- Common Antipattern
- setState()
- State, Events And Managed Controls

Section 6: React Component Lifecycle

- Component componentWillMount
- Component UnMount
- Component Update
- Lifecycle method call in different states
- React Component Container

Section 7: Handling Events

- Event handling in React
- Binding event handlers
- Arrow functions vs. regular functions
- Primary Events
- Sharing the events between components

Section 8: Communicate Between Components

- Child to Parent Components
- Parent to Child Components
- Not-related Components

Section 9: Conditional Rendering

- Conditional rendering with if statements
- Conditional Rendering using logical && in JSX
- Conditional Rendering using ternary operator
- Preventing Component from Rendering

Section 10: Lists and Keys

- Steps to Create and Traverse React JS Lists
- Rendering lists inside Components
- Key in React List

Section 11: ReactJS Keys

- What is a key in React ?
- Assigning keys to the list
- Difference between keys and props in React

Section 12: React Hooks

- useState()
- useEffect()
- useContext()
- useRef()
- useReducer()
- Custom React Hooks
- useDispatch(), useSelector, useMemo, useLayoutEffect()

Section 13: Styling in React

- CSS in React
- Different approaches for styling (CSS, CSS-in-JS, CSS Modules)
- Inline styles
- Styling Libraries
- Popular CSS frameworks (e.g., Bootstrap, Material-UI)

Section 14: Router

- Introduction to React Router
- Setting up React Router
- Creating routes

- Navigating with React Router
- Using Link and NavLink
- Nested Routes and Dynamic Routing
- Nested routes
- Passing parameters to routes
- Query String, accessing current URL

Section 15: React JS forms

- React Forms
- Lists of Form components
- Control Input elements.
- Controlled and Uncontrolled form components
- Adding Forms in React
- Handling React Forms
- Submitting React Forms
- Multiple Input Fields
- React JS Form validations
- Custom Validations

Section 16: State Management with Redux

- Introduction to Redux
- Understanding the need for state management
- Basic concepts: actions, reducers, store
- Setting Up Redux
- Installing Redux and setting up a store
- Creating actions and reducers
- Connecting React with Redux
- Using connect to connect components to the store
- Dispatching actions

Section 17: Asynchronous Programming and API Integration

- AJAX and Fetch API
- Making HTTP requests in React
- Fetching data from an API
- Async/Await and Promises

Section 18: Handling errors in React application

- Error Handling and Debugging
- Debugging React apps
- Performance Optimization
- Memoization
- React.memo and PureComponent

Section 19: ReactJS Virtual DOM

- What is DOM ?
- Disadvantages of real DOM
- Virtual DOM
- How does virtual DOM actually make things faster?
- How virtual DOM Helps React?
- Virtual DOM Key Concepts
- Differences between Virtual DOM and Real DOM

Section 20: Unit Testing Overview**Section 21: Lazy Loading****Section 22: Code Splitting****Section 23: Server-Side Rendering****Section 24: Micro FrontEnd Overview****Section 25: Deploying a React application**

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