

ReactJS Basics

1. Course Name: ReactJS

2. Summary: Training aimed at imparting knowledge to build Rich Internet Application (RIA) using ReactJS, this involves hands-on practice sessions to create a web-app from scratch to the first full fledged working application that having multiple views / components with Router implementation, login view, security, dashboard and Add /Update / Delete CRUD operations. Making participants confident in ReactJS Web Development.

3. Complexity Level of the Course: Basic

4. Prerequisite: Participants must have intermediate web development experience in JavaScript, HTML and OOPs concepts.

5. CourseObjectives:

At the end of this training course, the participants will:

- Able to confidently create, implement ReactJS applications
- Understand ReactJS (compare it with other technologies)
- Get the architecture of a React application

6. Target Audience:

1. Web Developer, fresher with programming skills
2. Web developer who wants to build best-of-breed web UIs with the simplicity and elegance of JavaScript.
3. Information Technology, Computer Science, Engineering

7. Lab Need :

- NodeJS
- SublimeText / VSCode
- Chrome
- Windows / Linux or Macbook with minimum 8GB RAM
- Internet Connection (with permissions to install npm modules)

8. Fundamentals of HTML and DOM

Day One

Course Introduction PreTest

Understanding JavaScript:

- Functions as first-class citizens
- Prototypical chain
- Asynchronous programming
- OOPs in JS
- Events / Callbacks in JS
- DOM fundamental
- JavaScript and jQuery

Hands on HTML5 and Javascript
Customer Application in CRUD in HTML5

Design Pattern
ReactJs comparison with other framework
Advantages of using frameworks
(Design patterns , performance, maintainability)
Why ReactJS

ES2015 *Introduction*

- **ES6** Overview
- Classes & Modules
- Destructuring Objects & Arrays
- Template String
- Spread & Rest operators
- Arrow Functions
- Optional and Named Parameters

Day Two

Components

- Component Life-Cycle
- Virtual DOM
- Component Events
- Using States and Properties
- Initialising States from properties
- Accessing DOM nodes using refs
- Nested component

Hands on Exercise

React Functional Component / Hooks

useState
useEffect

- Component Compositions
- Reusable Components
- Type Checking With PropTypes
- CRUD operations React Nested CustomerAPP

Hands On and practice session on ReactJS Components

Day Three

- Properties State Lifecycle
- Communication Between Components
- The Core of React Class
- Routing
- Params , match
- Handling routing in ReactJS
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Hands On and practice session on ReactJS Router

Hands on Exercise

Forms

- Controlled Components
- Uncontrolled Components ReactLink
- Principle of One-Way and Two-Way Data Binding
- Best Practices
- Styled Component in ReactJS
- Services
- Communication with Server / Fetch

Day Four

React Class Component

setState
componentDidMount
componentWillMount

UI Libraries in React

Material Design Introduction

Concepts and GRID / layouts in CSS and Material design

React with Material design
Themes and Templates

Hands on Exercise

Building an application from scratch with Routing, LoginPage, Fetch API and Responsive design using Material design

Post Test and Assessment