

React JS
Training
By
Zeolearn

24 hours of
Instructor Led classes
Basic to Advanced Level

















React is a view library to develop single page applications in Javascript. It is the most popular library backed by Facebook. With react library you can develop dynamic front end applications which comes with great features like component architecture, data binding, declarative views, universal apps

Zeolearn's course on react will make you familiar with the beginner to intermediate concepts of React library to build SPA applications that will help your business achieve faster ROI due to lesser development and maintenance cost, and faster accessibility.

#### YOU WILL LEARN TO -

- Understand how Single Page React application is different than traditional web development frameworks
- Code using new ES6 language features
- Develop an application from scratch using latest version of ReactJS
- Understand the benefits of unidirectional data flow
- Understand and use React, React Router, Redux, Redux Saga and other popular libraries
- Creating redux middleware with Redux saga
- Use styled-components to create presentational components (CSS in JS)
- Taking the advantage of react and redux dev tools for better debugging
- Taking the advantage of immutable.js library to follow the immutable state principle
- Implementing server-side rendering for SEO benefits and to reduce initial load times
- Unit test React components, redux using Jest, Enzyme and sinon
- Understand webpack bundler and its killer features like code splitting, lazy loading, tree shaking, hot module replacement
- Create, build, and deploy react applications to cloud
- React ecosystem and sources for good third-party libraries

#### WHO SHOULD ATTEND

This course is apt for web developers wanting to use React.js to build state-of-the-art web UIs will benefit from this course.

# **PRE-REQUISITES**

All attendees must have substantial prior experience developing with JavaScript. If attendees will not have prior JavaScript experience, we would be delighted to precede this class with a one- or two-day intensive JavaScript.

## CURRICULUM FOR REACT JS





#### **Module 1: ES6 Primer**

- History of Javascript
- What is ES6
- A word on bable
- 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
- Set and Map

#### **Module 2: 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

# Module 3: Templating using JSX

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

# Module 4: It's all about components

- Significance of component architecture
- Types of components
  - Functional
  - Class based





- Pure
- Component Composition

# Module 5: Working with state and props

- What is state and it significance
- Read state and set state
- Passing data to component using props
- Validating props using propTypes
- Supplying default values to props using defaultProps

## Module 6: Understanding component lifecycle

• Understanding component lifecycle

## **Module 7: Event handling in React**

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

## **Module 8: Rendering lists**

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

# Module 9: Working with forms

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

#### Module 10: Understand react portals

Understand react portals

#### **Module 11: Under error boundaries**

Under error boundaries

## Module 12: React's new fiber architecture

React's new fiber architecture.

## **Module 13: Routing with react router**

- Setting up react router
- Understand routing in single page applications
- Working with BrowserRouter and HashRouter components
- Configuring route with Route component





- Using Switch component to define routing rules
- Making routes dynamic using route params
- Working with nested routes
- Navigating to pages using Link and NavLink component
- Redirect routes using RedirectComponent
- Using Prompt component to get consent of user for navigation
- Path less Route to handle failed matches

## Module 14: Just Redux

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

## Module 15: Immutable.js for immutable datastructures

• Immutable.js for immutable datastructures

#### **Module 16: React Redux**

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

## Module 17: Redux Saga(Redux middleware)

- Why redux middleware
- Available redux middleware choices
- What is redux saga
- Install and setup redux saga
- Working with Saga helpers
- Sagas vs promises

## Module 18: Server-side rendering with react

- What is server-side rendering (SSR)?
- Why SSR
- Working with renderToString and renderToStaticMarkup methods

## Module 19: Unit testing in react

• Understand the significance of unit testing





- Understand unit testing jargon and tools
- Unit testing react components with Jest
- Unit testing react components with enzyme
- Using sinon to mock

## Module 20: Webpack primer

- What is webpack
- Why webpack
- Install and setup webpack
- Working with webpack configuration file
- Working with loaders
- Quick word on code splitting, lazy loading, tree shaking
- Setting up Hot Module Replacement

#### **PROJECT WORK**

Towards the end of the course, all participants will be required to work on a project to get hands on familiarity with the concepts learnt. You will use React.js development tools and build an RIA application with full support from your mentors. This project, which can also be a live industry project, will be reviewed by our instructors and industry experts. On successful completion, you will

be awarded a certificate.

# **INFRASTRUCTURE REQUIREMENTS:**

- Node.js
- Good Text / JavaScript Editor (Notepad++ / SublimeText / Brackets / Atom )
- Chrome
- Internet Connection (Mandatory with permissions to install npm modules from git on demand)

#### WHY ZEOLEARN:

- **Get Mentored by Industry Practitioners**: Zeolearn not only provides trainers for professional courses, we provide you with Industry Experts who are currently working in the field.
- Immersive Hands-on Trainings: All our training sessions are based on Learn by-doing method and hence every trainee learns by being immersed in projects that they develop along with their mentor. Every session is a combination of practical exercises, theoretical learning, hands-on exercises, group discussions, simulations and intensive Q & A sessions.
- **Build a Portfolio of Projects**: Zeolearn professionals help your employees to not only learn new concepts but also how to apply the theory to practice.





 Mentoring Sessions: Zeolearn professionals can also be retained even after the training session to help incorporate the learned concepts in a particular project and further mentoring.

## ZEOLEARN'S TRAINING DELIVERY METHOD:

- Hands-on Training with immersive, interactive and practice sessions.
- Administered Classroom Assignments, Group Discussions, Simulation based learning and Q & A Sessions
- Learning the concepts through examples and Build a project through the course of training
- Post Training Sessions from Industry Experts(2 4 Hours Online sessions)
- Mentors evaluate / review the Project (or)
- Deep dive into specific concepts (or)
- Assistance provided in implementing the technology in existing / new projects
- Exclusive Mentor Support provided via email up to 3 Months.



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