

React Js and Redux

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Day 1

JavaScript Fundamentals

Before we start with developing React Application, we will learn all the fundamental concepts and features of Javascript including:

- Scope
- Closures
- Hoisting
- Classes, Constructors, Prototypes
- Arrays, Strings functions
- ES6 and ES8 Javascript required for react.

How the Web Frameworks Works

Having the in-depth understanding of Javascript we will learn for different frontend web frameworks work. We will also cover the latest ES6 & ES7 features of Javascript in this lecture.

- Event Loops, Promises
- Object, Array destruct and rest operator
- Fat-arrow functions, this, call, apply, bind
- Template Literals, Default Params
- DOM manipulation
- Virtual DOM
- Webpack Project setup from scratch

Introduction to React

Now we will start learning how React works. This lecture will include fundamentals of React.

- Introduction to ES6 modules
- Components and elements in React
- Component Lifecycle

- Introduction to JSX
- Functional components
- Component state management

Day 2

React Fundamentals 2

In this lecture we will cover more React concepts and features.

- Error Boundaries
- Fragments
- Refs
- Handling events & building forms
- Pure class components & React.Memo (new)
- React Context API
- Typechecking With PropTypes

Node

- Basics of Node and Installation.
- Introduction to Npm
- Adding and removing modules

React with Node

- Creating an application using Create React App.
- Life Cycle
- Debugging
- Default values
- SetState in depth

Day 3

- Creating Forms
- Creating Table
- Handling Events
- Applying Filters
- JSX in depth
- Validations
- Applying Styles
- Backend calls

- Stateful Components
 - Stateless Components
 - Local Storage
 - Routing
 - Basic Routing and Passing Params
 - Hyperlinks
 - Master Pages
 - Reconciliation
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- Creating Reusable Components
 - React.Component vs React.pure Component
 - Composition vs Inheritance
 - Code Reusability and Optimization
 - Fragments
 - Bundling
 - Deploying

Day 4

Server side rendering using React and Next.js?

- * Fundamentals of Next
- * Zero-Config approach
- * Universal JavaScript (Isomorphic)
- * Server-side rendering
- * Code splitting
- * Next vs. Create React App vs. Gatsby

State Management with Redux

Building upon the React context API in previous lecture we will learn how to use Redux to implement application level state management. We will also learn the principles of Flux pattern.

- Redux fundamentals
 - Combined reducers
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- Creating Redux middlewares like logger and state persistence
 - Async actions with Redux thunk middlewares
 - Building forms with Redux forms

Day 5

Use Context lifecycle hook
Using Session Context

Server Side rendering with State management

Routing & Code Splitting

Finally we will learn how to implement routing using React Router & code splitting in React.

- React Router V4
- Code Splitting with Webpack
- Code Splitting with React Loadable
- Code Splitting with suspense & lazy (new)
- Precache & Preload concepts
- Hooks in React (new)

Test Case development using Jest and Enzyme

Debugging techniques