Building Web Applications with React 16

Category: Software Development & Programming | **Vendor:** Various

Duration: 32.00 hours (4 days) **26.0 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

React is an open-source JavaScript library from Facebook used for building HTML5 web applications. In this training course, you learn how to develop a complete application by building high-performance User Interfaces (UIs) with JSX components targeting a virtual DOM, and creating Flux applications, which provide complementary architectural patterns to construct client-side application functionality.

About This Course

React is an open-source JavaScript library from Facebook used for building HTML5 web applications. In this training course, you learn how to develop a complete application by building high-performance User Interfaces (UIs) with JSX components targeting a virtual DOM, and creating Flux applications, which provide complementary architectural patterns to construct client-side application functionality.

Prerequisites & Entry Requirements

General Prerequisites:

Experience developing web pages with JavaScript, HTML, and CSS at the level of:

- JavaScript for Modern Web Development

Learning Outcomes

Upon successful completion of this course, participants will be able to:

- Create an isomorphic web application using Facebook React and Flux
- Compose a UI using React JavaScript and JSX components
- Integrate React forms with Ajax and back-end REST services
- Apply the Flux application pattern (dispatcher, stores, and actions)
- Exploit React animation components with CSS3 transitions

Detailed Course Outline

Introduction and Overview

- Features of React and Flux
- Benefits of the virtual DOM
- Configuring the development and build environment

Designing Custom React Components

Displaying React content

- Employing React.createElement() and React.DOM.* factories
- Rendering the application with ReactDOM.render()
- Constructing the UI on the server with renderToString()

Leveraging JSX for UI design

- Coding custom components with React.createClass()
- Generating component output with the render method
- Composing a JSX component hierarchy
- Incorporating third-party components

Activating React Components

Parameterising components

- Disambiguating component properties and state
- Inserting properties into rendered output with this.props
- Passing property values using JSX { } expressions
- Initialising default values with getDefaultProps()

Manipulating component state

- Setting starting state values with getInitialState()
- Reading application data with this.state
- Mutating data with this.setState()
- Harnessing React autobinding and event aggregation

Integrating into the component life cycle

- Attaching and detaching logic and event handlers in componentDidMount and componentWillUnmount
- Enhancing performance with componentShouldUpdate
- Responding to changes with componentWillReceiveProps

Developing React Forms

Manipulating form input components

- Working with interactive properties
- value
- defaultValue
- checked
- selected
- Capturing form component updates with onChange
- Comparing controlled and uncontrolled components

Simulating two-way binding

- Applying the onChange / setState() convention
- Employing the LinkedStateMixin
- Passing ReactLink objects through the props hierarchy

Connecting React to REST services

- Making Ajax calls from React
- Mapping CRUD access to REST actions
- GET
- POST
- PUT
- DELETE

Creating Flux Applications

Modelling client-side data interactivity

- Identifying Flux participants
- Actions
- Dispatcher
- Stores
- Views
- Harnessing unidirectional data flow
- Comparing Flux to Model View Controller, Redux and Relay

Coding a Flux application

- Extending the Facebook Dispatcher
- Utilising Node.js EventEmitter with custom stores
- Integrating REST access with Flux action creators

Integrating routing into Flux

- Exploiting the react-router for semantic URLs
- Mapping URL paths and parameters to components

Analysing React Applications

Developer tools

- Inspecting React components with browser extensions

- Identifying and debugging rendering errors

Unit testing

- Running tests with Jest

- Simulating event dispatch with ReactTestUtils.Simulate

Performance testing

- Establishing a baseline

- Profiling React execution with Perf.start() and stop()

- Optimising component reconciliation with key

Animating React Applications

- Including the react-css-transition-group add-on

- Employing the ReactCS component

- Writing CSS transitions and animations

Skills You Will Learn:

- Create an isomorphic web application using Facebook React and Flux
- Compose a UI using React JavaScript and JSX components
- Integrate React forms with Ajax and back-end REST services
- Apply the Flux application pattern (dispatcher, stores, and actions)
- Exploit React animation components with CSS3 transitions

Frequently Asked Questions

Q: What delivery options are available for Building Web Applications with React 16?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 4-day Building Web Applications with React 16 course provides up to 26.0 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Building Web Applications with React 16 training?

The training takes place over 4 day(s), with each day lasting approximately 32.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Building Web Applications with React 16?

Yes, we provide corporate training, dedicated training, and closed classes for Building Web Applications with React 16. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Building Web Applications with React 16, Programming, REACT

Q: Why choose Nexus Human for Building Web Applications with React 16?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Building Web Applications with React 16 training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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