Faysal Aziz

Advanced Web Applications Design

with React JS and React Native

FA-0043 · 3-Day

Software Development

Introduction

- 3-Day Course

This comprehensive course is intended for developers looking to advance their skills in building both web and mobile applications using React JS and React Native. It covers advanced concepts and best practices in application design, ensuring a deep understanding of these powerful frameworks.

Learning outcomes

- Master advanced techniques in React JS for web development.
- Gain proficiency in building mobile applications with React Native.
- Understand state management, routing, and API integration in React applications.
- Implement testing, debugging, and deployment strategies for React-based applications.

Prerequisites

- Solid understanding of JavaScript, including ES6+ features.
- Development experience and knowledge of React JS and React Native.
- Expertise with HTML, CSS, and modern web development practices.

Training outline

1. Advanced React JS for Web Development

Objective: Deepen understanding of React JS for building sophisticated web applications.

Advanced Component Architecture

1. Higher-Order Components
2. Render Props and Compound Components
3. Hooks in-depth (useReducer, useMemo, useRef)

State Management in React

1. Context API and Global State Management
2. Integrating Redux for Complex State Management

Connecting to APIs

1. Fetching Data with Axios
2. Handling Asynchronous Operations

Lab Session: Building a Complex Web Application

1. Implementing a real-world project using advanced React JS features

2. Diving into React Native for Mobile Development

Objective: Explore React Native for building cross-platform mobile applications.

React Native Fundamentals

1. React Native Components and Architecture
2. Styling and Layout in React Native

Navigation and Data Management

1. Implementing Navigation with React Navigation
2. State Management in React Native

Integrating with Device Features

1. Accessing Camera, GPS, and Sensors
2. Offline Data Storage and Handling

Lab Session: Developing a Mobile Application

1. Creating a cross-platform mobile app with React Native

3. Testing, Debugging, and Deploying React Applications

Objective: Learn to test, debug, and deploy React JS and React Native applications efficiently.

Testing Strategies

1. Unit Testing with Jest
2. UI Testing with React Testing Library and Enzyme
3. End-to-End Testing in React Native

Debugging Techniques

1. Debugging Tools for React and React Native
2. Performance Optimization

Deployment and Best Practices

1. Deploying React Web Applications
2. Building and Releasing React Native Apps for iOS and Android

Lab Session: Finalizing Projects

1. Testing, debugging, and preparing applications for deployment

This course includes a blend of theoretical learning and hands-on practical sessions, culminating in real-world projects that encompass the key aspects of advanced web and mobile application development with React JS and React Native. Participants will leave with the skills to design, develop, test, and deploy sophisticated applications across platforms.

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