

React and React Native

Duration: 40 Hours (5 Days)

Course Overview

React and React Native certifications officially recognize an individual's expertise in these JavaScript libraries, which are widely used for building user interfaces. Developed by Facebook, React facilitates seamless UI development for web applications, while React Native enables the creation of mobile applications. These certifications validate a professional's ability to write, test, and deploy functional, optimized code using React or React Native effectively. The certification process emphasizes core concepts such as Components, State, Props, Lifecycle Methods, and Hooks in React, as well as platform-specific development techniques in React Native. Earning these certifications demonstrates a strong understanding of high-quality, intuitive application development, making them a valuable credential in the industry.

Audience Profile

- Web developers aiming to expand their skill set.
- Programmers seeking expertise in popular JavaScript libraries.
- App developers aspiring to create cross-platform applications.
- IT professionals looking to stay updated with the latest technologies.
- Computer Science students eager to broaden their knowledge.

Course Syllabus

Module 1: Introduction to React

- What is React?
- Setting Up the Development Environment
- Hello React
- Custom Configuration
- Full Stack Architecture

Module 2: ES6 Refresher

- Introduction
- let vs var vs const
- Objects
- The "this" Keyword
- Binding this
- Arrow Functions
- Arrow Functions and this
- Array map Method
- Object Destructuring
- Spread Operator
- Classes
- Inheritance
- Modules
- Named and Default Exports

Module 3: Components

- Introduction
- Setting Up the Project
- Your First React Component
- Embedding Expressions
- Setting Attributes
- Rendering Classes Dynamically
- Rendering Lists
- Conditional Rendering
- Handling Events
- Binding Event Handlers
- Updating the State
- What Happens When State Changes
- Passing Event Arguments

Module 4: Composing Components

- Introduction
- Composing Components
- Passing Data to Components
- Passing Children
- Debugging React Applications
- Props vs State
- Raising and Handling Events
- Updating the State
- Single Source of Truth
- Removing Local State
- Synchronizing Multiple Components
- Lifting the State Up
- Stateless Function Components
- Destructuring Arguments
- Lifecycle Hooks
- Mounting Phase
- Updating Phase
- Unmounting Phase

Module 5: Pagination, Filtering, and Sorting

- Introduction
- Pagination: Component Interface
- Pagination: Display Pages
- Pagination: Handling Page Changes
- Pagination: Paginating Data
- Pagination: Type Checking with PropTypes
- Filtering: Component Interface
- Filtering: Display Items
- Filtering: Default Props

- Filtering: Handling Selection
- Filtering: Implementing Filtering
- Sorting: Extracting Logic
- Sorting: Raising Sort Events
- Sorting: Implementing Sorting

Module 6: Routing

- Introduction
- Setup
- Adding Routing
- Switch
- Link
- Route Props
- Passing Props
- Route Parameters
- Optional Parameters
- Query String Parameters
- Redirects
- Programmatic Navigation
- Nested Routing
- Adding React Router
- Adding Routes

Module 7: Forms

- Introduction
- Building a Bootstrap Form
- Handling Form Submission
- Refs
- Controlled Elements
- Handling Multiple Inputs
- Common Errors
- Extracting a Reusable Input
- Validation
- Basic Validation Implementation
- Displaying Validation Errors
- Validation on Change
- Using JOI for Validation
- Validating a Form
- Validating a Field

Module 8: Calling Backend Services

- Introduction
- JSON Placeholder
- HTTP Clients
- Getting Data
- Creating Data

- Lifecycle of a Request
- Updating Data
- Deleting Data
- Optimistic vs Pessimistic Updates
- Expected vs Unexpected Errors
- Handling Unexpected Errors Globally
- Extracting a Reusable HTTP Service
- Extracting a Config Module
- Displaying Toast Notifications

React Native Course Modules

Module 1: Core Concepts

- Overview of React Native
- Setting Up the Environment
- Building a React Native App
- State and Props in React Native
- Styling in React Native
- Flexbox
- List View
- Text Input
- Scroll View
- Images
- HTTP Requests
- Buttons
- Animations
- Router
- Running on iOS
- Running on Android

Module 2: Components and APIs

- React Native: View
- React Native: WebView
- React Native: Modal
- React Native: ActivityIndicator
- React Native: Picker
- React Native: StatusBar
- React Native: Switch
- React Native: Text
- React Native: Alert
- React Native: Geolocation
- React Native: Async Storage

Module 3: Advanced React Native

- Consuming Web Services
- Posting Data to Web Services



- Third-Party Integrations
- Polishing and Publishing Applications