

Academy of Information Technology (AIT)

Certificate Course in ReactJS

Duration: 2 Months



Introduction to React.js

- ☒ Setting up a React development environment (e.g., Node.js, npm, Create React App)



Creating Your First React Application

- ☒ Hello World example
- ☒ Understanding React components
- ☒ JSX syntax



Understanding Components and Props

- ☒ Functional components
- ☒ Class components
- ☒ Passing and using props



State and Lifecycle

- ✓ State in React components
- ✓ Updating state
- ✓ Component lifecycle methods



React Hooks

- ✓ useState()
- ✓ useEffect()
- ✓ useContext()



Handling Events

- ✓ Event handling in React
- ✓ Binding event handlers
- ✓ Arrow functions vs. regular functions



Working with Forms

- ✓ Controlled components
- ✓ Handling form submission
- ✓ Form validation



Conditional Rendering

- ✓ Conditional rendering with if statements
- ✓ Ternary operators and logical && in JSX



Lists and Keys

- ✓ Rendering Lists
- ✓ Using .map() to render lists of elements
- ✓ Providing a key for each item



Understanding Keys

- ✓ The importance of keys in React
- ✓ Choosing the correct key



Styling in React.js

- ✓ CSS in React
- ✓ Different approaches for styling (CSS, CSS-in-JS, CSS Modules)
- ✓ Inline styles
- ✓ Styling Libraries
- ✓ Popular CSS frameworks (e.g., Bootstrap, Material-UI)



React Router

- ✓ Introduction to React Router
- ✓ Setting up React Router
- ✓ Creating routes
- ✓ Navigating with React Router
- ✓ Using Link and NavLink
- ✓ Nested Routes and Dynamic Routing
- ✓ Nested routes
- ✓ Passing parameters to routes



State Management with Redux

- ✓ Introduction to Redux
- ✓ Understanding the need for state management
- ✓ Basic concepts: actions, reducers, store
- ✓ Setting Up Redux
- ✓ Installing Redux and setting up a store
- ✓ Creating actions and reducers
- ✓ Connecting React with Redux
- ✓ Using connect to connect components to the store
- ✓ Dispatching actions



Asynchronous Programming and API Integration

- ✓ AJAX and Fetch API
- ✓ Making HTTP requests in React
- ✓ Fetching data from an API
- ✓ Async/Await and Promises



Handling errors in React applications

- ✓ Error Handling and Debugging
- ✓ Debugging React apps
- ✓ Performance Optimization
- ✓ Memoization
- ✓ React.memo and PureComponent



Hands-on Projects

- ✓ Hospital Management System:- It is a single Page application. In which doctors and patients are available. Using ReactJS, json-server package.
Doctors are going to be added based on their Specialization.
Patients are going to book appointments for a Specific Doctor.
- ✓ Online Banking Application:- A simple online-banking application allows you to perform day to day banking activities.
New User Registration
Login
Deposit
Withdrawal
Fund Transfer



Deploying a React application

- ✓ Deployment Cloud Services (Netlify, Vercel, AWS)