

# ***ReactJS (MERN Stack)***

**Objective:** Create Native Applications on both Android and iOS platform using same code

**Pre-requisites:** You must be familiarize with HTML, CSS, JavaScript and HTTP.

## **Session 1 (Overview)**

- What is ReactJS?
- Installation of Dependencies
- Why we use ReactJS? ReactJS VS other tools
- Environment Setup
- Start with First React JS App

## **Session 2 (Fundamental Concepts)**

- Inspecting the Starter Code
- Passing Data Through Props
- Making an Interactive Component
- Developer Tools

## **Session 3 (Components)**

- What is Components?
- Need of Components
- Working with Components
- Lifecycle of Component

## **Session 4 (State and Props)**

- How to use State and Props?
- Default Props
- Validating Props
- SetState Method

## **Session 5 (Events and Methods)**

- Forms, Events, Refs
- Map, Keys, Conditional Rendering

## **Session 6 (Routing and Navigation)**

- What is Routing?
- How to implement Routing in React JS?

- Private Routes

### **Session 7 (Working with Database Connectivity)**

- Using Axios
- GET, POST, PUT, DELETE, UPDATE Methods
- Handling the response
- Making Request
- Authentications
- Backend Setup
- Setup of Node JS Connectivity with Database as requirement

### **Session 8 (Project Development)**

- Requirement Analysis
- Design DB
- Making Dynamic Project
- Debug the project with developer tools

### **Session 9 (More on ReactJS)**

- Installation State: Immutability, setState method
- Functional and Class Components
- How to create, Differences, Importing/Exporting Components
- Props: How to access, How to provide, Uses
- Elements: Activity Loader, Status Bar, TextInput, TouchableOpacity, Modal, Text, ...
- Events: Touch Events, Change Events
- Layout (FlexBox): Aligning Items and their Contents, Column Alignment, Row Alignment
- Types of Views: ScrollView, KeyboardAvoidingView
- ListView: FlatList, SectionList
- StyleSheets: Syntax, Assign to Elements
- Rendering Options: Conditional Rendering, Map, Keys, Access Element using Reference
- Life Cycle Hooks: Sequence, Advantage
- Images: Source, Resizing

### **Session 10 (Async Storage)**

- Concept and Requirement
- setItem, getItem, removeItem

## **Session 11 (Navigation)**

- Stack Navigation
- Drawer Navigator
- Tab Navigator
- Custom Navigator
- Navigation Methods
- Navigation LifeCycle
- Navigation Props

## **Session 12 (Axios)**

- Package Installation
- How to send Request
- HTTP Methods
- How to manipulate response

## **Session 13 (Introduction to Redux)**

- Concepts, Actions, Reducers
- Store, Components, Containers

## **Session 14 (Redux-Thunk Middleware)**

- Requirement, Usage
- Redux-Persistent Uses, How to Setup

## **Session 15 (NodeJS)**

- Installation
- Local Packages Installation (NPM)
- Importing/Exporting Variables
- Writing APIs using Express
- CORS Headers

## **Session 16 (MongoDB)**

- Installation and Integration with NodeJS
- MongoDB is a document-based database system
- MongoDB Internal, Essential Concepts behind a Database Index
- CRUD Operation with documents in the collection
- Indexing and Ordering in MongoDB, Creating and Using Indexes in MongoDB

## **Session 17 (Project Work)**