# React Native Cross Platform Native Mobile App Development Training

Duration: 40 HRS

Prerequisite:

* Strong Knowledge on Programming
* Strong Knowledge on Java script
* React.js and Redux Knowledge good Have

Software Requirement and Hardware Requirement

Hardware Requirement:

* 8 GB RAM Minimum
* Windows 10

IDE

1. VS code
2. Android Studio

Runtime

* Node.js latest
* Browser any
* JDK 17
* Android SDK latest version

**Course Details**

# React Native combines the best parts of native development with React, a best-in-class JavaScript library for building user interfaces.

**ES 6 Fundamentals**

* Introduction to JavaScript language
* JavaScript language compiler and runtime architecture
* JavaScript version history
* ECMA Script overview

**Language Fundamentals**

* Variables
* Literals
* Type system
* Let, var, const
* Operators
* Advanced boolean literals
* Control statements and loops

**Functions**

* Function declaration and invocation
* Function args and parameters
* Positional args and parameters
* Default args

**Functional Programming concepts**

* Function as literal
* Higher order function
* Anonymous function
* Passing function as Parameters
* Returning function from Function
* Arrow functions

**Object based Programming and implementation**

* What is object
* Creating objects
* Using constructors patterns
* Using literal pattern
* Inheritance
* Has-a relationship
* Arrays
* JSON Parsing

**Asynchronous Programming**

* What is async Programming
* Callback pattern
* Callback composition
* Callback Hell
* Promise Pattern
* Async await Pattern

**React js Getting Started**

* What is react.js
* Why react.js
* DOM, Virtual DOM
* React as DOM lib

**React Core**

* React Components
* Component Creational Patterns
* Functions and class components
* JSX language introduction
* JSX language rules
* Component compositions
* Component tree
* React dev tool and debugging
* React Fragments

**Data and React**

* Data Representations
* Data binding
* Data representation patterns
* Props and state Patterns

**Props Deep Dive**

* What is props
* How to pass props
* Parent and Child components
* Default Props
* Prop Validations
* Props and Destructuring
* Prop rethrowing

**List**

* How to render list of items
* Arrays with complex data
* Key prop
* Building different types of layouts using list
* Filtering array of items

**Conditional Rendering**

* Conditionally returning JSX
* Conditionally returning null
* Conditional rendering using ternary operator
* Conditional rendering using Logical operator

**State**

* How to add interactivity
* Adding event listener
* Mutating state
* Exploring Pure functions
* Pure functions and setState
* Object, array Mutations

**Component Life Cycle Methods**

* What is Component Life cycle methods
* Mount
* Update
* unMount
* Use cases of Component Life cycles

**API integration with React**

* How to talk to rest api
* Getting data from api
* Rendering data
* Conditional Rendering with loading state

Hooks

* **What is hooks**
* **Why Hooks**
* **State reusability patterns**
* **Built-in hooks like useState**
* **Component life cycles and hooks such as useEffect**
* **API Calls using hooks**

**State management using Redux**

* What is State Management
* Why State management
* Redux architecture
* Flux pattern and redux
* Redux core features
  + Store
  + Reducers
  + Actions
  + Action constant
* Middlewars
* Redux toolkit introduction
* Writing api calls inside redux
* End to End apps in react with Redux

**React Native**

* What is React Native
* Why React Native
* React Native and Mobility
* Types of Mobile Apps
* Architecture of React Native
* React Native and JSX

**Environment Setup**

* JDK 17 setup
* Android Studio and SDK setup
* React Native CLI Setup
* Expo Project Setup
* Creating Emulators and Simulators
* Create basic Project
* Deploy on Emulators/Simulators

**Work Flow**

* Metro Bundler
* Using Bundlers
* Using TypeScript
* Fast Refresh

**Components Getting Started**

* Reactive Native Components Check List
* [Basic Components](https://reactnative.dev/docs/components-and-apis#basic-components)
* [User Interface](https://reactnative.dev/docs/components-and-apis#user-interface)
* [List Views](https://reactnative.dev/docs/components-and-apis#list-views)
* [Android-specific](https://reactnative.dev/docs/components-and-apis#android-components-and-apis)
* [iOS-specific](https://reactnative.dev/docs/components-and-apis#ios-components-and-apis)

**Basic Components**

* View
* Text
* Images
* TextInput
* ScrollView
* StyleSheet
* Button
* Switch

**List Views**

* Flat List
* Section List

**State and React Native**

* How to declare State
* Hooks
* Update UI And Re rendering

**API integration with React Native**

* Fetch api and React Native
* useEffect hook and data initialization
* conditional rendering
* Posting data
* Updating data

**Redux Integration with React Native**

* How to write Redux inside React Native
* How to integrate With Redux

**React Native Routing**

* How to Navigate between screens
* Router Setup
* Types of Navigation
* Page to Page
* Tab Navigation
* Drawer navigation
* Hybrid Navigation
* Status Bar

**Device Features**

* How to integrate device features
* Expo components and react native community components overview
* Contacts
* Location
* Camera
* Storage
* Audio
* Video
* Filesystem

**Native Modules**

* Android Native Modules
* Setup Native Modules
* How to use Native modules
* Built in Native Modules
* Create Custom Native Modules