# The React Native Developer Training Outline

**Duration 7 Days**

**Prerequisite:**

* May have experience in programming
* Android or IOS knowledge is preferred but not mandatory

**Software Requirement and Hardware Requirement**

**Hardware Requirement:**

* 16 GB RAM Minimum
* Windows 10

**Internet Connection**

* Admin rights for installing node modules

Note : if you face problem during npm install phase, then you have to set admin rights and also proxy must be enabled.

**Proxy setup:**

* Open an command prompt or terminal session and run the following commands to configure npm to work with your web proxy. The commands use proxy.company.com as the address and 8080 as the port.

npm config set proxy http://proxy.company.com:8080

**IDE**

1.Visual Studio Code

**Runtime**

* Node - latest

NPM Modules:

* Can be installed during Session Only.

**Web Browsers - Any one Browser - Recommended Chrome**

* Chrome

**Tools -**

* Chrome Plugin -POST Man

**React Native Setup:**

1. Install JDK 1.8
2. Install Android Studio
3. Install the Android SDK
4. Configure the ANDROID\_HOME environment variable
5. Add platform-tools to Path

<https://facebook.github.io/react-native/docs/getting-started>

**Kindly follow this link**

**Big Picture on React and Redux for React Native**

**Day 01**

**ECMA 2015,2016/ES6,ES7**

* Transpilers
* let
* const
* Arrow functions and function expressions
* Template literals
* ES 6 and Arrays
* Classes
* Instance variables
* methods
* constructors
* object Creation
* Inheritance
* function default arguments
* Object Destructuring
* Spread Operator
* Modules
* import and export

Lab: Build todo app based on es 6 features- Promises, async, await, Modules

React

React Big Picture

* What is React.js?
* Why React.js
* React and DOM Manipulation
* Declarative vs Imperative Programming method to Create User Interface Application
* React.js ecosystem
* Virtual DOM Vs Physical DOM
* Diff algorithm

React Getting Started

* Installation
* React cli - create-react-app
* Hello World
* Introducing JSX
* Component Introduction
* ES 6 Class Pattern
* Arrow Function pattern
* Variable Pattern

**Day 02**

Components

* Component Composition
* Parent and Child Composition
* HTML Attributes

Components and Styling

* Component Styling
* Bootstrap Integration
* className attribute
* Style attribute
* Building Layouts

Data and React

* How to supply data to Component
* JavaScript Expressions in JSX
* Props Introduction
* State Overview
* Supplying Primitive data
* Supplying Literal Objects

Lists and Keys

* Rendering multiple elements
* Basic list Component
* Keys
* Embedding Map in JSX

Redux

* Introduction Redux
* Redux Core Concepts
* Three Principles
* Redux Flow
* Installing Redux

Redux Getting Started

* Pure Functions and Immutability
* Reducers
* Store Object
* Store API overview
* Actions
* Action Creator
* Dispatching an Store
* Getting State
* Action Creators

Redux Middlewares and Async Programming

* What is Middlewares
* Why it is important
* Types of Middlewares
* Basic middleware implementation
* Async Actions Introduction
* Async Actions Implementations
* Redux-thunk Middleware

Lab: Build todo react application using state,props,event handling

**Day 03**

React Native Getting Started

* What is React Native
* React Native Architecture
* React Application Architecture
  + UI Code
  + Application code in Java script
* React Native App development work flows
  + Expo Cli
  + React native CLI
* Set up
  + Setting up the development environment
  + Expo cli Quick Start
  + React Native Cli
  + JDK 8
  + Install Android SDK
  + Metro
  + Virtual device
  + Integration with existing apps
  + Running on Device

**React Native -Hello World**

* Create new Application
* Preparing Android Simulator /Device
* Start Metro
* Start Your Application
* Modify the Application
* Testing Application
* React native Components Overview

Lab : Use case for Installing Reactive Native setup and comparing on various patterns of building react native apps

**Day 04**

**React Native Application – UI Design – Layouts**

* **Styles**
  + Style Sheet
  + Style Properties
  + Attaching Style Property
  + Color References
* **Flex**
  + Flex Direction
  + Layout Direction
  + Justify Content
  + Align Items
  + Align Self
  + Align Content
  + Flex Wrap
  + Flex Basis, Grow, and Shrink
  + Width and Height
  + Absolute & Relative Layout
  + Going Deeper
* **Height and width**
  + [Fixed Dimensions](https://reactnative.dev/docs/height-and-width#fixed-dimensions)
  + [Flex Dimensions](https://reactnative.dev/docs/height-and-width#flex-dimensions)

Lab : Use case for Creating App for demonstrating various layouts

**Day -05**

**User Interface Components**

* Label Component
  + Text
  + Properties with Examples
* Container Components
  + View
  + Scroll View
  + List View
    - Flat List
    - Section List
    - Event Handling
* Image Component
* User Input Components
  + Text Input
  + Button
  + Checkbox
  + Radio
  + Select
  + Event Handling
  + Alert
* Status Bar
* Modal Diaglog
* Switch
* TouchableHighLight
* TouchableOpactiy
* Touchable Without Feedback
* Keyboard Handling

Lab : Use case for Building app using various components

**Day -06 ,07**

Native Components

* Calendar
* Camera
* Date Time Picker
* GPS
* Video and Audio
* Drawer Layout
* Toast Android
* Back Handler
* Permissions
* Refresh Control
* Linking
* Activity Indicator
* Animations
* Networks
* Battery

**Local Data bases Integration: Storage**

* SQL Lite
* File System

**Hooks into native Modules**

React Native Bridge Modules

* The Toast Module
* Create the Module
* Argument types
* Register the Module
* Beyond the toast
* Callbacks
* Promises
* Sending events to JavaScript
* Debugging Native Bridge Modules in Android Studio
* Testing Native Bridge Modules in Android Studio

Lab : Use case for building simple shopping app using all concepts