TECHCRUSH MOBILE DEVELOPMENT BOOTCAMP OUTLINE

Pre-requisites:

- Basic programming knowledge (JavaScript preferred)
- A computer with internet access
- Code editor (e.g., VS Code)
- Node.js installed on the system
- Basic understanding of React.js (recommended but not mandatory)

Course Overview:
This **12-week** intensive bootcamp covers the fundamentals of mobile development using **React Native**, focusing on JavaScript, React, React Native, state management, navigation, API integration, and advanced mobile app development techniques.

WEEK ONE: JAVASCRIPT & REACT FUNDAMENTALS

D1: JavaScript Essentials

- Introduction to JavaScript and its importance in mobile development
- Variables and data types (var, let, const)
- Functions and arrow functions
- Arrays and array methods
- Objects and object manipulation

D2: React Fundamentals

- Introduction to React and its role in React Native
- Understanding JSX and component structure
- Props and state management basics
- Functional vs class components
- Event handling in React

WEEK TWO: REACT NATIVE FOUNDATIONS

D1: React Native Setup

- Introduction to React Native and its advantages
- Setting up the development environment (Expo & React Native CLI)
- Running applications on iOS and Android emulators

D2: Core React Native Concepts

- Understanding React Native components
- Component lifecycle methods
- Introduction to React Native's built-in components

WEEK THREE: UI DEVELOPMENT IN REACT NATIVE

D1: Styling in React Native

- Introduction to styling in React Native
- Flexbox for layout structuring
- Using the Stylesheet API

D2: Handling User Inputs

- Input components (TextInput, Button, etc.)
- Handling touch gestures and events
- Forms and form validation

WEEK FOUR: NAVIGATION ESSENTIALS

D1: Introduction to React Navigation

- Navigation libraries in React Native
- Installing and setting up React Navigation

D2: Implementing Navigation

- Types of navigation (Stack, Tab, Drawer)
- Passing data between screens
- Navigation best practices

WEEK FIVE: STATE MANAGEMENT

D1: Context API for State Management

- Understanding state and props in React Native
- Using Context API for global state management

D2: Redux Fundamentals

- Introduction to Redux and its architecture
- Actions, reducers, and the Redux store
- Connecting React components with Redux

WEEK SIX: DATA PERSISTENCE

D1: Local Storage with AsyncStorage

- Introduction to AsyncStorage
- Storing and retrieving data locally

D2: Local Databases in React Native

- Introduction to SQLite and Realm
- Setting up and interacting with local databases

WEEK SEVEN: API INTEGRATION

D1: Fetching Data from APIs

- Introduction to APIs in mobile apps
- Fetching data using Fetch API and Axios
- Handling API responses and errors

D2: Advanced API Handling

- Authentication in React Native apps
- Managing API calls efficiently

WEEK EIGHT: WORKING WITH LISTS & DATA DISPLAY

D1: Displaying Lists in React Native

- Understanding FlatList and SectionList
- Optimizing lists for performance

D2: Advanced List Techniques

- Lazy loading and pagination

- Using VirtualizedList for large datasets

WEEK NINE: ADVANCED COMPONENTS

D1: Custo hooks

- Custom hooks
- Reusable components

D2: Animations in React Native

- Creating smooth UI transitions
- Gesture-based animations with React Native Gesture Handler

WEEK TEN: TESTING IN REACT NATIVE

D1: Unit Testing in React Native

- Introduction to Jest for unit testing
- Writing test cases for components

D2: Integration Testing

- Setting up Detox for end-to-end testing
- Writing and running integration tests

WEEK ELEVEN - TWELVE: PROJECT COMPLETION

D1: Final Project Development

- Planning and structuring a React Native app
- Implementing core features

D2: App Deployment

- Preparing an app for deployment

Assignments and Projects: