Course Outline: App Development with React Native

Course by:

Sheikh Kamal IT Business Incubator, CUET
Chattogram-4349, Bangladesh.

Course Summary

No.	Subject	Comments
1	Course Duration	48 Hours (16 Classes, 8 Weeks)
2	Pre-requisites	Yes ● Basic Knowledge of JavaScript ● React Basics ● Basic Git command
3	Lab Facilities	SKITBI, CUET will provide.

Schedule

Batch – 01 (Offline): Friday & Saturday 3 pm to 6 pm
Batch – 02 (Online): Friday & Saturday 6 pm to 9 pm

Coordinator

Professor Dr. M. Moshiul Hoque
Professor, Dept of CSE, CUET
Director, Sheikh Kamal IT Business Incubator in CUET
Former Dean, Faculty of Electrical & Computer Engineering, CUET
Chair, IEEE Bangladesh Section

Trainers

Ratul Bhowmick
Senior Software Engineer,
Programming Hero

Tanvir Ibn Touhid
Senior Software Engineer,
Diligite Ltd.

What will you learn?

- **JavaScript Fundamentals:** Master the core concepts of JavaScript including variables, control structures, functions, and ES6 features.
- **HTML and CSS with Tailwind:** Gain proficiency in HTML and CSS, and learn the utility-first approach of Tailwind CSS for efficient styling.
- **Git and Version Control:** Understand version control concepts and learn to use Git for collaborative development.
- **Introduction to Web Development with React:** Get familiar with React.js, setting up the development environment, and basic web technologies like HTML, CSS, and JavaScript.
- **React Components and Styling:** Learn to create and style React components using CSS or CSS-in-JS libraries.
- **Routing and Navigation in React:** Implement routing and navigation using React Router.
- **Working with APIs and Data Management:** Make API calls and manage application state using React Hooks.
- **Advanced State Management in React:** Master advanced state management patterns like Redux/Zustand and Context API.
- **Advanced Topics in React:** Dive into asynchronous data fetching, testing, debugging, deployment, and project optimization techniques in React.
- **Basic Knowledge in Next.js:** Understand the core concepts of Next.js and migrate projects to Next.js for enhanced performance and functionality.
- **Project Refinement and Q&A:** Review and refine projects while addressing common challenges and questions.

Course Modules

React Native App Development with Expo:

Module	Topics Covered	Duration
Module 1: Introduction to Mobile App Development & React Native	-Overview of mobile app development - landscape, -Importance of cross-platform development	2 hours
Module 2: Setting Up the Development Environment & Expo Basics	-Installing Node.js and npm, -Setting up React Native CLI, -Introduction to Expo and its advantages	2 hours
Module 3: React Native Components and Styling	-Exploring React Native components, -Styling components with Flexbox, -Handling user input with forms	2 hours

Module 4: Navigation in React Native	-Introduction to React Navigation, -Setting up stack and tab navigation	2 hours
Module 5: Working with APIs and Data	-Making API calls with Axios, -Managing state with React Hooks, -Handling data in React Native apps	2 hours
Module 6: State Management in React Native	-Overview of state management options (Redux, Context API), -Implementing state management in a React Native app	2 hours

Advanced Topics in React Native:

Module	Topics Covered	Duration
Module 1: Animations in React Native & Offline Support and Caching	-Understanding Animated API, -Creating smooth animations in React Native apps, -Implementing offline support in React Native, -Using caching strategies for better performance	4 hours
Module 2: Push Notifications	-Integrating push notifications in React Native apps, -Setting up Firebase for push notifications	2 hours
Module 3: Testing and Debugging	-Introduction to testing frameworks (Jest), -Debugging techniques in React Native	2 hours
Module 4: Deployment and Publishing	-Preparing the app for deployment, -Publishing the app to app stores	2 hours
Module 5: Building a Complete React Native App	-Guided hands-on project development, -Incorporating learned concepts into a practical project, -Identifying and resolving performance bottlenecks,	8 hours

	-Code splitting and lazy loading	
Module 6: Advanced Expo Features	-Using Expo modules for enhanced functionality, -Expo over-the-air updates	5 hours
Module 7: Project Refinement and Q&A	-Reviewing and refining the project, -Addressing common challenges and questions	5 hours

Frequently Asked Questions (FAQ)

Can I register for multiple courses?
-Yes, participants can register for multiple courses.

Will there be an overlap in class schedules for multiple courses
-There may be minimal overlap in class schedules, Please check the routine available at the notice board.

What are the available payment methods for online enrollment?
-Payment can be made via cash or online using the "Bkash to Bank" option.

Are there evening batches available for job holders?
-Yes, evening batches will be available. Please check the routine available on the notice board of the website.

Can I switch between online and offline classes?
-Online and offline classes are separate batches, and transfer depends on seat availability.

How will admission be confirmed?
-Admission will be confirmed upon payment; no separate admission exam will be conducted.

Will classes be conducted in locations other than the chosen one?
-No, classes will only be conducted at the chosen location, not in other cities.

What is the profile of the trainers?
-Faculty members will include both academic and industry experts.

What is the last date of enrollment?
-There is no last date of admission. After filling out the batches, enrollment will be closed.

Can I admit physically?

-Yes, Come to the third floor (Room no: 301,302) at the Multipurpose Building of Sheikh Kamal IT Business Incubator, CUET.

Will classes be held during Ramadan?
-Yes, they will.

Will a recorded version be available?
Yes, you will get lifetime access to the recorded version of the classes.