

Lab Assignment 1: Spinning Up React Native App

System Requirements

Operating System:	Windows 10 or newer
CPU:	2.0 GHz dual-core processor or higher
RAM:	8 GB or more
Disk Space:	2 GB of free space

Installation Instructions

Nodes.js, Android Studio, and React Native CLI are needed for installation. If Java Development KIT (JDK) has not been installed, it needs to be installed.

Node.js. React Native Requires Node.js. Installation can be done simply by downloading the .msi file from the official website of Node.js and then following the installation instructions. Version 18 or newer is needed. After installation, input '**node -v**' in the command prompt terminal, the version of the installed Node.js will then be displayed if the installation is completed correctly.

React Native CLI. To install React Native CLI, simply input '**npm install -g react-native-cli**' in the command prompt terminal. The installation will then be implemented automatically.

Android Studio. Android Studio can be installed by downloading it from its official website and following its installation instructions. For this mobile application course, Android SDK, Android API 34, Performance (Intel HAXM), Performance (Android Emulator hypervisor driver), and Android Virtual Device are needed. Once selected, it will be downloaded and installed.

Java Development Kit (JDK). If this JDK has not been installed, it can be downloaded from its official website. JDK 8 or newer is needed.

Configuration Steps

To configure the system to run React Native, the steps are as follows:

1. Open System Properties > Advanced > Environment Variables.
2. Add a new variable named `ANDROID_HOME` and then set its value to the path (location) of the SDK installed. In my system, it is '`C:\Users\manho\AppData\Local\Android\Sdk`'.

Project Creation

To create a project, open the command prompt terminal, navigate to the directory where I want to create my project, and then run the command of '`npx react-native@latest init FirstTrial`' (FirstTrial is the project name that I created for my project).

Running the Project

Go to the project folder path bar, for my case, '`C:\CPRG303\jsreview\MyFirstApp`', click the bar, and then input '`cmd`'. A command prompt terminal will then appear. A command of '`npm start`' is input. A prompt will appear asking the user to choose r, d, i, or a. When I input a, another command prompt terminal will appear. The React Native app will launch in the Android Device Simulator.

Troubleshooting

When there is an error(s) and I need to debug, I can use built-in debugging tools provided by React Native. Debugging can be done by pressing "Ctrl + M" in the Android Emulator.

Error messages can be found in the command prompt terminal when there is an error(s) and then fix the corresponding error(s) accordingly. If error(s) cannot be fixed, solution can be found on the internet or by referring to the official website of Reactive Native and its documentation.

Resources

Installation guidance, manual, troubleshooting etc. can be found in the official website of React Native and Stack Overflow.