**LAB-1 Spinning Up React Native App**

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**React Native Development Environment Setup**

**System Requirements:**

**CPU:** 12th Gen Intel(R) Core (TM) i7-1260P 2.10 GHz

**Ram:** 16.0 GB

**Operating System:** Windows 11 Home 64 bit

**Installation instructions**:

1. Install Node.js

Download and install the latest LTS version of node.js

**Verify installation**: node –v, npm –v

1. Install React Native CLI

Open a terminal and run the following command:

npm install -g react-native-cli

1. Install android studio:

* Download android studio from the official website.
* During installing ensure the following components are checked
* android sdk
* android sdk platform-tools
* android virtual device

**Configuration Steps:**

**Set Android Environment Variables**

* Open **System Properties** > **Advanced** > **Environment Variables**.
* Under user variables, add variable name as: ANDROID\_HOME
* Variable value: C:\Users\<priyanshu>\AppData\Local\Android\Sdk
* Edit the "Path" system variable, adding: C:\Users\<priyanshu>\AppData\Local\Android\Sdk\platform-tools

**Project Creation:** Open Comm prompt and navigate to the directory where you want to create your new project and create a new project: react-native init IncredibleTodoListApp.

**Running the Project**

* **Start Android Emulator**

Open Android Studio

* **Run the React Native App:**

In the project directory run (npx react-native run-android).

**Troubleshooting**:

**Common issue and their solution:**

**Metro bundler stuck:**

**Issue:** the metro bundler fails to start

**Solution:** clear the metro cache by running: npx react-native start --reset-cache

**SDK location not found error:**

**Issue:** the android sdk location did not found although its install.

**Solution:** Make sure that android\_home environment variables is correctly set to sdk location. C:\Users\priyanshu\AppData\Local\Android\Sdk

**Fail to install the app:**

**Issue:** while running the app build fail, npx react-native run-android becauseapp did not install on the emulator or device.

**Solution:**

* make sure android emulator is running, Open Android Studio > Tools > AVD Manager and start the emulator manually.
* Make sure you JDK version are updated, java –version.
* Rebuild the app if the error persists, cd android && gradlew clean && cd ..
* npx react-native run-android.

**Resources for React Native Development:**

* Official React Native Documentation
* react Native CLI Documentation
* Node.js Documentation
* Android Studio Documentation
* React Native GitHub Repository
* React Native Testing Library