**Lab: spinning up React Native**

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**System requirements**

Ram: minimum 8GB

CPU: intel core i5 or greater

Storage: a minimum of 10 GB

Stable Internet connection

**Instructions for setting up the development environment**

**1. Installing NPM and Node.js**

1. Visit <https://nodejs.org/en>
2. Install the correct version for your operating system
3. After running the installer NPM is now automatically installed with the Node.js.
4. Double-check that it is installed by typing node -v in your terminal. If a version is returned (ex. v20.17.0) your good to go!

**2. setting up IDE**

1. Next is setting up your IDE. The most common is Visual Studio code but there are many options such as Notepad++
   1. For this installation we will be using VS Code which can be downloaded here <https://code.visualstudio.com/download>
2. Download the required version for your operating system
3. After running the installer VS Code should now be on your desktop

**3. Installing Expo Go**

1. The next step is installing Expo Go to see our changes in real time we can download Expo Go on our mobile devices.
2. Simply go onto the App store on IOS or The Play Store on and download and install Expo Go

**4. Installing your Simulator**

Now depending on your mobile device, it will change what simulator you download in the next step. If you have an Apple device, we will be installing the Android simulator on our desktop. If you have an Android device, we will be installing the Apple simulator.

1. Installing Android Simulator (only if you have a apple mobile device)
   1. Move to this link and download the Android Studio [Link](https://developer.android.com/studio?gad_source=1&amp%3Bgclid=Cj0KCQjwiuC2BhDSARIsALOVfBIMWdccBDmLlJsOD8kIKSsO6B3ilvouBZXUAbBASUG4_aiViS6xOpYaAonnEALw_wcB&amp%3Bgclsrc=aw.ds) that matches your OS
   2. After running the installer, you now have Android Studio we will be going over what to do with it later in this installation set.
2. Installing Apple Simulator (only if you have an Android device)
   1. Move to this link [Xcode - Apple Developer](https://developer.apple.com/xcode/) and download the version that matches your OS.
   2. After running the installer you now have Xcode installed on your desktop.

**5. Setting up your first project**

1. In your terminal navigate to any empty folder that you'd like the project to be created within
   1. \*note some commands for the terminal include
      1. Cd .. this moves you one back in your directory
      2. Cd [folder name] will navigate into the folder you specify
      3. Mkdir [folder name] will create a folder with the name provided
      4. Dir will display the folders and files in the current directory\*
2. we are now going to run the following command once your in your desired directory npx create-expo-app@latest –template
   1. *\*note\* if you get errors at this step please refer to the trouble shooting guide below*
3. after running this command you’ll be presented with a range of options. For now we are going to move forward with a blank template. Using the arrow keys and then hitting enter
4. provide a name for your project. It can be anything you'd like. Just ensure to not use spaces in the name. it must be URL-friendly *\*note\* the first build can take a little longer so no worries if it takes a few minutes*
5. once this completes you now have a react native project congradulatrions!
6. Next we are going to change the directory into your new project
7. Enter cd [the project name]
8. Now enter code . including the period
   1. This should open your project in vs code.

**6. setting up a virtual device on Android Simulator**

1. Start Android Studio
2. On the right side select the option with Device manager
3. Select the + button to add a new device
4. create new virtual device
5. from here you can choose the size of the Android device you'd like to simulate
6. click next
7. then next again. For now we will just be using the default system image
8. now you can change the name of the device and hit finish
9. in the device manager once the device has been created click the play button to the right of the device. Once the device start now we can run the new project you just created.

**7. Running the new project**

1. ensure your in the correct directory
2. enter this command into the terminal npm start
3. once you see the QR code appear in the terminal press A
   1. if an error like this come up: No Android-connected device found, and no emulators could be started automatically. Please see trouble shooting
4. this will open the Android device we just created. It may start installing the Expo go app on its own
5. Congratulations if you see “Open up App.js to start working on your app!” your setup is working.

**Trouble Shooting**

Errors when creating a new project

Please run the following command on the CMD

1. npm cache clean –force
2. npm install -g npm@latest
3. npm install -g create-expo-app
4. then run the create command again.

Errors when pressing A in the terminal

1. Double check that the device you created is running
2. Hit A again once you see your simulated device running in Android studio

**Additional resources**

<https://reactnative.dev/docs/set-up-your-environment>

[Android Studio Emulator - Expo Documentation](https://docs.expo.dev/workflow/android-studio-emulator/)

[iOS Simulator - Expo Documentation](https://docs.expo.dev/workflow/ios-simulator/)