

LAB ASSIGNMENT 1
SPINNING UP A REACT NATIVE APP

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CPRG 303-B

SYSTEM REQUIREMENTS

To begin working with React Native, you must comply with the system requirements stated below:

CPU - Intel Core i5 or higher

RAM - Recommended 8GB available, preferably 16GB or higher

OS - Windows 10 or higher, preferably Windows 11 (64-bit)

NODE.JS INSTALLATION INSTRUCTIONS

1. Download Node.js from <https://nodejs.org/en>

- a. NOTE: Download the LTS version.



b.

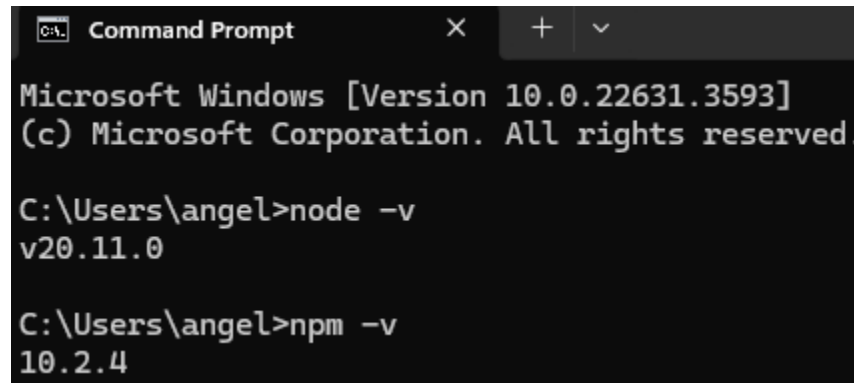
2. Run the downloaded installer

- a. Once the installer is open, click Next
- b. On the next page, agree to the terms in the License Agreement and hit Next
- c. On this page, choose where to install Node.js. Click Next once you are finished.
- d. Ensure Node.js runtime, npm package manager, and other default components are selected. Once finished, hit Next.
- e. On this page, you may opt to install all necessary tools to compile modules. Click Next once finished/
- f. Click Install.
- g. Once installation is complete, click Finish.

3. To verify Node.js installation, open command prompt by opening the command prompt.

- a. Run the following:

- i. Node -v
- ii. Npm -v
- b. If Node.js is installed correctly, the versions installed will be displayed.



```

Microsoft Windows [Version 10.0.22631.3593]
(c) Microsoft Corporation. All rights reserved.

C:\Users\angel>node -v
v20.11.0

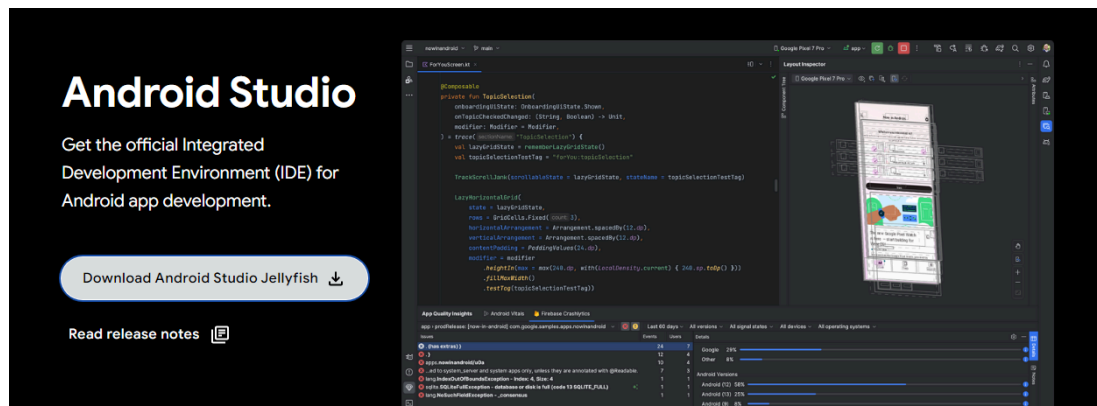
C:\Users\angel>npm -v
10.2.4

```

c.

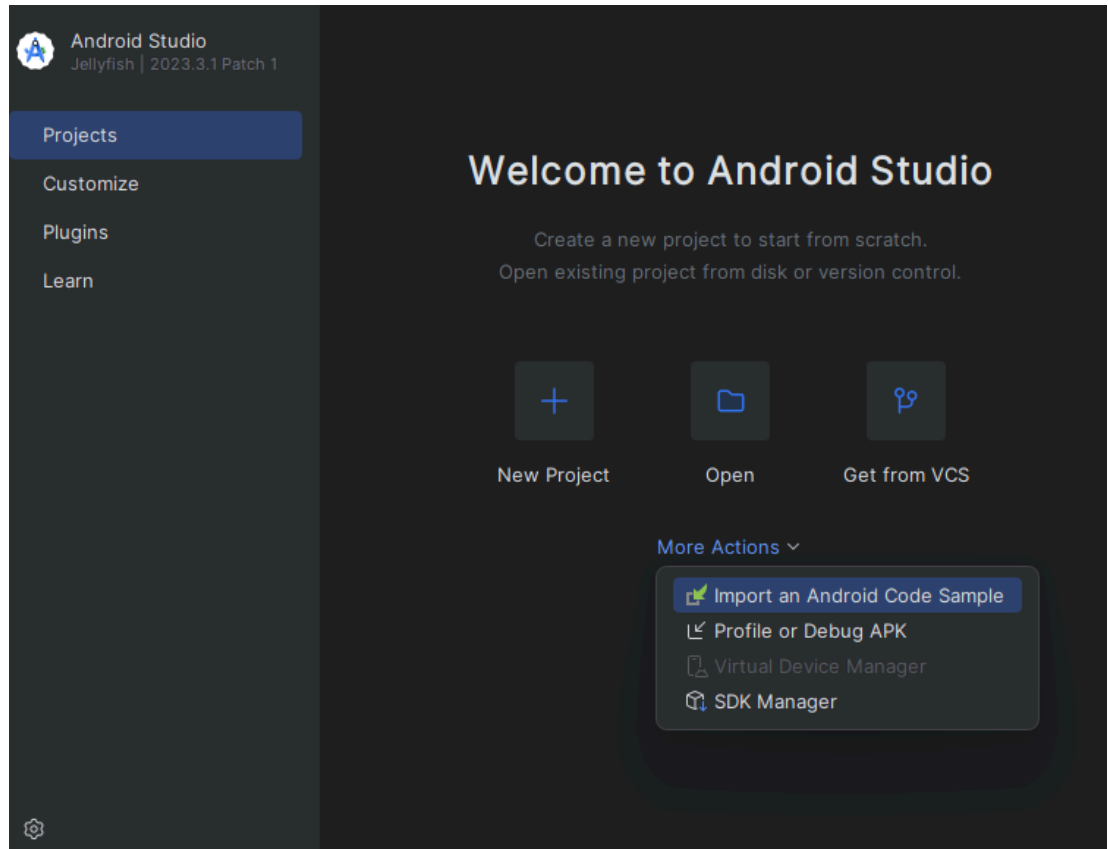
INSTALL ANDROID STUDIO

1. Download Android Studio from <https://developer.android.com/studio>
 - a. NOTE: Make sure your downloaded file is compatible with your OS



b.

2. Run the downloaded installer
 - a. Once the installer is open, hit Next.
 - b. Select the default options and follow the prompts.
 - c. On this page, choose where Android Studio will be downloaded. Once finished, hit Next.
 - d. Hit Install and wait for the installer to finish.
3. Configure Android SDK
 - a. Open Android SDK and click Next, click on Standard then click Next.
 - b. Accept the license agreement and click Next.
 - c. Click on More Actions and select SDK Manager

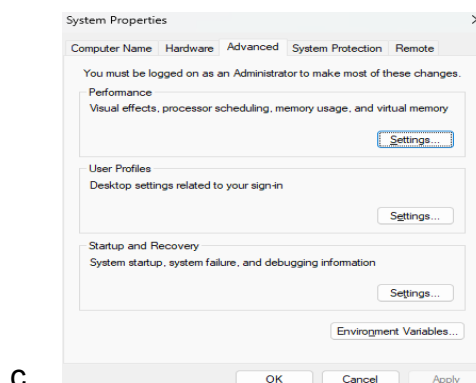


- d.
- e. Ensure the latest SDK installed
- f. In the tools tab, ensure the following are installed
 - i. Android SDK Build-Tools
 - ii. Android Emulator
 - iii. Android SDK Platform-Tools
 - iv. Intel x86 Emulator Accelerator (HAXM)

CHANGE ENVIRONMENT VARIABLES

1. Open Environment Variables

- a. Search for Advanced System Settings on the computer's search.
- b. Click on Environment Variables



- d. In the Environment Variables Window, click New under User Variables
- e. Name the variable name as ANDROID_HOME and set the variable value as the directory you've installed Android SDK.
- f. Under System Variables, find the Path variable and click Edit.
- g. Add New with the paths stated as such:
 - i. %ANDROID_HOME%\platform-tools
 - ii. %ANDROID_HOME%\emulator

INSTALL REACT NATIVE CLI

1. Open your command prompt
2. Run the following command:
 - a. `npm install -g react-native-cli`

CONFIGURATION

1. Configure the Android Virtual Device

- a. Open Android Studio
- b. Click on the Android Virtual Manager from the Drop Down in More Options
- c. Click Create Virtual Device
- d. Select a Device Definition and Click Next
- e. Choose a System Image and Click Next
- f. Follow the prompts to download and install anything necessary
- g. Click Finish and ensure the AVD is selected and click Play to start it

CREATING AND RUNNING A PROJECT

1. **Open a command prompt and run**
 - a. `cd C:\path\to\your\workspace\AppName`
2. **Run the command**
 - a. `npx react-native start`
3. **Open a new window and navigate to your project directory and run the command**
 - a. `npx react-native run-android`

TROUBLESHOOTING

1. Ensure Node.js and Npm are installed correctly
2. Check the installations paths are added to the systems 'Path' variable
3. Ensure ANDROID_HOME is set correctly
4. Verify that the paths in the 'Path' variable are correct and point to the SDK tools and platform tools directories
5. Ensure that Intel HAXM is installed and enabled
6. Restart the emulator or make a new one if the current one is corrupted

7. Run the command 'npx react-native log-android' to view logs and issues.

RESOURCES

<https://reactnative.dev/docs/getting-started>

<https://developer.android.com/studio/intro>

<https://nodejs.org/docs/latest/api/>