React Native Setup

Software Studio

DataLab, CS, NTHU

React Native



Flutter

Flutter

Setting up the development environment

- React Native CLI
- Expo CLI



React Native CLI - Installation

• Requirements

- JDK 8
- Python: both 2, 3 works for react native
 - Window:
 - Install Python2 and JDK through Chocolatey
 - choco install -y nodejs.install python2 jdk8
 - Mac:
 - Using Homebrew
 - brew cask install adoptopenjdk/openjdk/adoptopenjdk8
 - Modern macOS versions come with Python 2.7.x itself



• Android Studio

- Choose a "Custom" setup
- Make sure the boxes are checked:
 - Android SDK
 - Android SDK Platform
 - Performance(Intel HAXM)
 - Android Virtual Device

- Install the Android SDK
 - open SDK Manager
 - Windows:
 - File->settings->Appearance & Behavior->Android SDK
 - Mac:
 - Preferences->Appearance & Behavior \rightarrow System Settings \rightarrow Android SDK
 - make sure the following items are checked
 - Android SDK Platform 28
 - Intel x86 Atom_64 System Image or Google APIs Intel x86 Atom System Image •
 - then click Apply

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- Windows:
 - Configure the ANDROID_HOME environment variable

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Edit User Variable		×
Variable name:	ANDROID_HOME	
Variable value:	C:\Users\hramos\AppData\Local\Android\Sdk	
Browse Directory	Browse File	OK Cancel

- Windows:
- Add platform-tools to Path
 - C:\Android\tools\bin\platform-tools

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- Mac:
 - Add the following lines to your \$HOME/.bash_profile or \$HOME/.bashrc config file:
 - export ANDROID_HOME=\$HOME/Library/Android/sdk export PATH=\$PATH:\$ANDROID_HOME/emulator export PATH=\$PATH:\$ANDROID_HOME/tools export PATH=\$PATH:\$ANDROID_HOME/tools/bin export PATH=\$PATH:\$ANDROID_HOME/platform-tools
 - source \$HOME/.bash_profile

• Open AVD Manager



• Create Virtual Device

🛎 Andro	id Virtual Device Manager					-		×
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• Choose any phone you like

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Phone			5.96"	1440x2560	560dpi	
Wear OS		⊳	5.2"	1080x1920		Ratio: long Density: 420dpi
Tablet	Nexus 5	►	4.95"	1080x1920	xxhdpi	
			4.7"	768x1280	xhdpi	5.2" 1920px
	Galaxy Nexus		4.65"	720x1280	xhdpi	
	5.4" FWVGA		5.4"	480x854	mdpi	
	5.1" WVGA			480x800	mdpi	
	4.7" WXGA		4.7"	720x1280	xhdpi	
New Hardware	Profile Import Hardy				G	Clone Device
?						Previous <u>N</u> ext <u>Cancel</u> Finish

• Choose any system image you like



• Click finish and see the virtual Device





3:27 🗘 🖸 🖬 🛦 ·

Welcome to React

7/1

Step One

Edit **App.js** to change this screen and then come back to see your edits.

See Your Changes

Double tap **R** on your keyboard to reload your app's code.

Debug

Press Cmd or Ctrl + M or Shake your device to open the React Native debug menu.

Learn More

Read the docs to discover what to do next:

React Native Project

- Creating a new application
 - npx react-native init <project-name>
- Preparing the Android device
- Running your React Native application
 - To start the application run npx react-native runandroid inside your React Native project folder

Expo CLI - Installation

- Requirements
 - Node 12 LTS or greater installed
- npm install -g expo-cli



Expo CLI - React Native project

- expo init <project_name>
- cd <project_name>
- npm start # you can also use: expo start

→ AwesomeQuickProject git:(master) × npm start

> @ start /Users/alanlin/Documents/software_studio_2020/lab/AwesomeQuickP > expo start

Starting project at /Users/alanlin/Documents/software_studio_2020/lab/Awe Expo DevTools is running at http://localhost:19002 Opening DevTools in the browser... (press shift-d to disable) Starting Metro Bundler on port 19001.

exp://192.168.50.177:19000



To run the app with live reloading, choose one of:

- \bullet Scan the QR code above with the Expo app (Android) or the Camera app
- Press a for Android emulator, or i for iOS simulator, or w to run on
- Press e to send a link to your phone with email.
- Press **s** to sign in and enable more options.

Expo CLI - Running your React Native application

- Install the Expo client app on your Android phone
- Connect to the same wireless network as your computer
- On Android, use the **Expo app to scan the QR code** from your terminal to open your project.

Expo CLI - Running your React Native application





React Native CLI vs Expo

	React Native CLI	Ехро
Advantages	 Add native modules written in Java/Objective-C Having control over the builds 	 Setting up a project is easy and can be done in minutes No build necessary to run the app
Disadvantages	 Needs Android Studio and XCode to run the projects You can't develop for iOS without having a mac Setting up a working project properly is rather complicated and can take time 	 You can't add native modules You can't use libraries that use native code in Objective-C/Java Big app size(The standard Hello World app is about 25MB big)

Happy Coding!!