# Configuring Android Studio

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Install JAVA SDK
Install sdkman! or brew
Install Gradle
Install Android Studio
Install Emulator
Set Environment Variables
Set Bash Variables
Enable Developer Mode on Your Android Phone

https://cordova.apache.org/docs/en/latest/guide/platforms/android/index.html

What does SDK means? **S**oftware **D**evelopment **K**it It is a package that contains all the software tools to create new application in a given programming language. JAVA SDK is required for the development of Android Apps

Go to:

https://www.oracle.com/java/technologies/javase-downloads.html

find latest version of JAVA, and click on JDK download (yes, J is for JAVA).

If may ask you to register to Oracle (it's free)

# **Set JAVA Variables**

### Mac/Linux (and Windows Git Bash)

**Open a terminal and edit/create the file named** .bashrc **inside of your home directory (terminal commands below)** 

cd vim .bashrc

Add the following lines:

Path for Mac <u>could be</u>:

/Library/Java/JavaVirtualMachines/jdk1.8.0\_221.jdk/

Numbers must match the version on your machine

export PATH=\$PATH:"c/Program\ Files/Java/jdk1.8.0\_221/bin/"
# Some guides on the Internet suggest to add this folder too,
# but it may cause Cordova builds to fail. If so just comment it out:
# export JAVA HOME="c:/Program\ Files/Java/jdk1.8.0 221/"

### Windows

Open Add JAVA to the PATH environment variables and create the JAVA\_HOME directory as above. Follow this tutorial:

https://javatutorial.net/set-java-home-windows-10

# **Testing JAVA**

Close and reopen the terminal/Git Bash

Туре

java -version java version "1.8.0\_221" Java(TM) SE Runtime Environment (build 1.8.0\_221-b11) Java HotSpot(TM) 64-Bit Server VM (build 25.221-b11, mixed mode)

javac -version javac 1.8.0\_221

# **Android Studio**

You need to download several GBs of data. Make sure you have a fast and reliable Internet connection, otherwise the installer may fail unreliably and some packages may be installed and others not.

# android studio

Android Studio provides the fastest tools for building apps on every type of Android device.

### DOWNLOAD ANDROID STUDIO

3.6.1 for Windows 64-bit (749 MB)

DOWNLOAD OPTIONS

**RELEASE NOTES** 

https://developer.android.com/studio/

Cross-Platform guide: https://www.androidcentral.com/installing-android-sdk-windows-mac-and-linux-tutorial

# SDK Manager (from Android Studio)

# Install additional packages through the interface

<u>B</u> uild	R <u>u</u> n	<u>T</u> ools	VC <u>S</u>	<u>W</u> indow	<u>H</u> elp	Му Ар	plication	
	🖳 AVD Manager							
	🔍 SDK Manager							
	<ul> <li>Resource Manager</li> <li>Troubleshoot Device Connections</li> </ul>							

Make sure you those packages installed Check the SDK location (highlighted)

opearance & Behavior > System Settings > Android SDK	/
anager for the Andro <mark>id SDK and Tools used by Android Studio</mark>	
ndroid SDK Location: C:\Users\balistef\AppData\Local\Android\Sdk	idit Optimize disk space
SDK PlatformsSDK ToolsSDK Update Sites	—
Below are the available SDK developer tools. Once installed, Android Studio will automatically che	ck for updates.

Take note of this location

Below are the available SDK developer tools. Once installed, Android Studio will automatically check for updates. Check "show package details" to display available versions of an SDK Tool.

Name	Version	Status
<ul> <li>Android SDK Build-Tools 30-rc2</li> <li>GPU Debugging tools</li> <li>LLDB</li> <li>NDK (Side by side)</li> <li>Android SDK Command-line Tools (latest)</li> <li>CMake</li> <li>Android Auto API Simulators</li> <li>Android Auto Desktop Head Unit emulator</li> <li>Android Emulator Hypervisor Driver for AMD Processors (installer)</li> <li>Android SDK Platform-Tools</li> <li>Documentation for Android SDK</li> <li>Google Play APK Expansion library</li> <li>Google Play Licensing Library</li> <li>Google Play services</li> <li>Google USB Driver</li> <li>Google Web Driver</li> </ul>	1 1.1 30.0.0 1.4.0 29.0.6 1 1 1.9.0 1 49 12 2	Installed Not Installed Not Installed Installed Not Installed Installed Not Installed Not installed Installed Not installed Not installed
✓ Intel x86 Emulator Accelerator (HAXM installer)	7.5.6	Installed

# **Set Android SDK Variables**

### Mac/Linux (and Windows Git Bash)

export PATH=\$PATH:"~/AppData/Local/Android/Sdk/cmdline-tools/latest/bin/" export PATH=\$PATH:"~/AppData/Local/Android/Sdk/build-tools/**30.0.3**/" <u>## Emulator must be before tools</u>:

export PATH=\$PATH:"~/AppData/Local/Android/Sdk/emulator/" export PATH=\$PATH:"~/AppData/Local/Android/Sdk/platform-tools/"

export ANDROID\_HOME=~/AppData/Local/Android/Sdk/ export ANDROID\_SDK\_ROOT=~/AppData/Local/Android/Sdk/

### Windows

Replicate above setup setting environment variables. Follow this tutorial:

https://javatutorial.net/set-java-home-windows-10

Numbers must match the version on your machine



# Accelerate developer productivity

From mobile apps to microservices, from small startups to big enterprises, Gradle helps teams build, automate and deliver better software, faster.

### https://gradle.org/

It is recommended to install Gradle using SDKMAN or HomeBrew: <u>https://gradle.org/install/</u>

# SDKMAN! (Win)

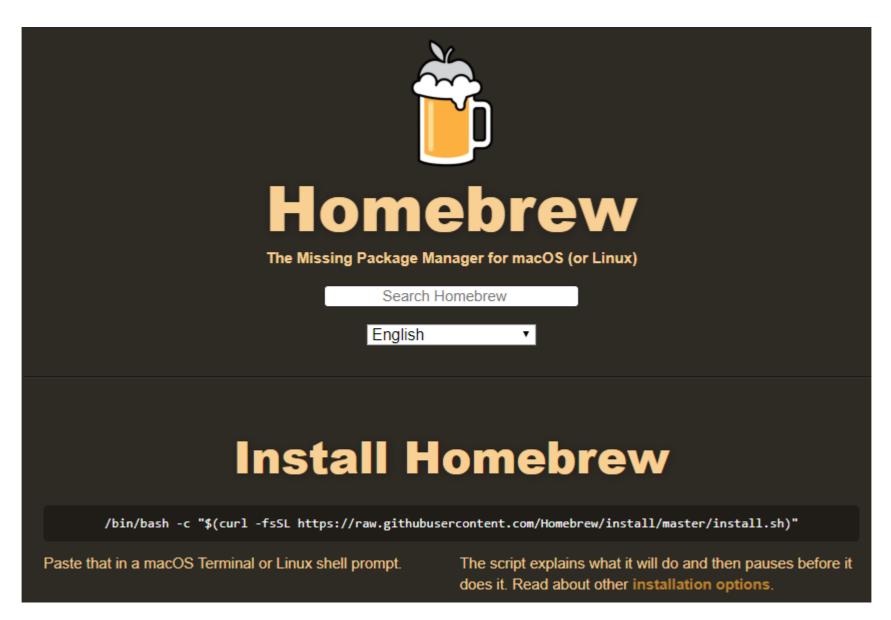


## The Software Development Kit Manager

SDKMAN! is a tool for managing parallel versions of multiple Software Development Kits on most Unix based systems. It provides a convenient Command Line Interface (CLI) and API for installing, switching, removing and listing Candidates. Formerly known as GVM the Groovy enVironment Manager, it was inspired by the very useful <u>RVM</u> and <u>rbenv</u> tools, used at large by the Ruby community.

### https://sdkman.io/

# Homebrew (Mac)



### https://brew.sh/

# **Set Gradle Variables**

### Mac/Linux (and Windows Git Bash)

SDKMan/Homebrew usually automatically edits .bashrc to look like this:

#THIS MUST BE AT THE END OF THE FILE FOR SDKMAN TO WORK!!!
export SDKMAN\_DIR="/c/Users/username/.sdkman/sdkman"
[[ -s "/c/Users/username/.sdkman/bin/sdkman-init.sh" ]] && source
"/c/Users/username/.sdkman/bin/sdkman-init.sh"

### Windows

Add Gradle to the PATH environment variable. Follow this tutorial:

https://javatutorial.net/set-java-home-windows-10

Withs SDKMAN, Gradle is generally installed under:

~/.sdkman/candidates/gradle/current/bin

# Add an Emulated Device on Android Studio

Run Tools VCS Window Help My Applicatio

- 🛛 📮 AVD Manager
- 🔍 SDK Manager
- 🔥 Resource Manager
- Troubleshoot Device Connections

👱 Se

### Select Hardware

### Choose a device definition

				C Pixel 2		
Category	Name 🔻	Play Store	Size	Resolution	Density	
TV	Pixel XL		5.5"	1440x2560	560dpi	— 1080px —
Phone	Pixel 3a XL		6.0"	1080x2160	400dpi	Size: large
Wear OS	Pixel 3a	⊳	5.6"	1080x2220	440dpi	Ratio: long Density: 420dpi 5.0" 1920px
Tablet	Pixel 3 XL		6.3"	1440x2960	560dpi	
Automotive	Pixel 3	⊳	5.46"	1080x2160	440dpi	
	Pixel 2 XL		5.99"	1440x2880	560dpi	
	Pixel 2	⊳		1080x1920	420dpi	
	Pixel	►	5.0"	1080x1920	420dpi	
New Hardware Profile Import Hardware Profiles					G	Clone Device

Install...

# Add an Emulated Device on Android Studio

Your Virtual Devices									
Туре	Name	Play Store	Resolution	API	Target	CPU/ABI	Size on Disk	Actions	
Co	Pixel 2 API 29	⊳	1080 × 1920: 420dpi					▶ 2 ▼	

