

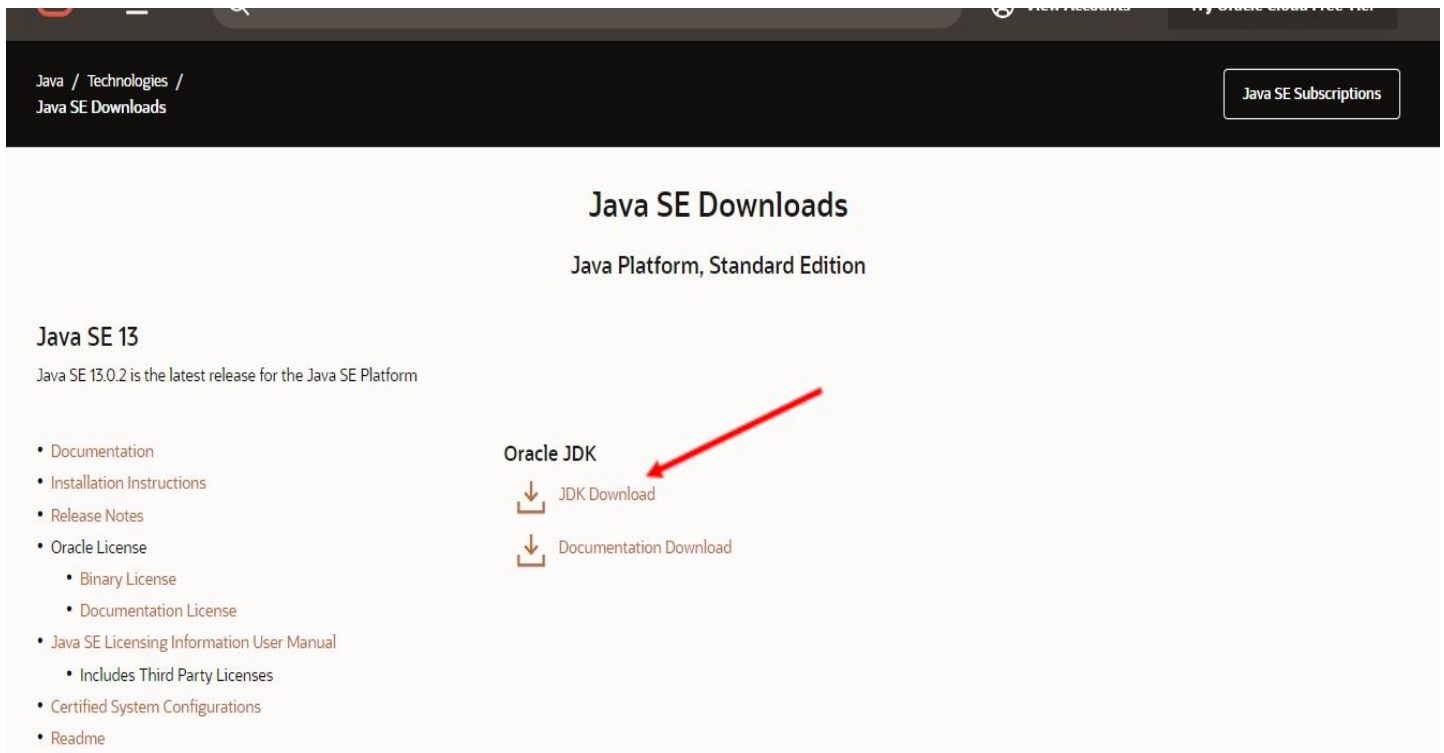
# Android Studio installation and setup

Android Studio is the IDE that will be used to develop Android Applications  
Steps to setup Android Studio for development in a Windows environment








1. Install Java
2. Install Android Studio
3. Test with a Simple Program

## 1.1. Install Java



- Step 1) Go to [the link](#). Click on Download JDK. For java latest version.



- **Step 2) Select JDK version for your system**


Product / File Description	File Size	Download
Linux Debian Package	155.72 MB	 jdk-13.0.2_linux-x64_bin.deb
Linux RPM Package	162.66 MB	 jdk-13.0.2_linux-x64_bin.rpm
Linux Compressed Archive	179.41 MB	 jdk-13.0.2_linux-x64_bin.tar.gz
macOS Installer	173.3 MB	 jdk-13.0.2_osx-x64_bin.dmg
macOS Compressed Archive	173.7 MB	 jdk-13.0.2_osx-x64_bin.tar.gz
Windows x64 Installer	159.83 MB	 jdk-13.0.2_windows-x64_bin.exe
Windows x64 Compressed Archive	178.99 MB	 jdk-13.0.2_windows-x64_bin.zip

- **Step 3) Accept the Oracle Technology Network License Agreement for Oracle Java SE to download this software**

Linux Compressed Archive	179.41 MB	 jdk-13.0.2_linux-x64_bin.tar.gz
macOS Installer	173.3 MB	 jdk-13.0.2_osx-x64_bin.dmg
macOS Compressed Archive		
Windows x64 Installer		
Windows x64 Compressed Archive		

You must accept the [Oracle Technology Network License Agreement for Oracle Java SE](#) to download this software.

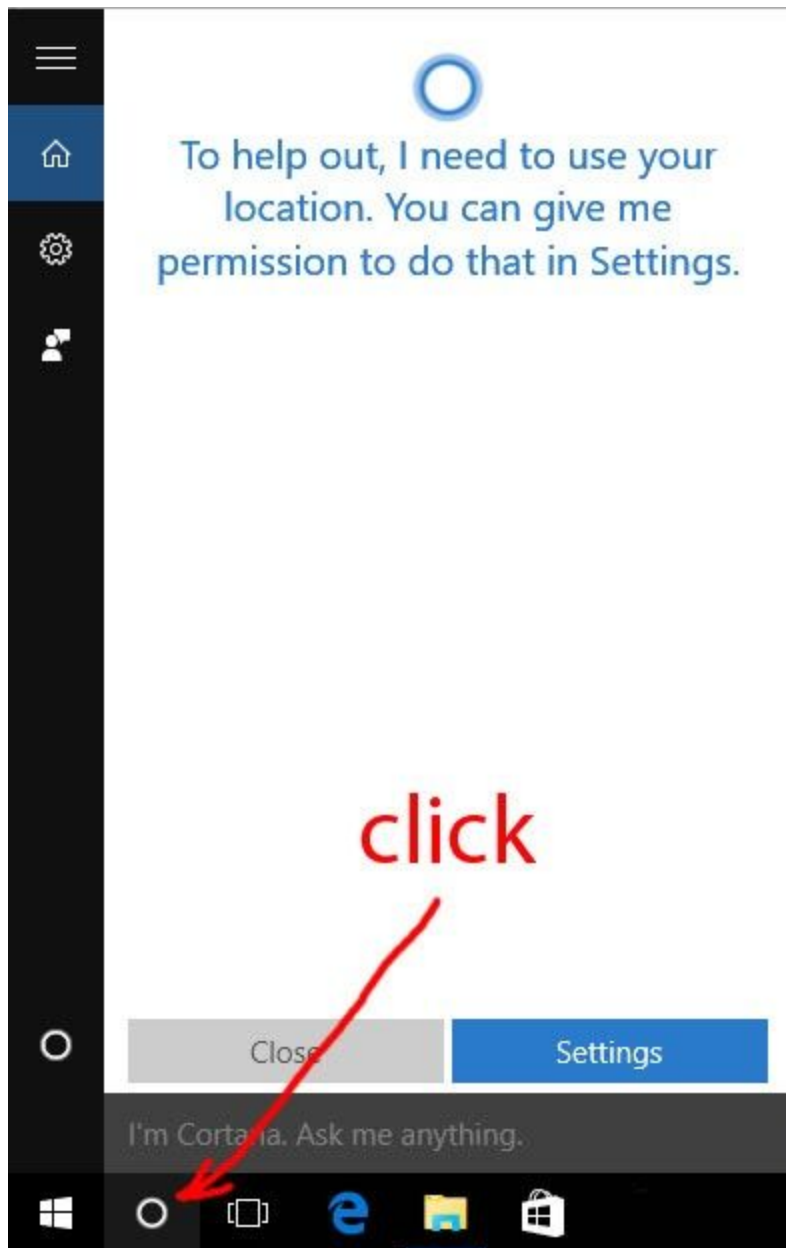
☒ I accept the Oracle Technology Network License Agreement for Oracle Java SE

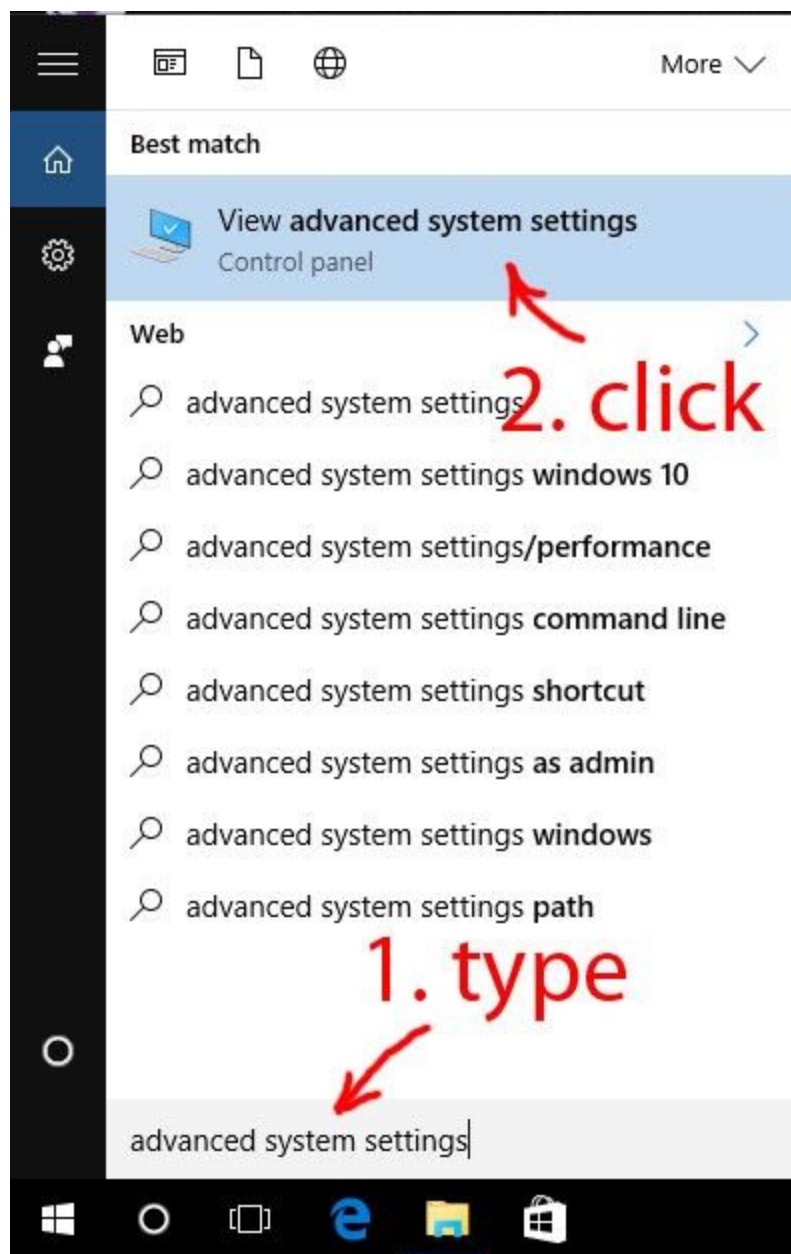
[Download jdk-13.0.2\\_windows-x64\\_bin.exe](#) 

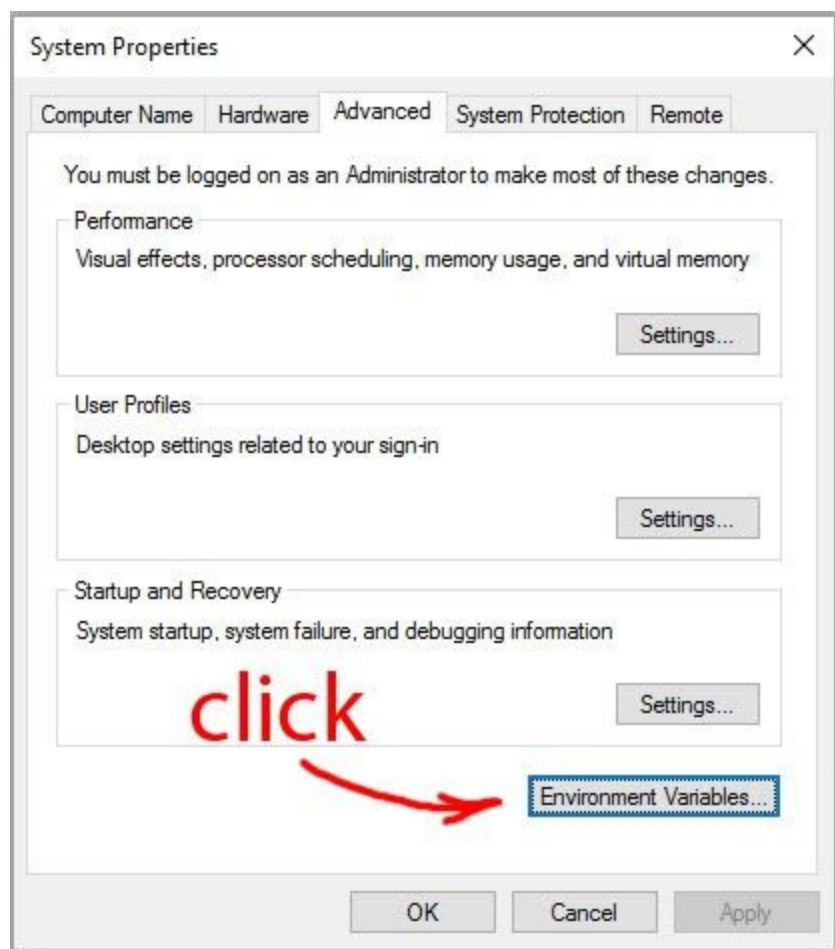
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- **Step 4) Add JAVA to the environment path**







Environment Variables

User variables for admin

Variable
TEMP
TMP

Edit System Variable

Variable name: JAVA\_HOME

Variable value: C:\Program Files\Java\jdk1.8.0\_102

Browse Directory...

Browse File...

OK

Cancel

New...

Edit...

Delete

System variables

Variable	Value
ComSpec	C:\WINDOWS\system32\cmd.exe
FP_NO_HOST_CHECK	NO
JAVA_HOME	C:\Program Files\Java\jdk1.8.0_102
NUMBER_OF_PROCESSORS	8
OS	Windows_NT
Path	C:\ProgramData\Oracle\Java\javapath;C:\Program Files (x86)\Intel\i...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC

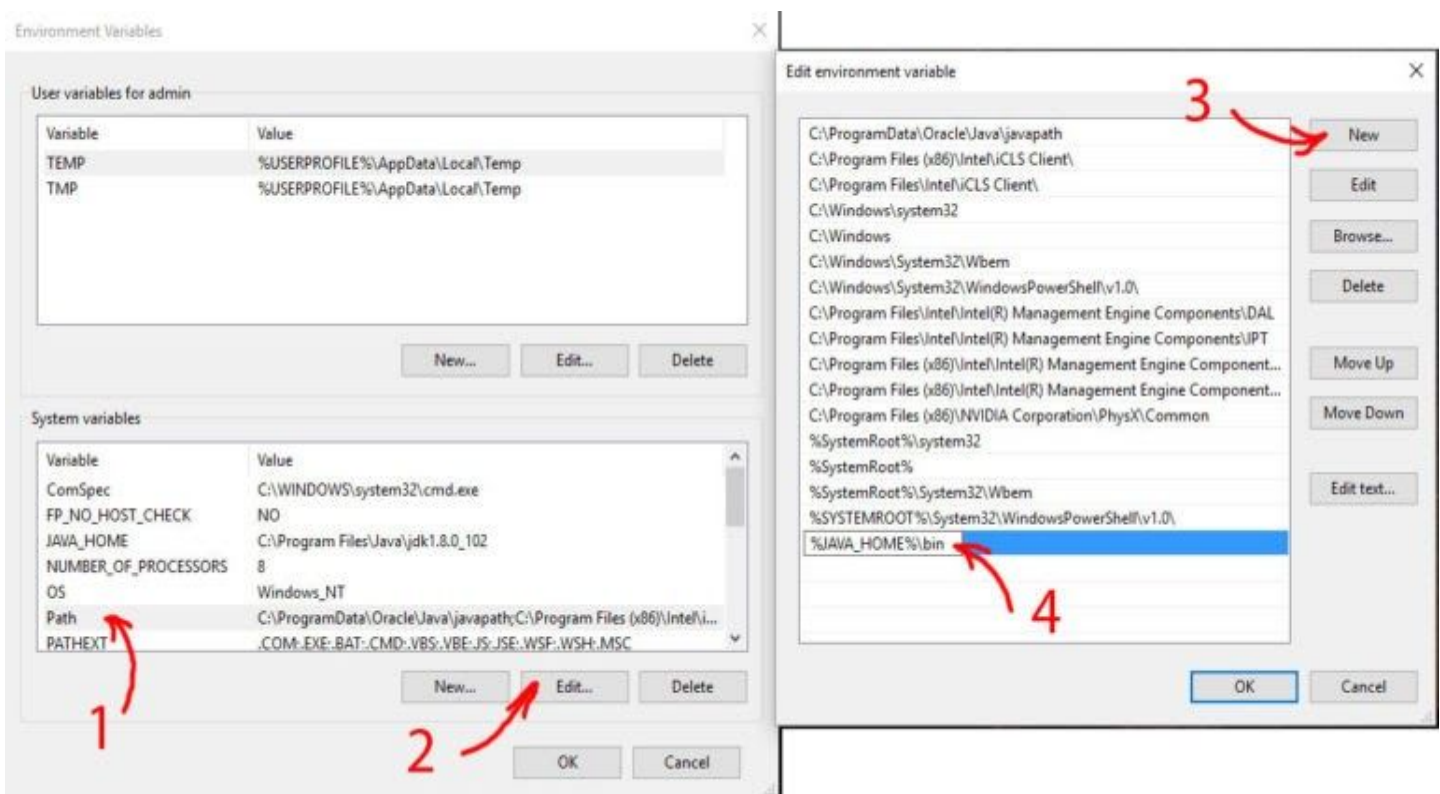
New...

Edit...

Delete

OK

Cancel

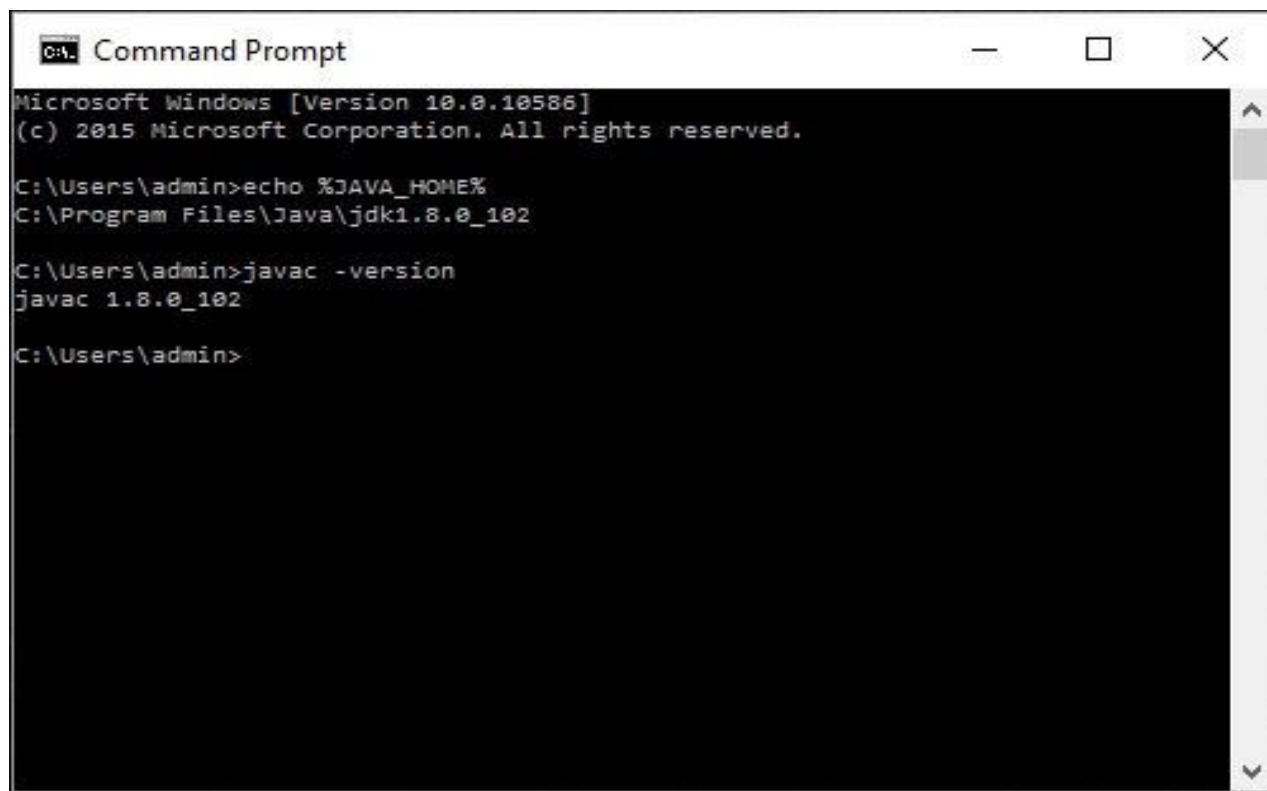


## Test Java

Type this in command prompt to this the installed JAVA information

```
echo %JAVA_HOME%
```

```
javac -version
```



A screenshot of a Windows Command Prompt window. The title bar reads "C:\> Command Prompt" with standard minimize, maximize, and close buttons. The window content shows the following text: "Microsoft Windows [Version 10.0.10586] (c) 2015 Microsoft Corporation. All rights reserved." followed by a command prompt "C:\Users\admin>". The user enters "echo %JAVA\_HOME%", and the output is "C:\Program Files\Java\jdk1.8.0\_102". Then, the user enters "javac -version", and the output is "javac 1.8.0\_102". The prompt returns to "C:\Users\admin>". A vertical scrollbar is visible on the right side of the command window.

```
C:\> Command Prompt
Microsoft Windows [Version 10.0.10586]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Users\admin>echo %JAVA_HOME%
C:\Program Files\Java\jdk1.8.0_102

C:\Users\admin>javac -version
javac 1.8.0_102

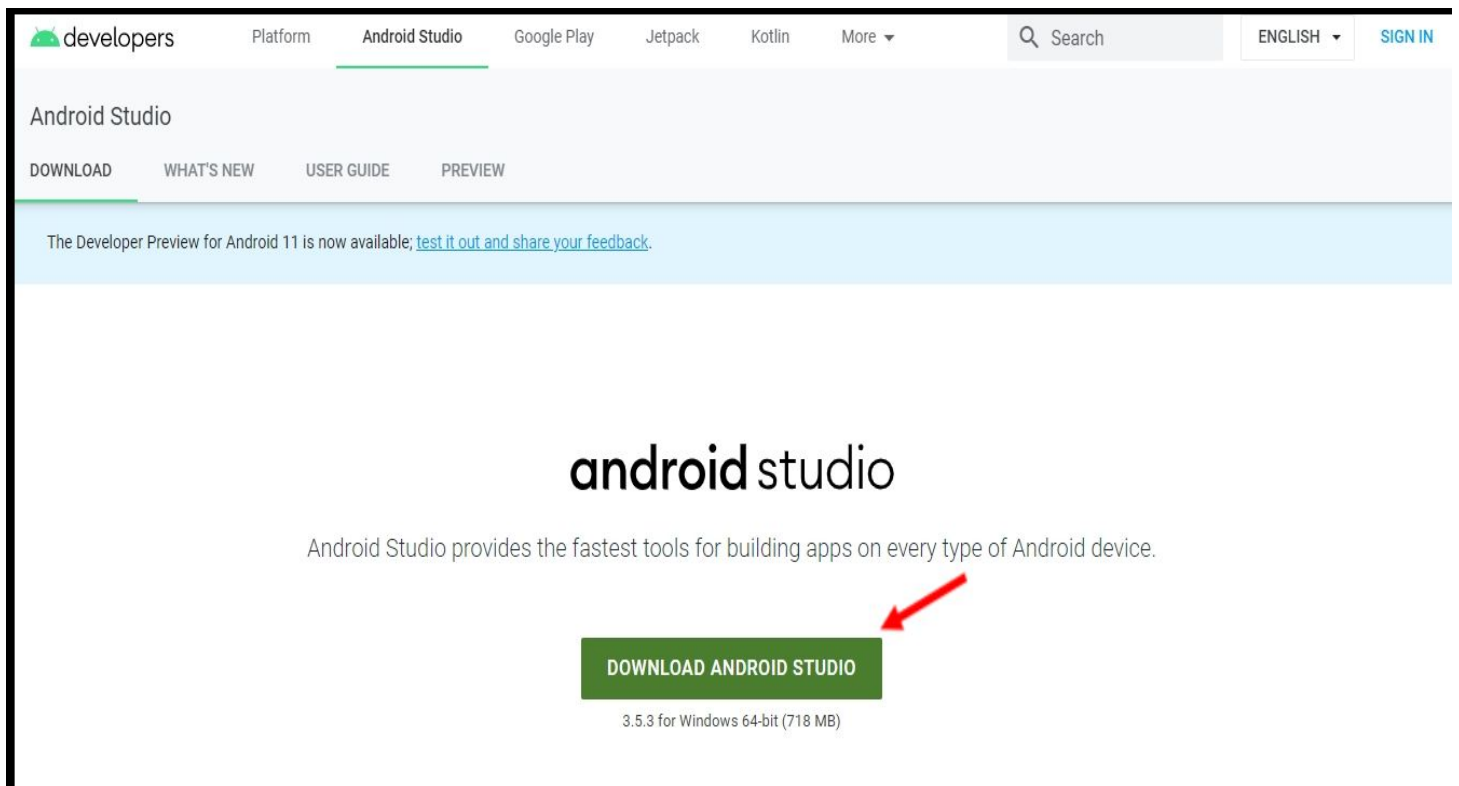
C:\Users\admin>
```



## 1.2 Install Android Studio

### ❖ Download Android Studio

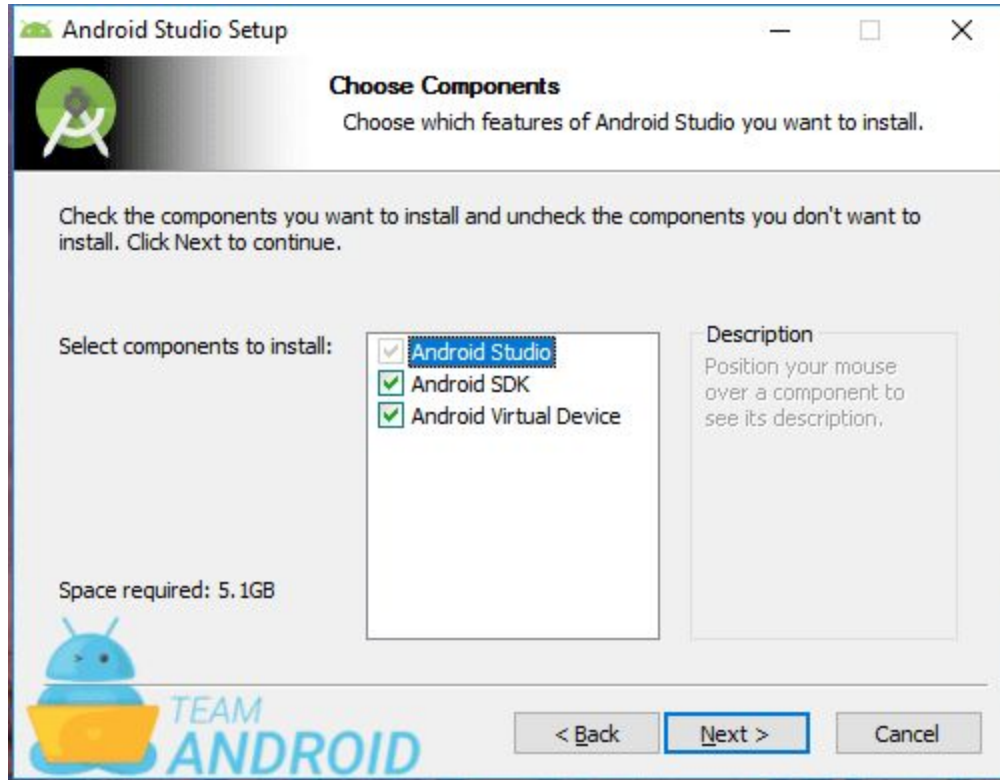
(`android-studio-bundle-XX.XXXXXXX-windows.exe`) from the Android Developers website. This may take a while to download as the entire set up is about 2GB in size.



- ❖ Run the EXE setup file you just downloaded. You should be greeted with a similar setup wizard screen as shown below. Click *Next* to begin!



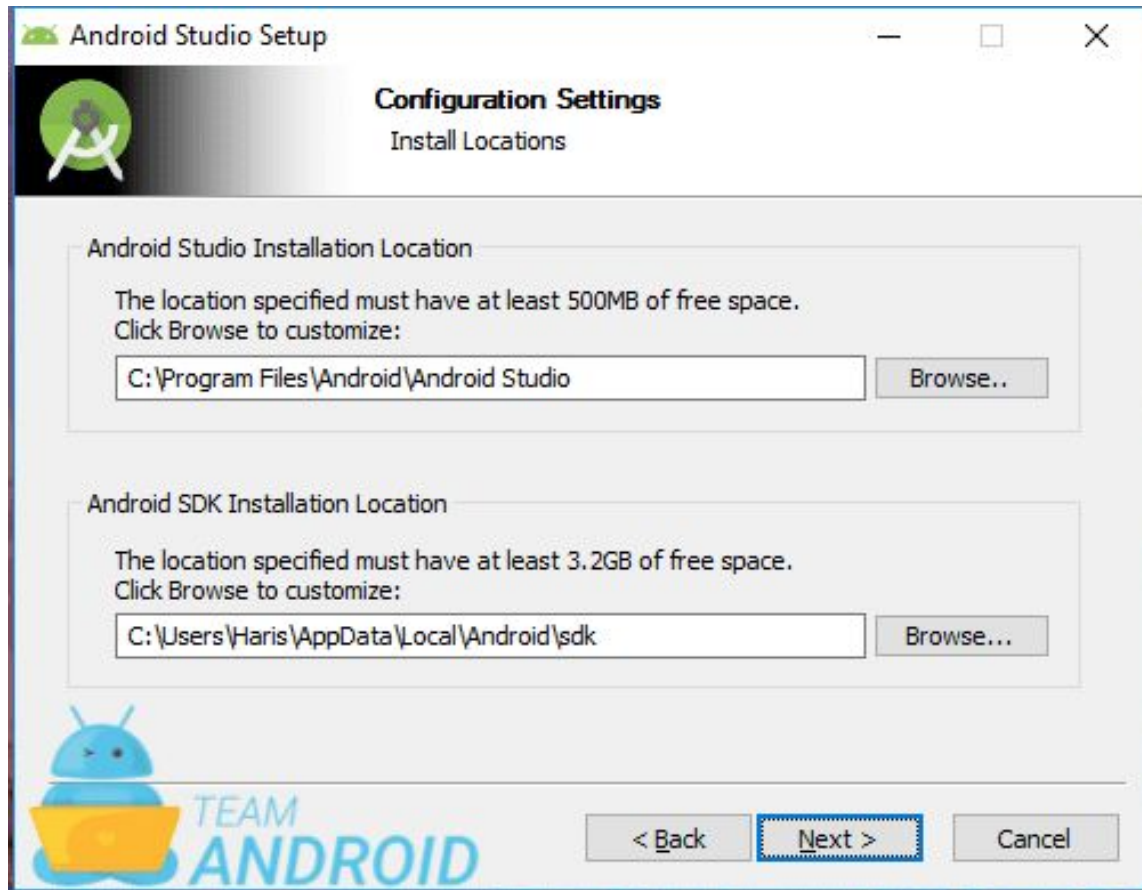
- ❖ Keep the default components selected for installation. Click *Next*.



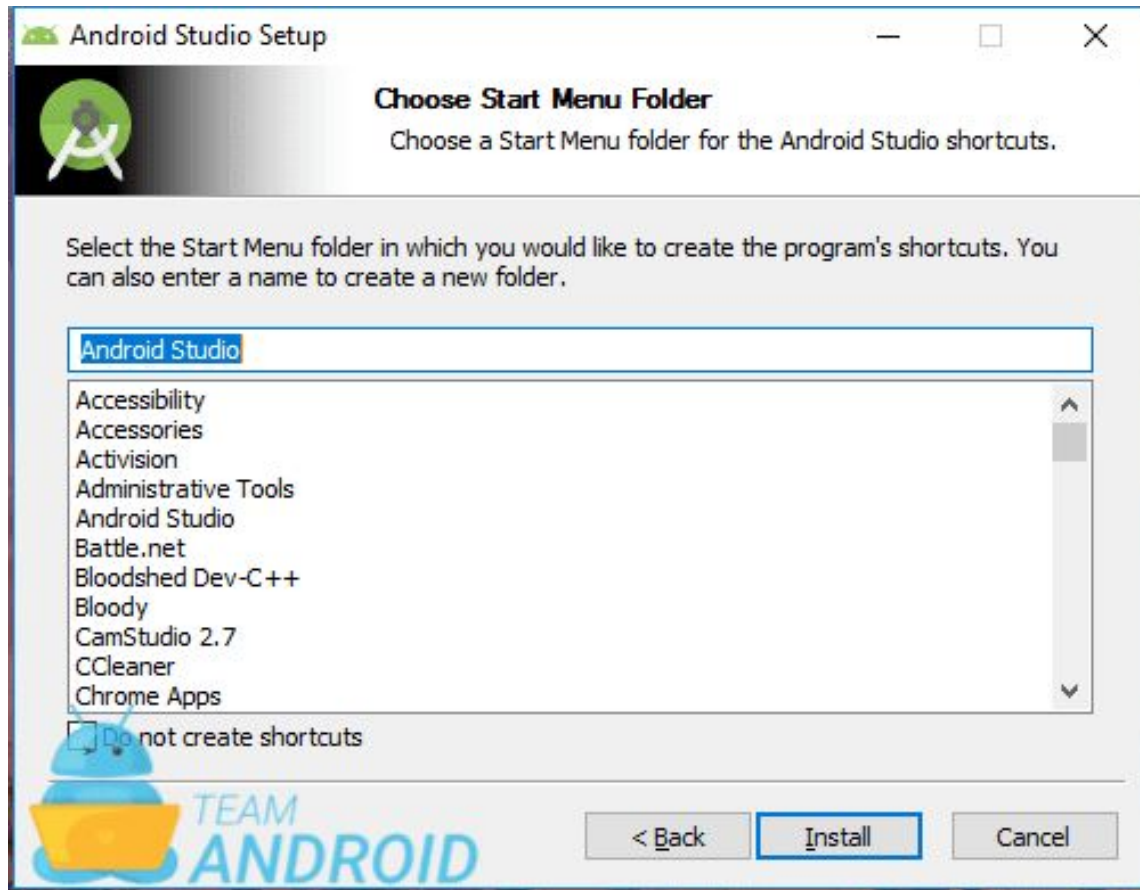
- ❖ We are sure you would not want to read through the entire license agreement.  
Click *I Agree*.



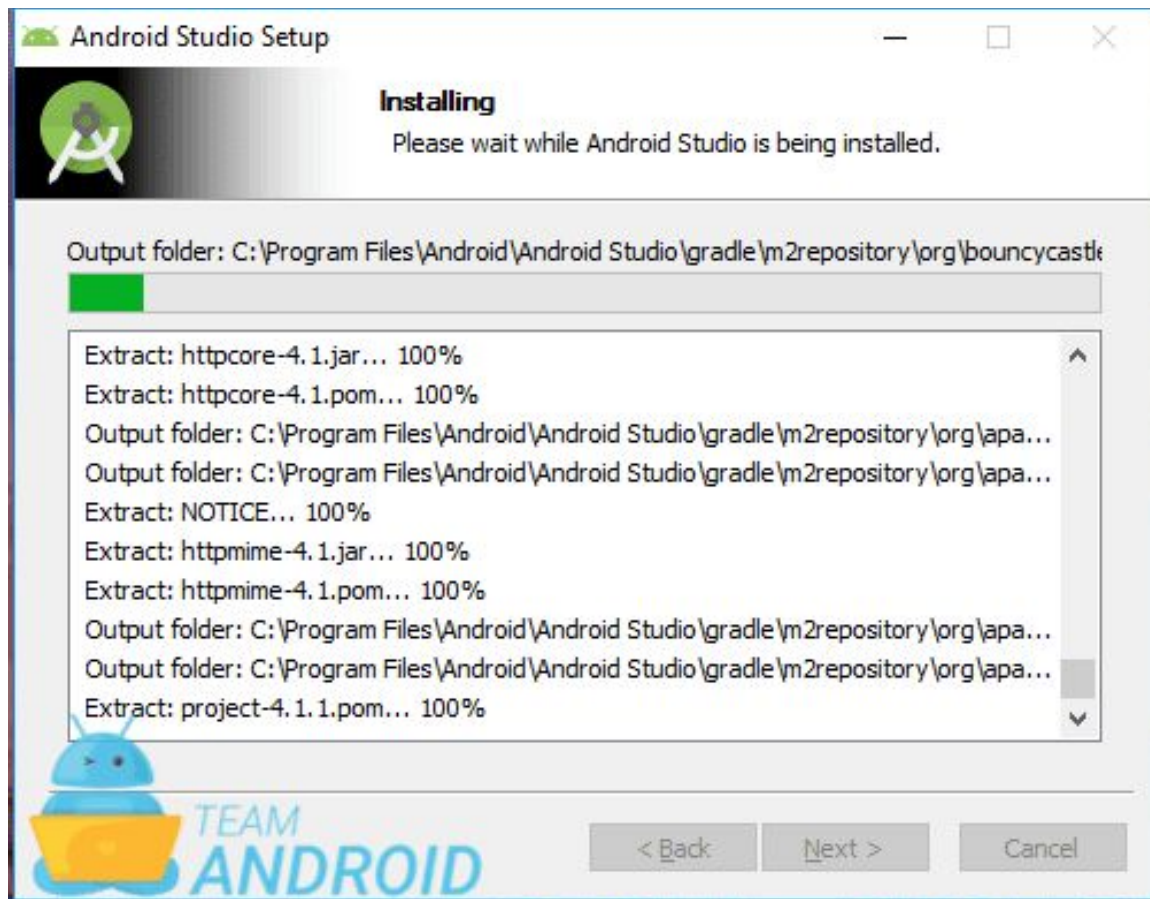
- ❖ This is where you select the installation location for Android Studio and Android SDK. You may select another location/drive that has the required space available. Click *Next* to continue.



- ❖ Yes, you would want to have a Start menu folder. Just click *Install* to continue.

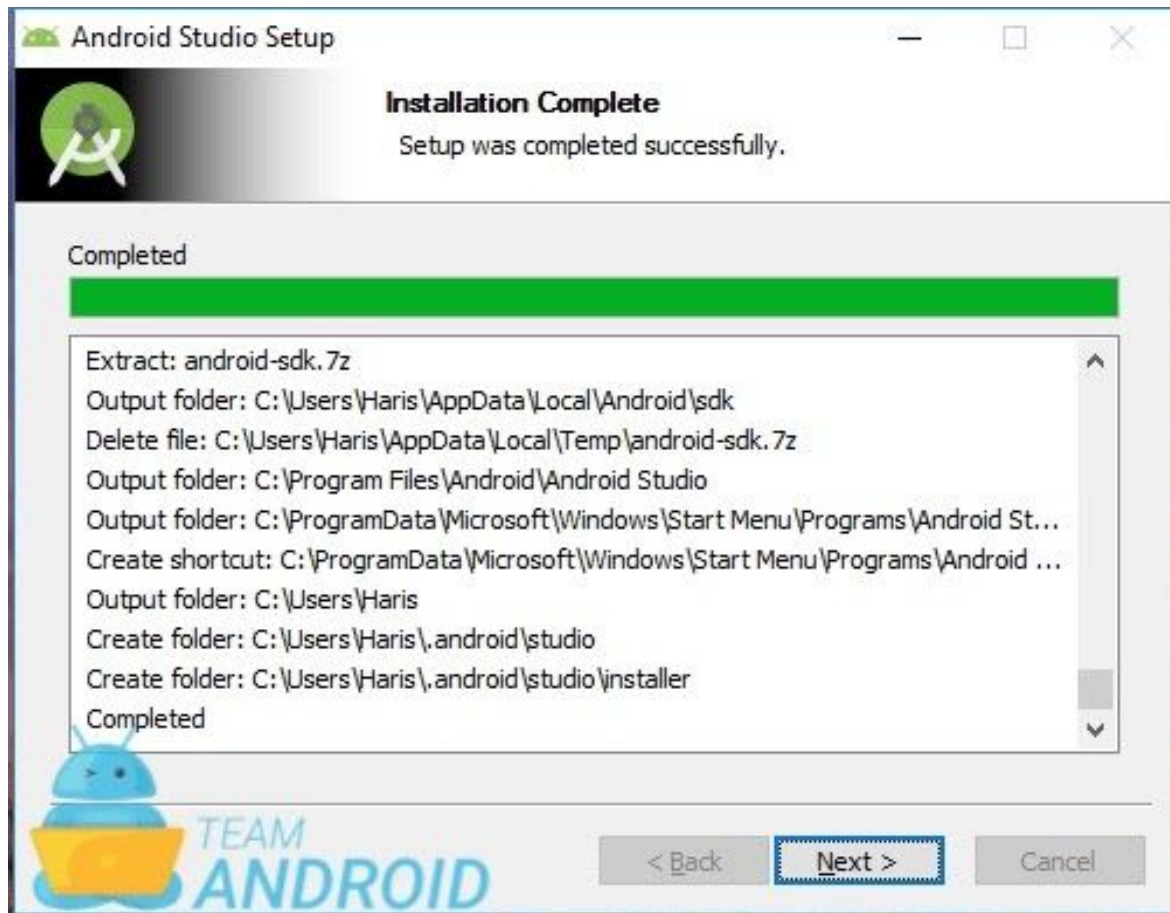


- ❖ Installation should begin now. This may take a while for all the files to be extracted and installed on your computer.





- ❖ Once the installation is completed, click *Next*.





- ❖ You are all set to launch Android Studio for the first time. Click *Finish* to proceed.



**NB:-** Install Additions SDK that is compatible with your device if you test in Actual android phone

## ❖ Add SDK tools

Click on SDK tools tabs select on the desired tool and click on Apply button (if downloaded and installed all checkboxes will be marked and status will be installed)

Settings for New Projects

Appearance & Behavior > System Settings > Android SDK

Manager for the Android SDK and Tools used by Android Studio

Android SDK Location: C:\Users\...\AppData\Local\Android\Sdk [Edit](#)

SDK Platforms SDK Tools SDK Update Sites

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.

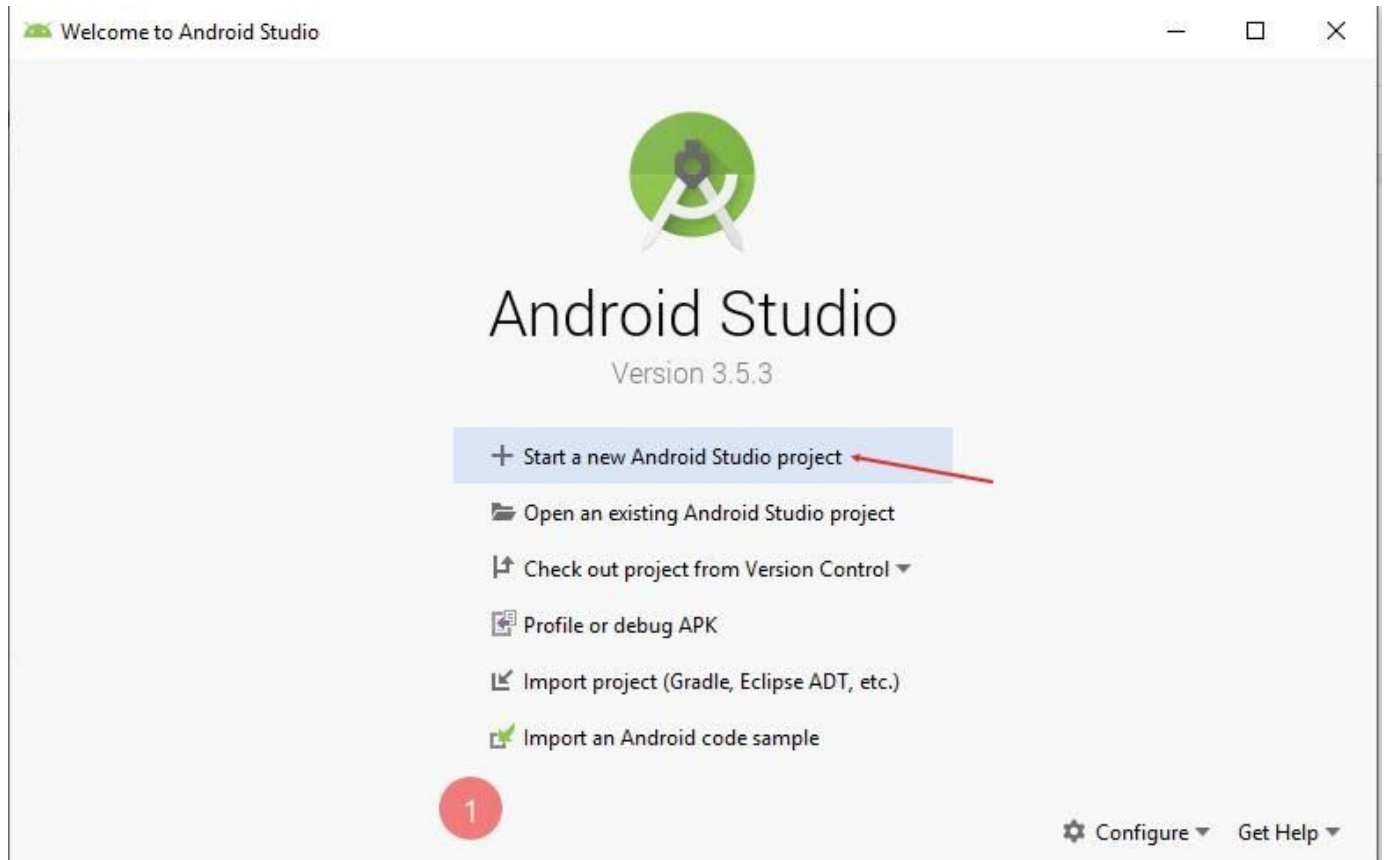
	Name	Version	Status
<input checked="" type="checkbox"/>	Android SDK Build-Tools 30-rc1		Installed
<input checked="" type="checkbox"/>	GPU Debugging tools		Installed
<input checked="" type="checkbox"/>	LLDB		Installed
<input checked="" type="checkbox"/>	NDK (Side by side)		Installed
<input checked="" type="checkbox"/>	CMake		Installed
<input checked="" type="checkbox"/>	Android Auto API Simulators	1	Installed
<input checked="" type="checkbox"/>	Android Auto Desktop Head Unit emulator	1.1	Installed
<input checked="" type="checkbox"/>	Android Emulator	30.0.0	Installed
<input type="checkbox"/>	Android Emulator Hypervisor Driver for AMD Processors (installer)	1.3.0	Not installed
<input checked="" type="checkbox"/>	Android SDK Platform-Tools	29.0.6	Installed
<input checked="" type="checkbox"/>	Android SDK Tools	26.1.1	Installed
<input checked="" type="checkbox"/>	Documentation for Android SDK	1	Installed
<input checked="" type="checkbox"/>	Google Play APK Expansion library	1	Installed
<input checked="" type="checkbox"/>	Google Play Instant Development SDK	1.9.0	Installed
<input checked="" type="checkbox"/>	Google Play Licensing Library	1	Installed
<input checked="" type="checkbox"/>	Google Play services	49	Installed
<input checked="" type="checkbox"/>	Google USB Driver	12	Installed
<input checked="" type="checkbox"/>	Google Web Driver	2	Installed
<input type="checkbox"/>	Intel x86 Emulator Accelerator (HAXM installer)	7.5.4	Not installed

☒ Hide Obsolete Packages ☐ Show Package Details

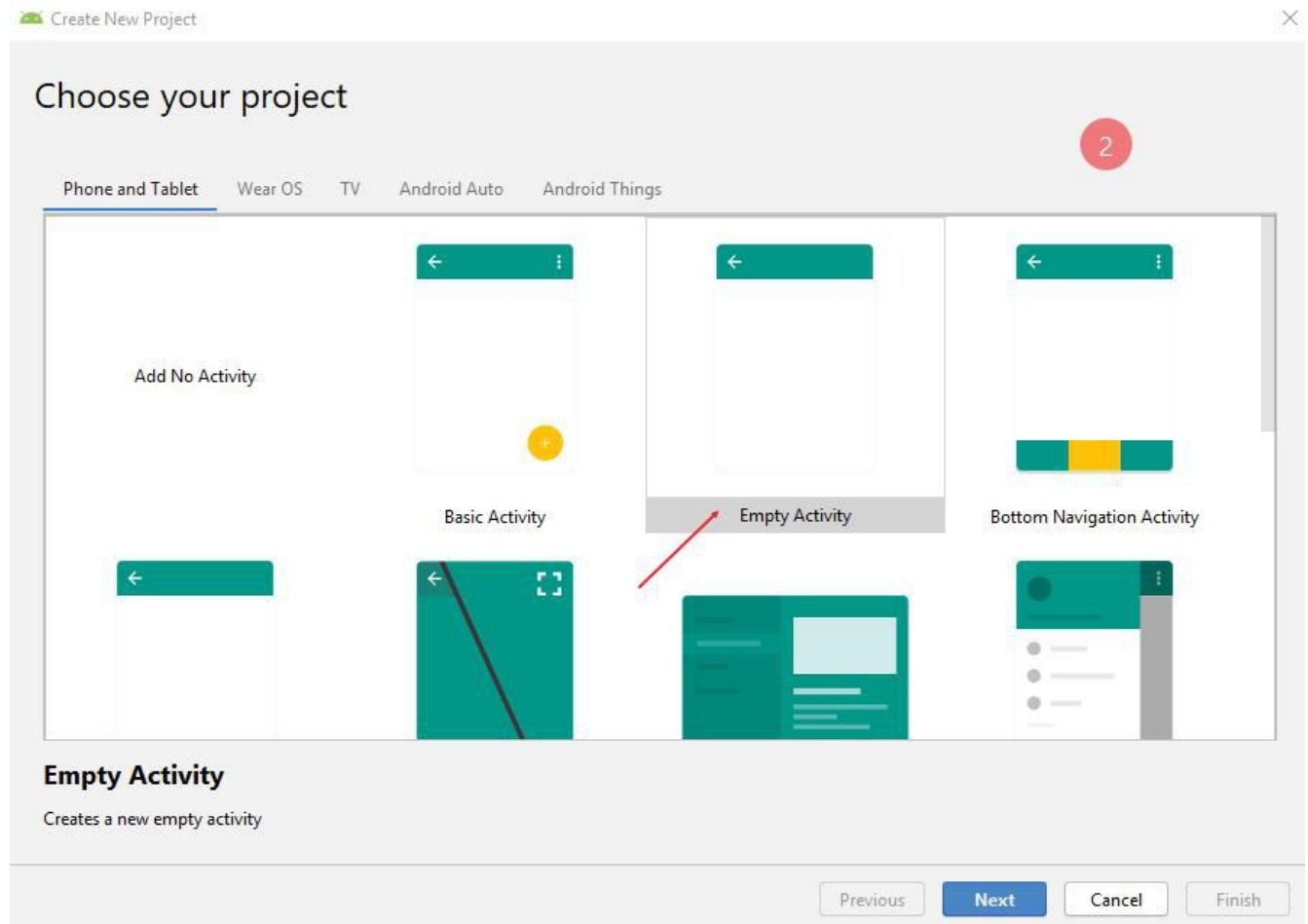
OK Cancel Apply Help

## 1.3 Test with a Simple Program

### Step 1) Click on Start new Android Studio Project

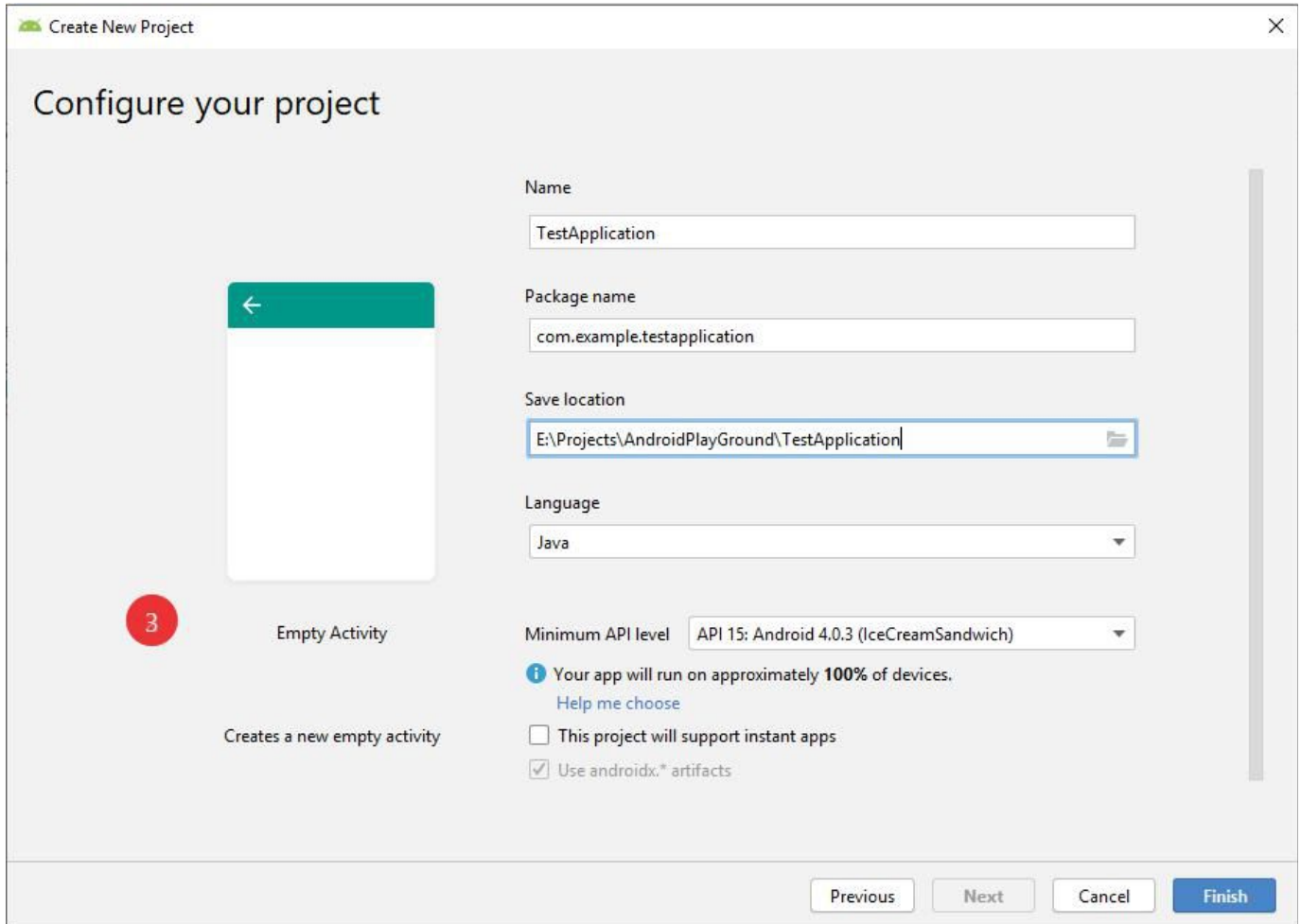


## Step 2) Choose a project from phone and tablet tab



### Step 3) Configure your project

Choose Application name, package name, minimum API version, Choose a language (Java)



The screenshot shows the 'Create New Project' dialog in Android Studio, specifically the 'Configure your project' step. The dialog is titled 'Create New Project' and has a close button (X) in the top right corner. The main heading is 'Configure your project'.

On the left side, there is a preview of an 'Empty Activity' with a red circle containing the number '3' next to it. Below the preview, it says 'Creates a new empty activity'.

On the right side, there are several configuration fields:

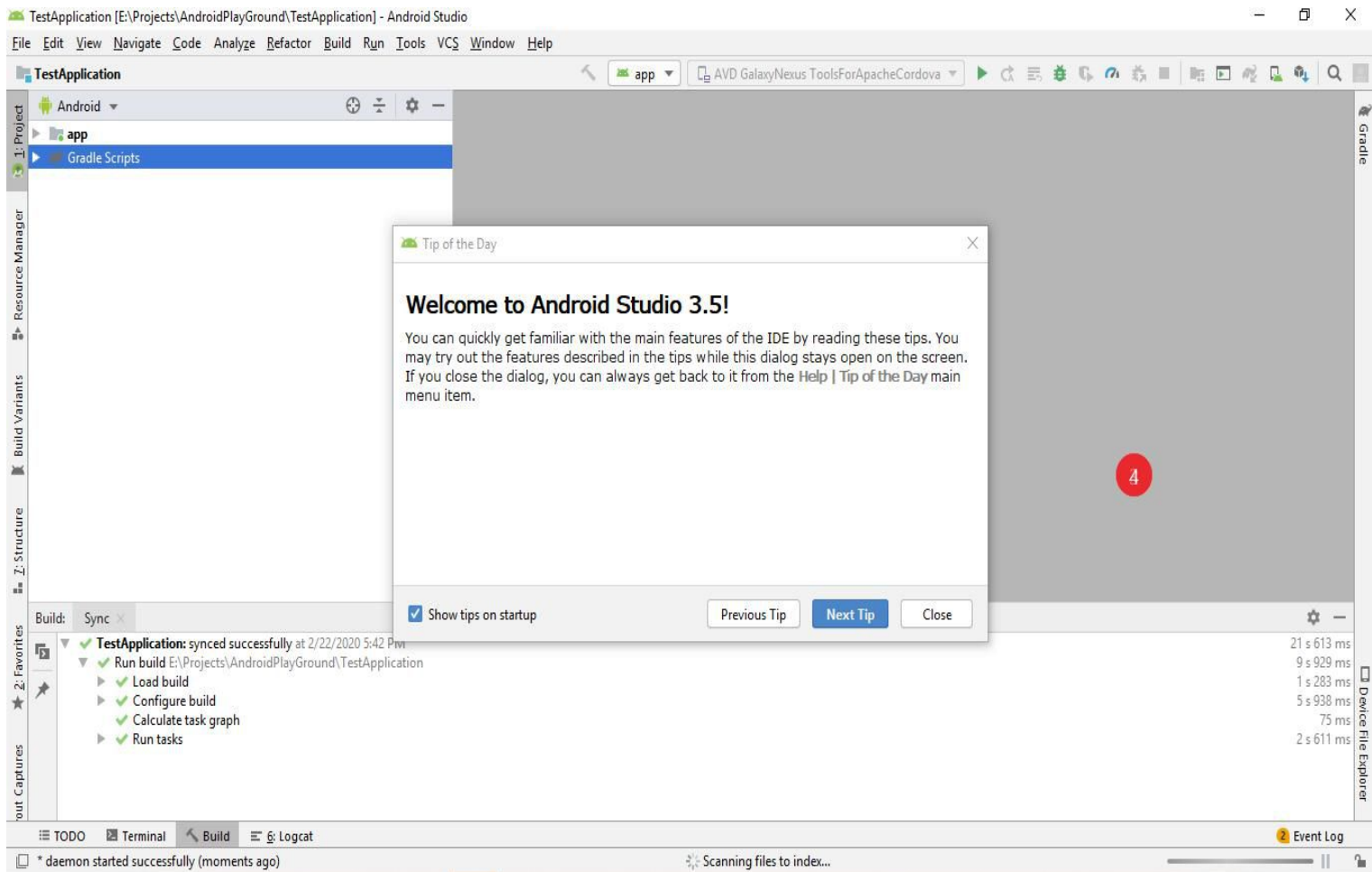
- Name:** A text field containing 'TestApplication'.
- Package name:** A text field containing 'com.example.testapplication'.
- Save location:** A text field containing 'E:\Projects\AndroidPlayGround\TestApplication' with a folder icon on the right.
- Language:** A dropdown menu showing 'Java'.
- Minimum API level:** A dropdown menu showing 'API 15: Android 4.0.3 (IceCreamSandwich)'.

Below these fields, there is an information icon (i) and a message: 'Your app will run on approximately 100% of devices.' with a link 'Help me choose'.

At the bottom, there are two checkboxes:

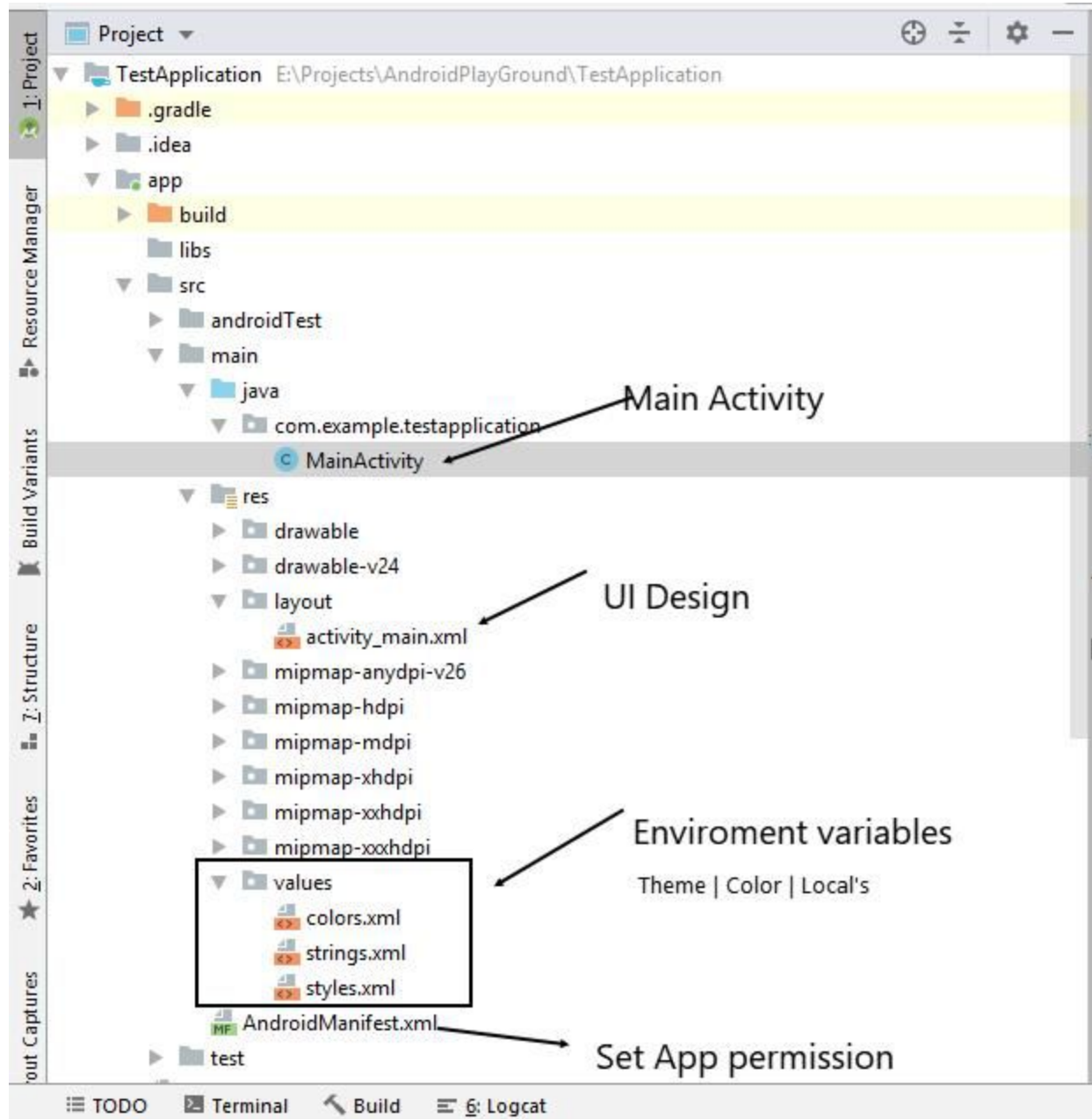
- ☐ This project will support instant apps
- ☒ Use androidx.\* artifacts

At the bottom right, there are four buttons: 'Previous', 'Next', 'Cancel', and 'Finish'.



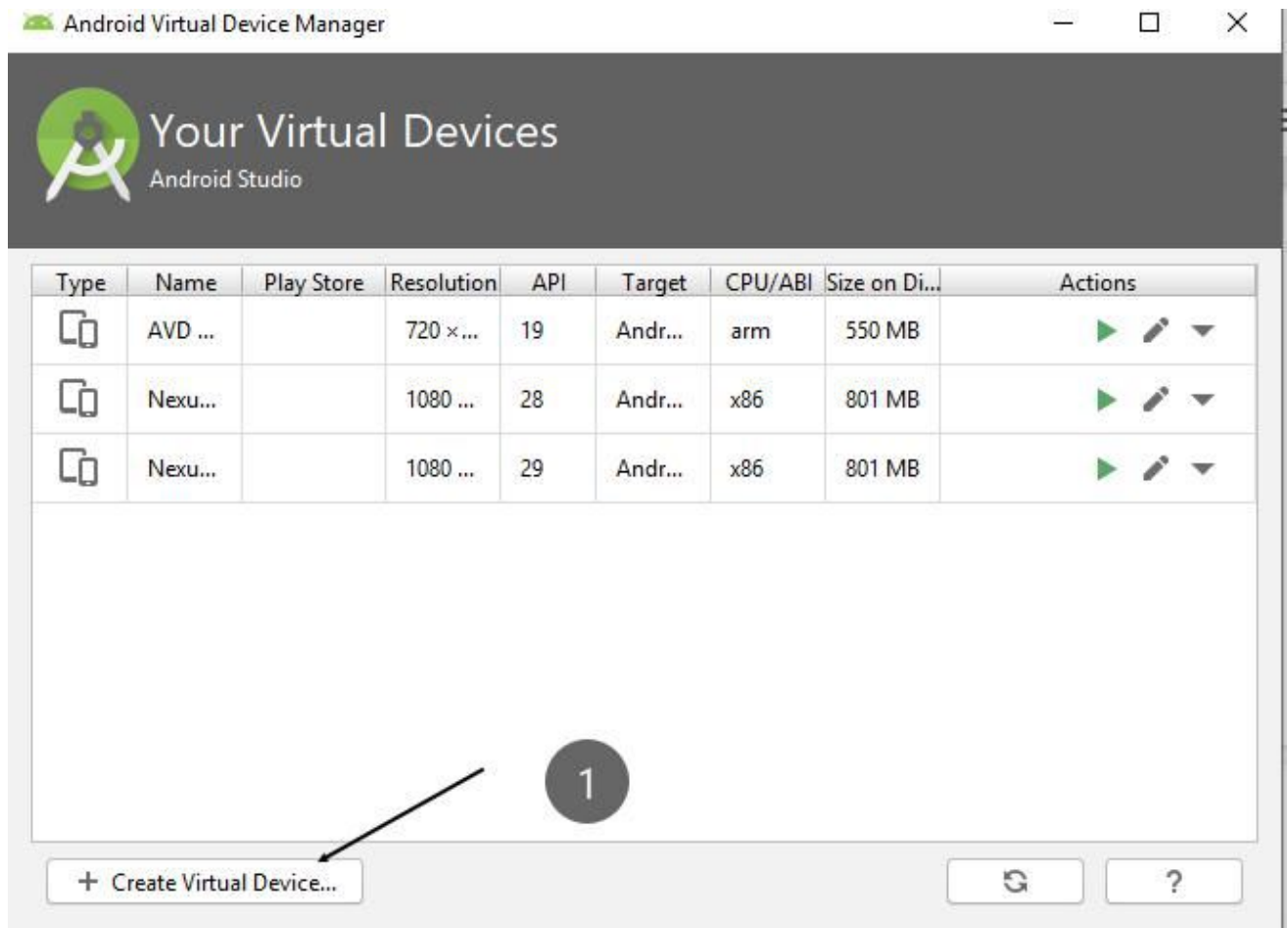
Click Finish and wait for [Gradle](#) to sync

## ❖ Folder layout



## Create AVD

### ➤ Open Avd Manager from the drop-down





## Choose device definition

Virtual Device Configuration

✕



Select Hardware  
Android Studio

### Choose a device definition

2

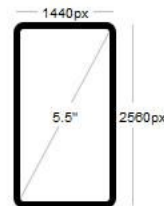
Category	Name	Play Store	Size	Resolution	Density
TV	Pixel XL		5.5"	1440x2560	560dpi
Phone	Pixel 3a XL		6.0"	1080x2160	400dpi
Wear OS	Pixel 3a	▶▶	5.6"	1080x2220	440dpi
Tablet	Pixel 3 XL		6.3"	1440x2960	560dpi
	Pixel 3	▶▶	5.46"	1080x2160	440dpi
	Pixel 2 XL		5.99"	1440x2880	560dpi
	Pixel 2	▶▶	5.0"	1080x1920	420dpi
	Pixel	▶▶	5.0"	1080x1920	420dpi

New Hardware Profile

Import Hardware Profiles



Pixel XL



Size: large  
Ratio: long  
Density: 560dpi

Clone Device...

Previous

Next


Cancel

Finish

Help

# Select System Image

Virtual Device Configuration


System Image  
Android Studio

### Select a system image

Recommended x86 Images Other Images

Release Name	API Level	ABI	Target
<a href="#">R Download</a>	R	x86	Android API R (Google APIs)
<b>Q</b>	29	x86	Android 10.0 (Google APIs)
<b>Pie</b>	28	x86	Android 9.0 (Google APIs)
<a href="#">Oreo Download</a>	27	x86	Android 8.1 (Google APIs)
<a href="#">Oreo Download</a>	26	x86	Android 8.0 (Google APIs)
<a href="#">Nougat Download</a>	25	x86	Android 7.1.1 (Google APIs)
<a href="#">Nougat Download</a>	24	x86	Android 7.0 (Google APIs)
<b>Marshmallow</b>	23	x86	Android 6.0 (Google APIs)
<a href="#">Lollipop Download</a>	22	x86	Android 5.1 (Google APIs)

Q



API Level

29

Android

10.0

Google Inc.

System Image

x86

We recommend these images because they run the fastest and support Google APIs.

Questions on API level?  
[See the API level distribution chart](#)

Previous

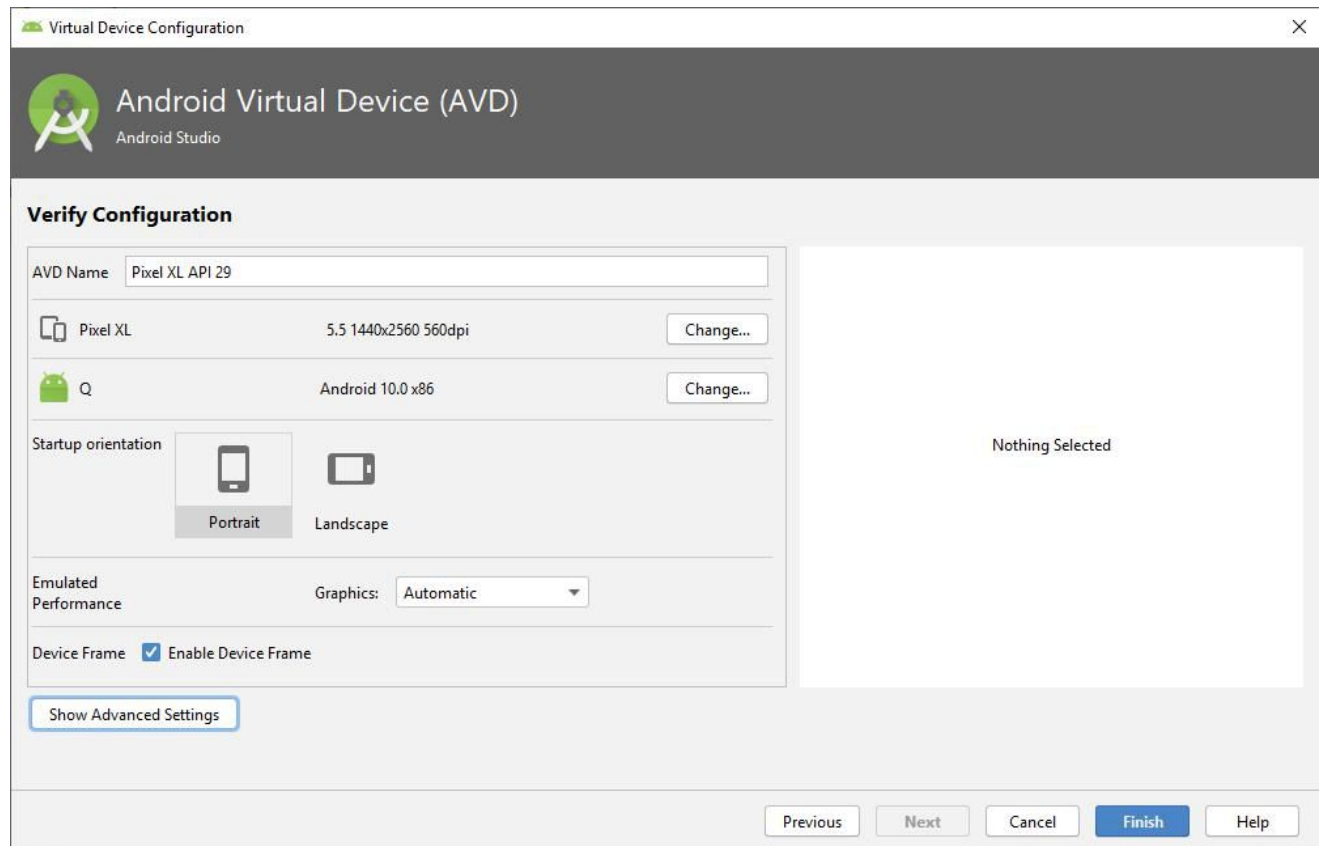
Next

Cancel

Finish

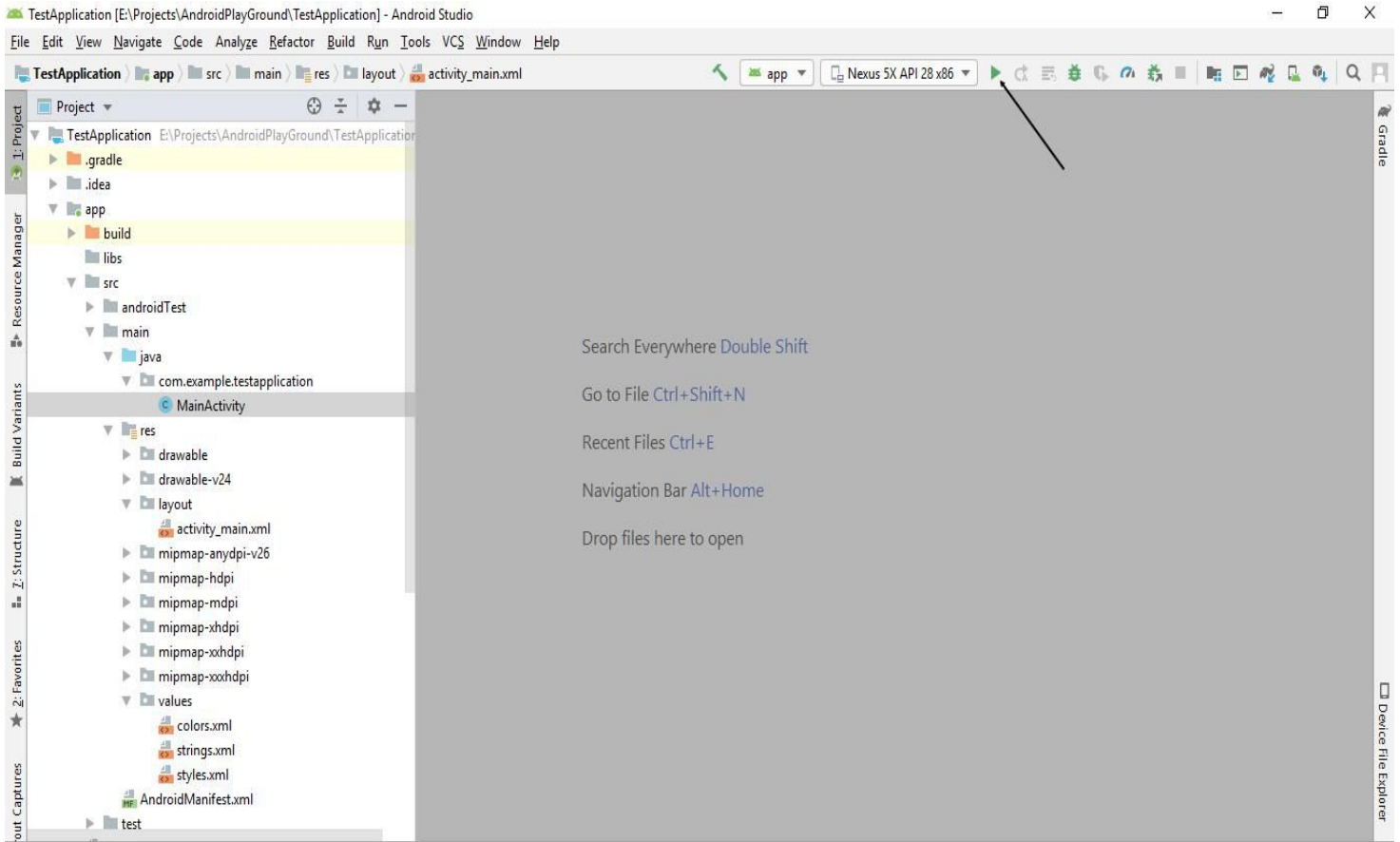
Help

## Configure AVD



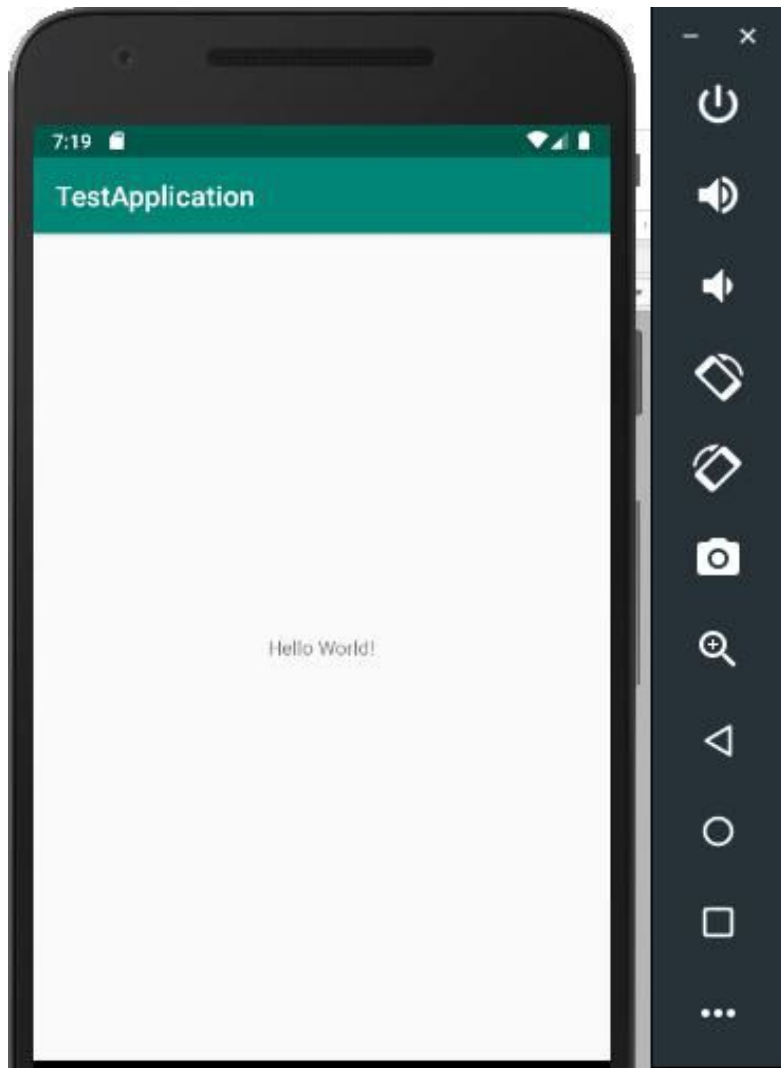
**Click Finish and you will see the new virtual device in the AVD list**

## Click on the Run button





**AVD will launch (may take a few minutes to start)**



## **Additional Resources**

1. [Youtube Video](#)
2. [Youtube video \(Ubuntu\)](#)
3. [Guides](#)