Department of Computer Technology and Information Systems

CTIS 487 - Mobile Application Development

FALL 2019 - 2020

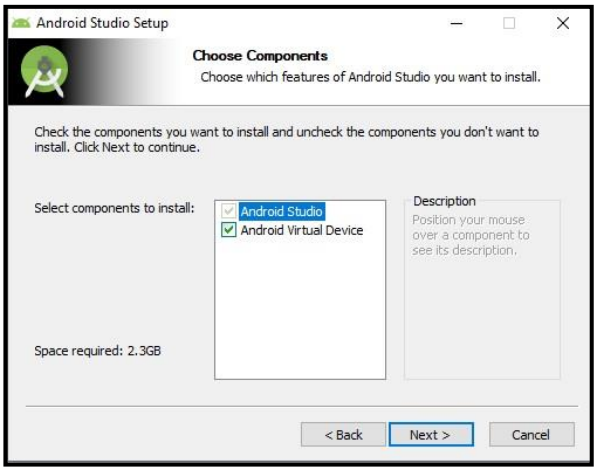
Lab Guide #1

OBJECTIVES : Android Development Environment Installation & Creating First Android Application
Instructor : Neşe ŞAHİN ÖZÇELİK **Assistant :** Leyla SEZER

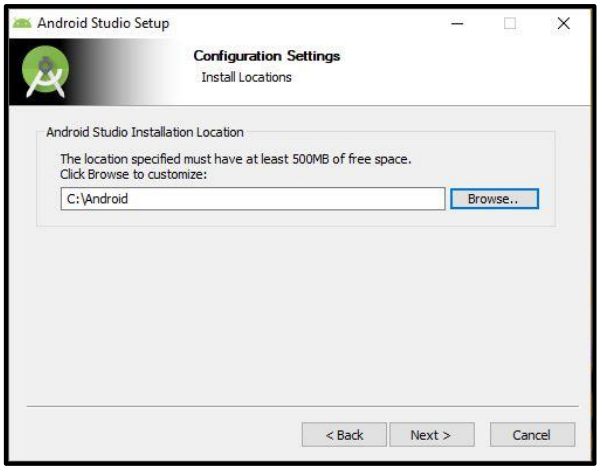
➔ **Install Java SE Development Kit 10 or upper versions from the below link**

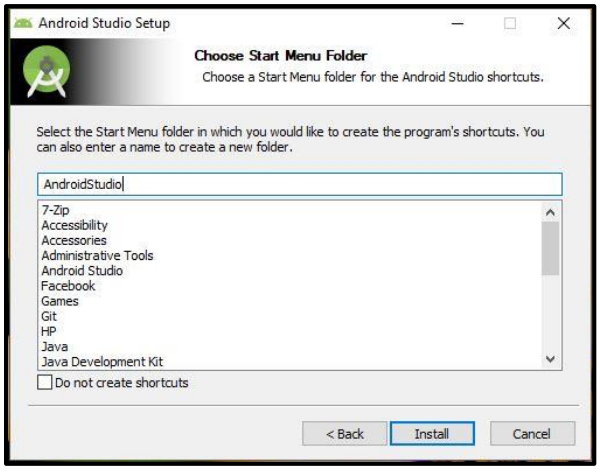
http://www.oracle.com/technetwork/java/javase/downloads/jdk10-downloads-4416644.html

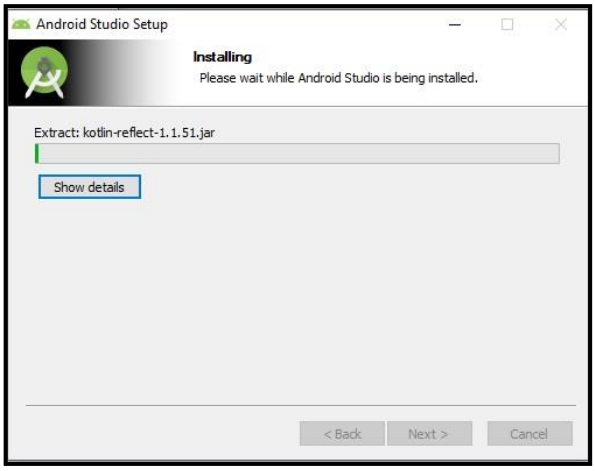
➔ **Steps to install Android Studio 3.5 and APIs**

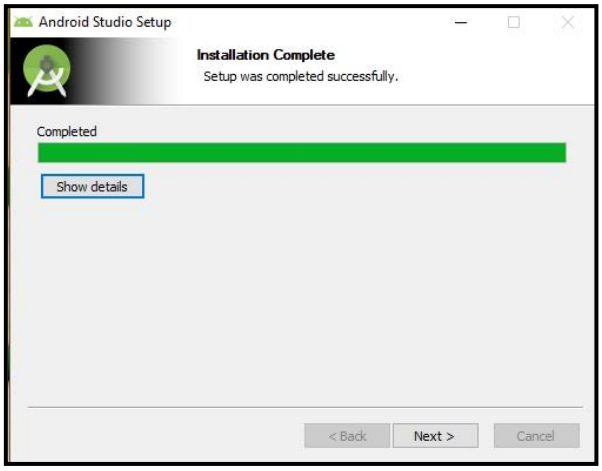


** Specify the location of the installation (It should NOT include blank character in the path)

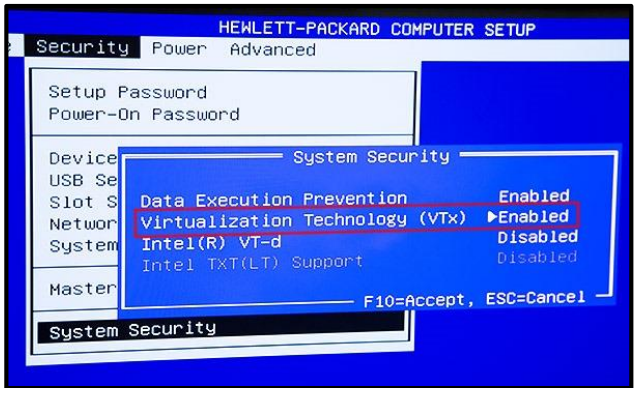




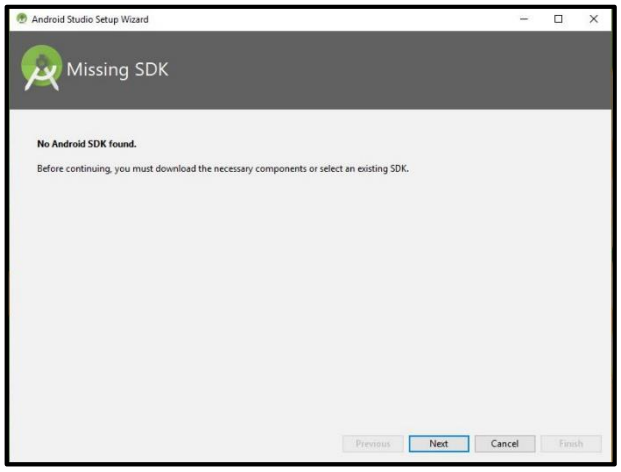


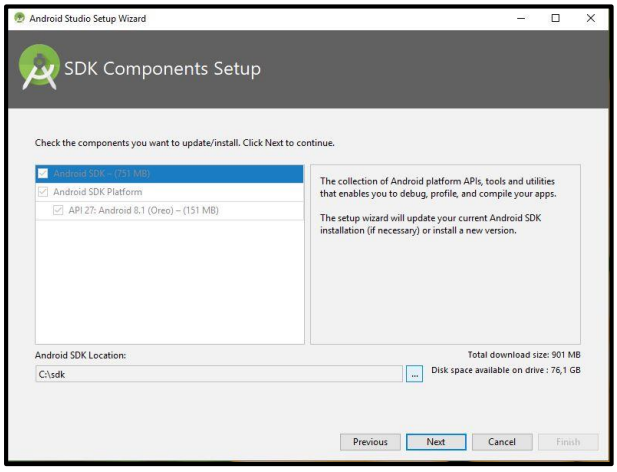


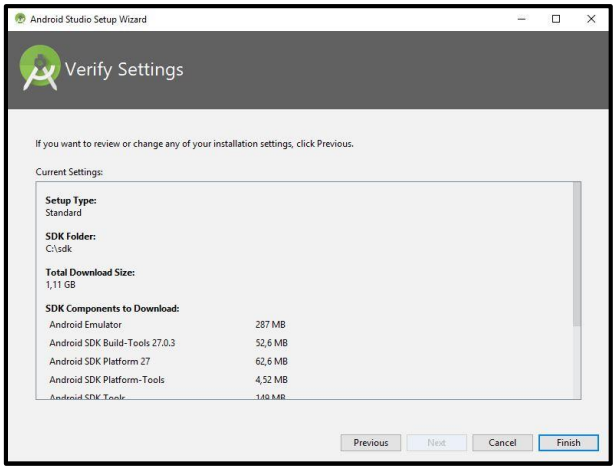
➔ **To install HAXM installer, be sure Virtualization Technology (VTx) is enabled in the BIOS Menu**

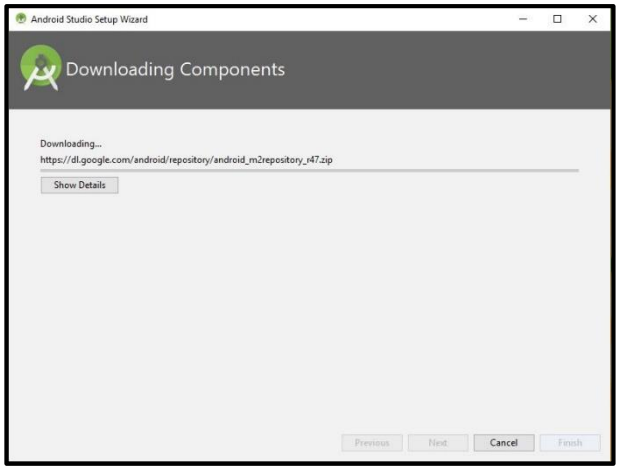


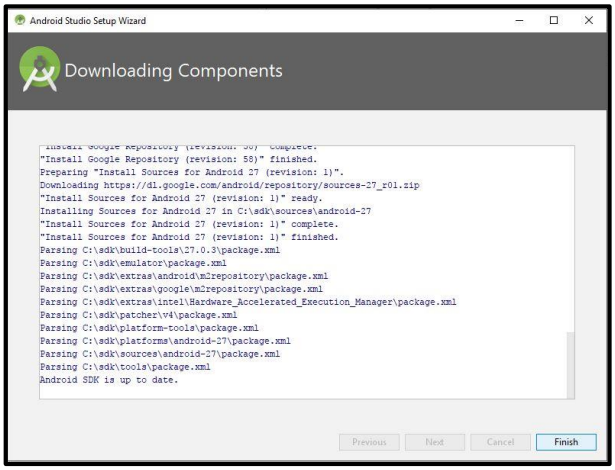
➔ **Steps to install SDK Manager**





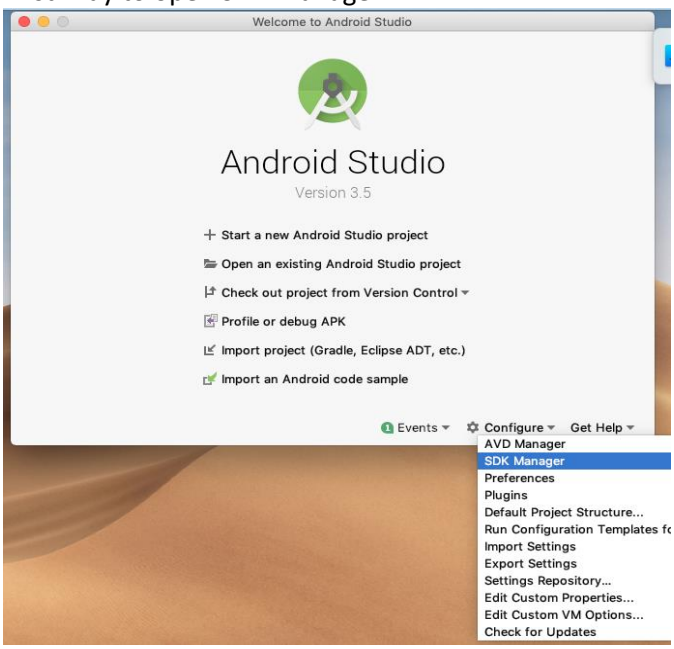




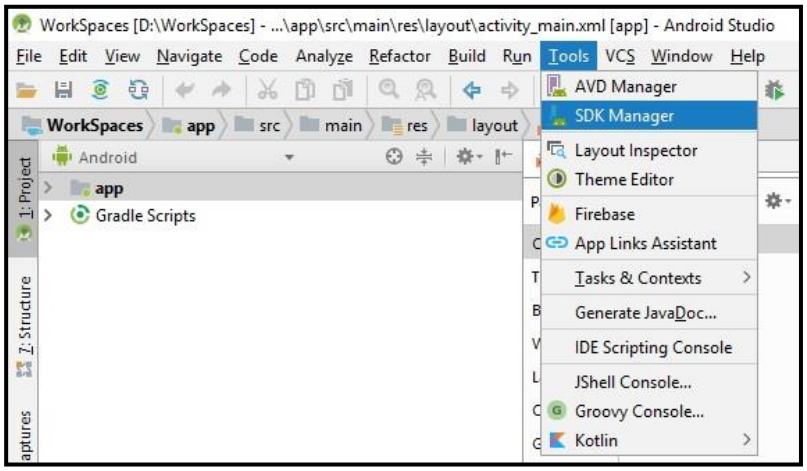


➔ **Steps to install APIs**

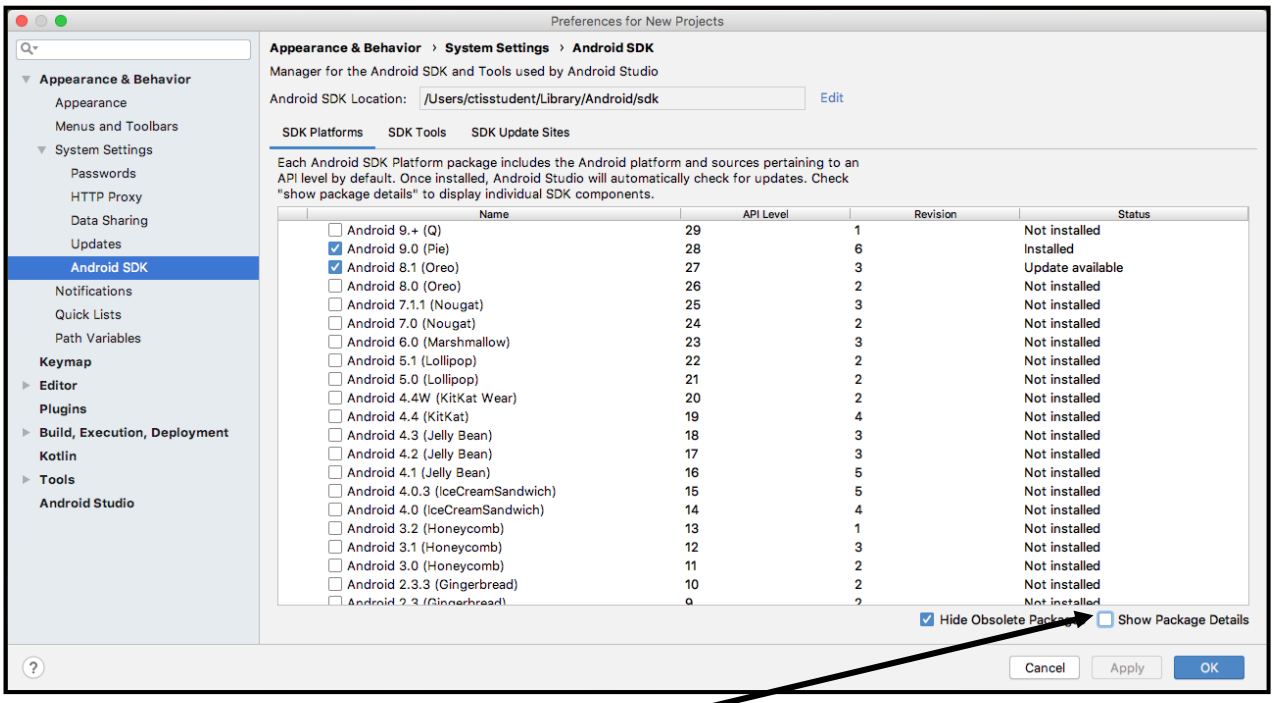
- First Way to open SDK Manager



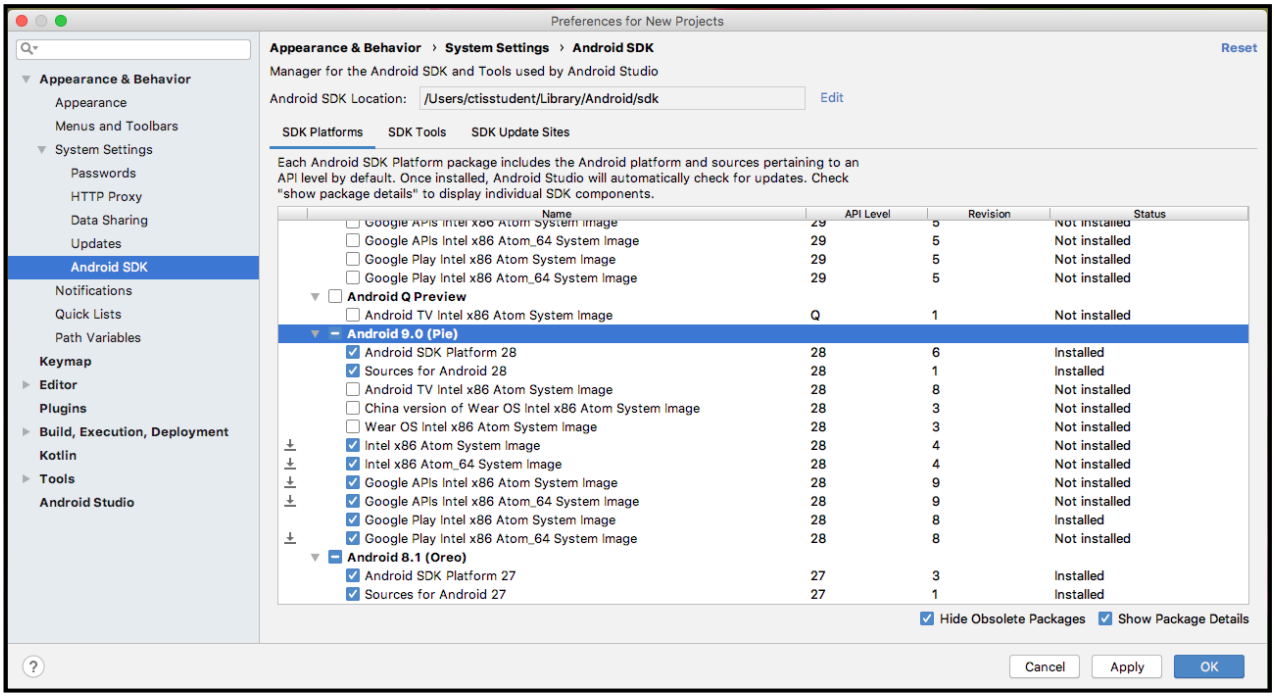
- Second Way to open SDK Manager, select SDK Manager from the Tools Menu like in the below



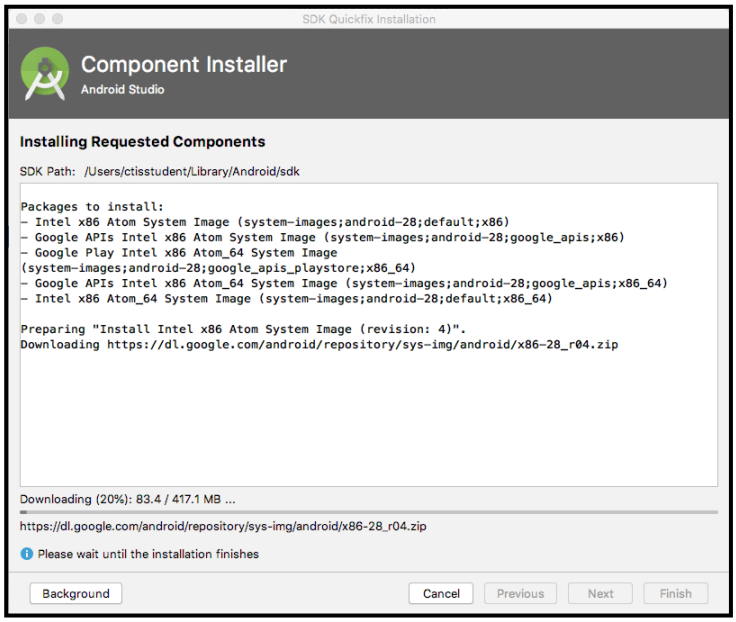
- Select Android 9.0 (API 28) to install

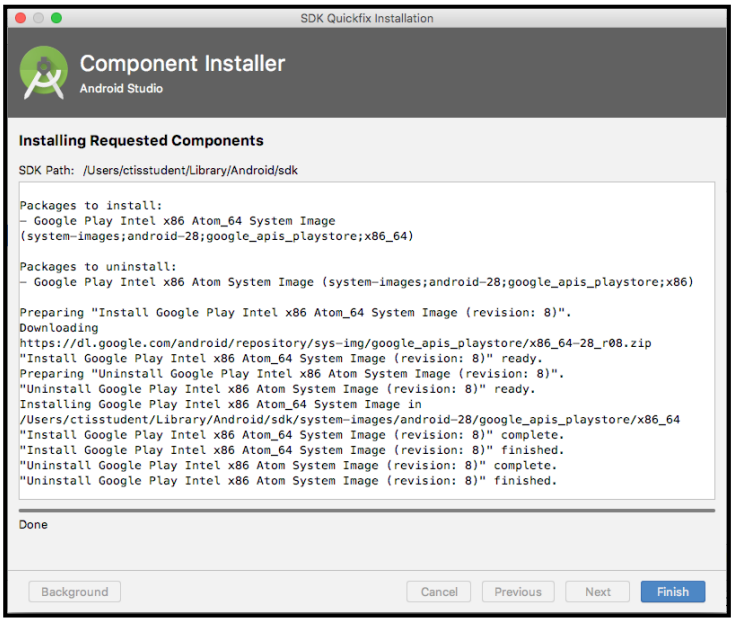


- Select Show Package Details check box
- Select the options without TV and Wear one like in the below

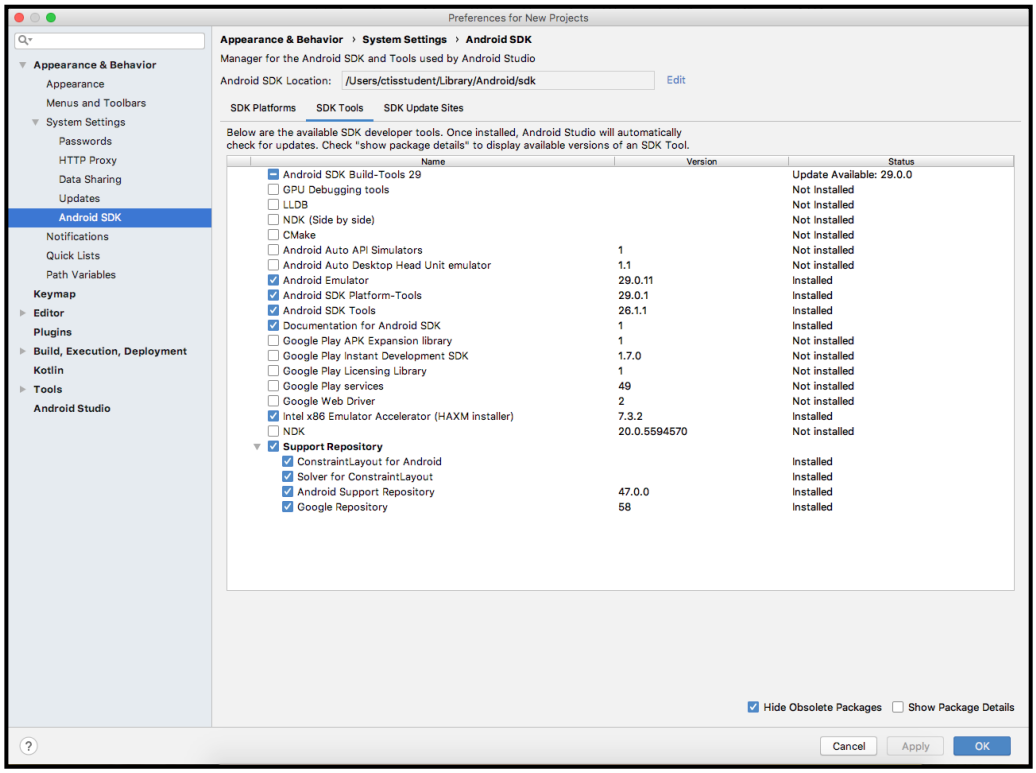


- It starts to install APIs



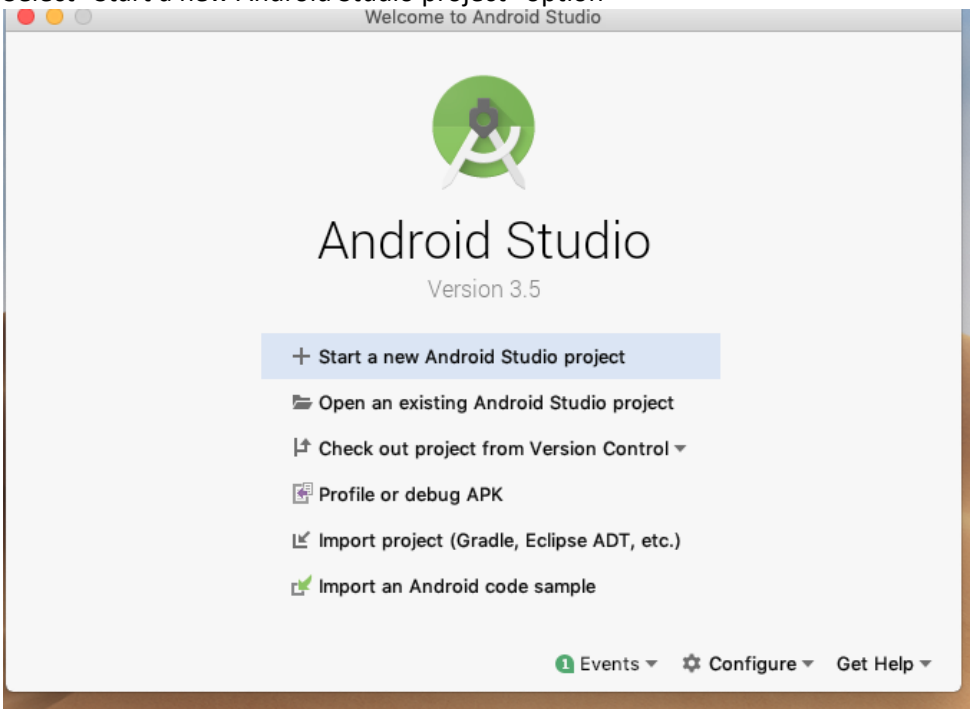


- Install SDK Build Tools belongings to API 28 in the SDK Tools like in the below
- If HAXM Installer is not installed, install it

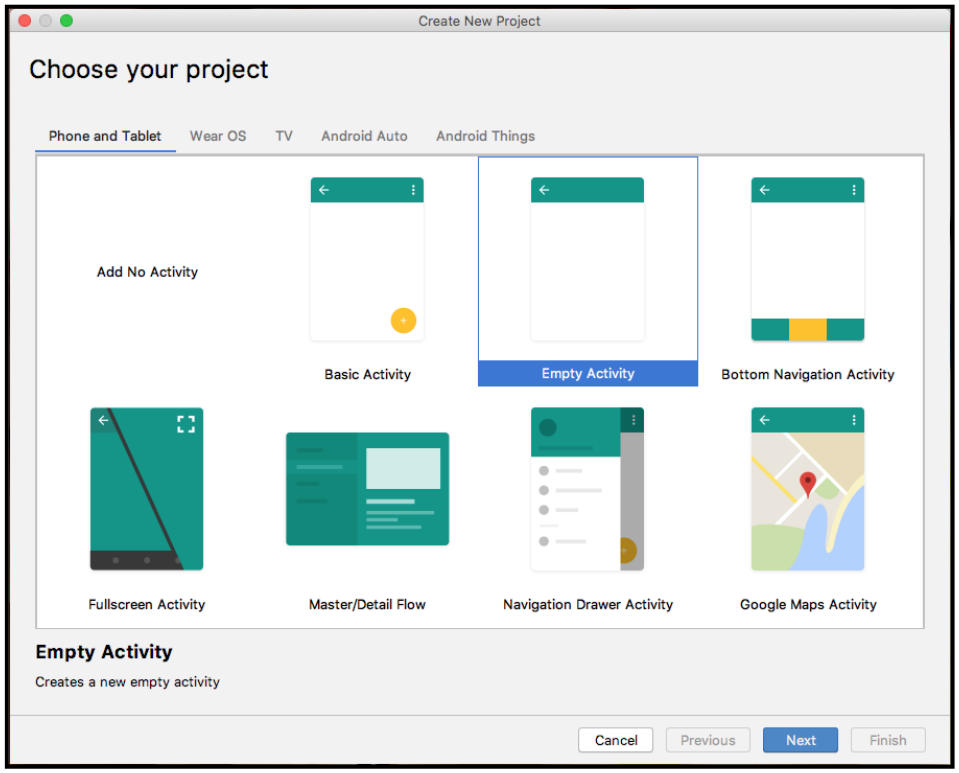


➔ **Creating a new project**

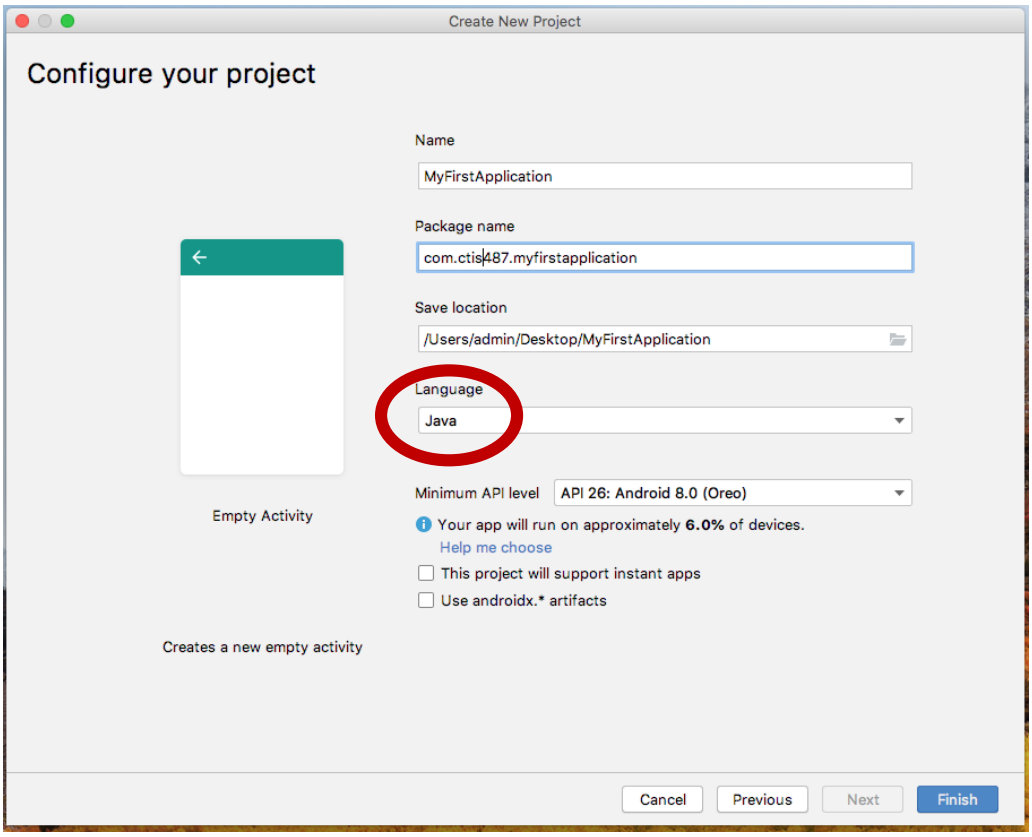
- Select “Start a new Android Studio project” option



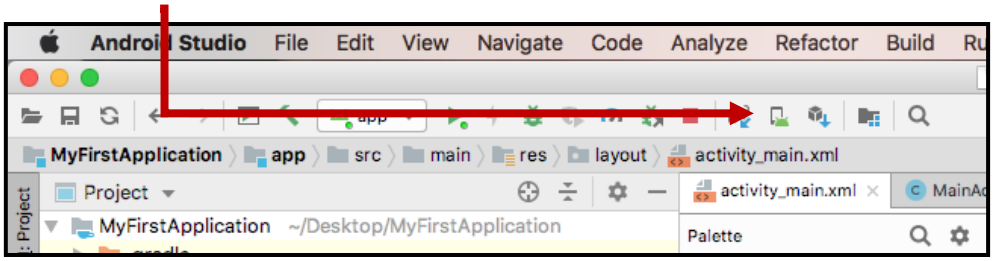
- Select “Empty Activity”

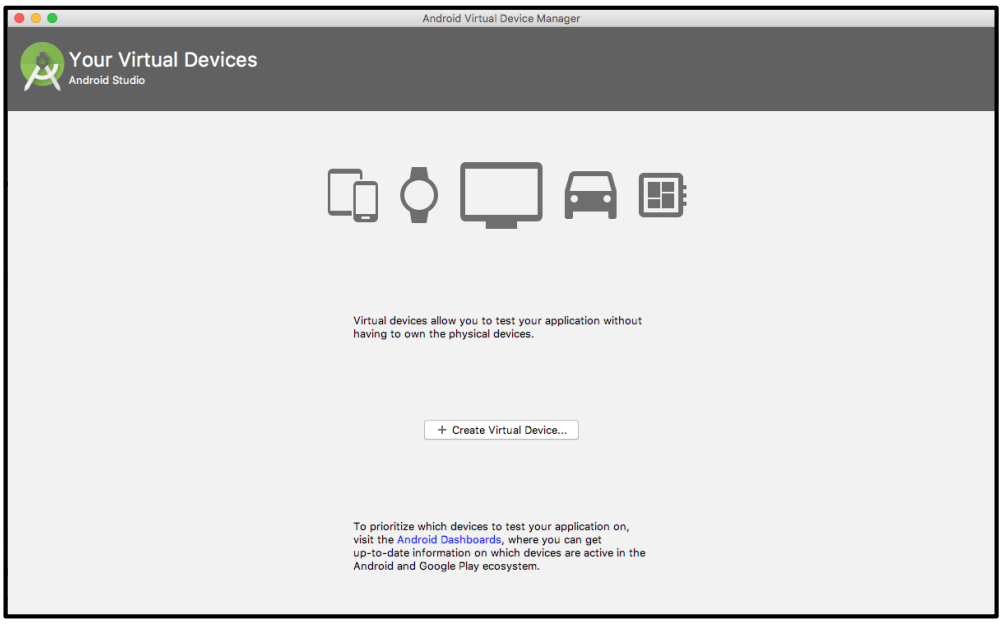


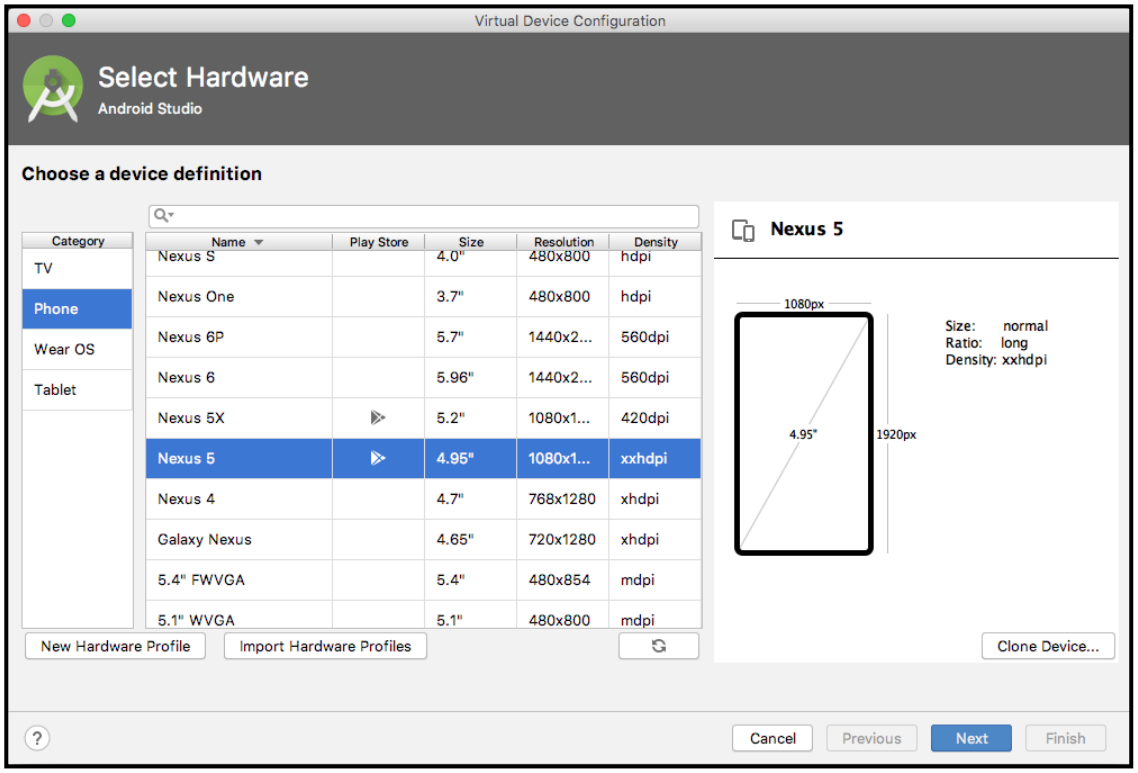
- Write a Project Name, Select API 26 and select language to JAVA and click Finish button.



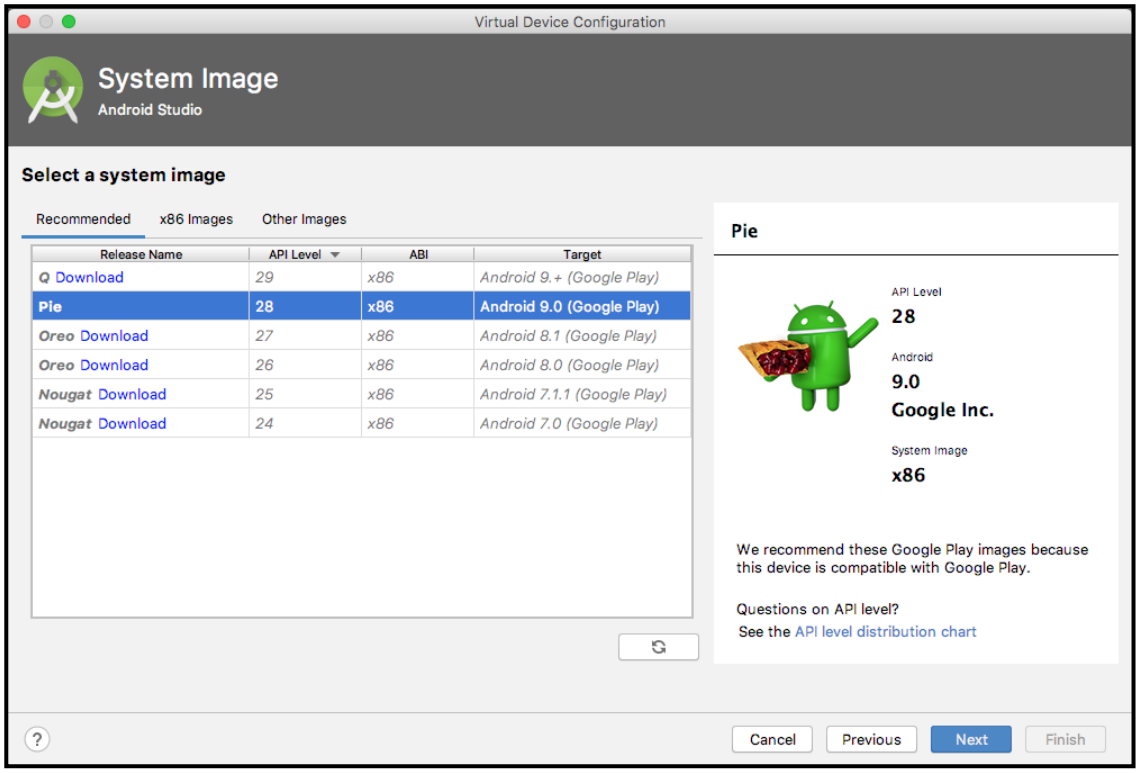
➔ **Creating a new virtual device**





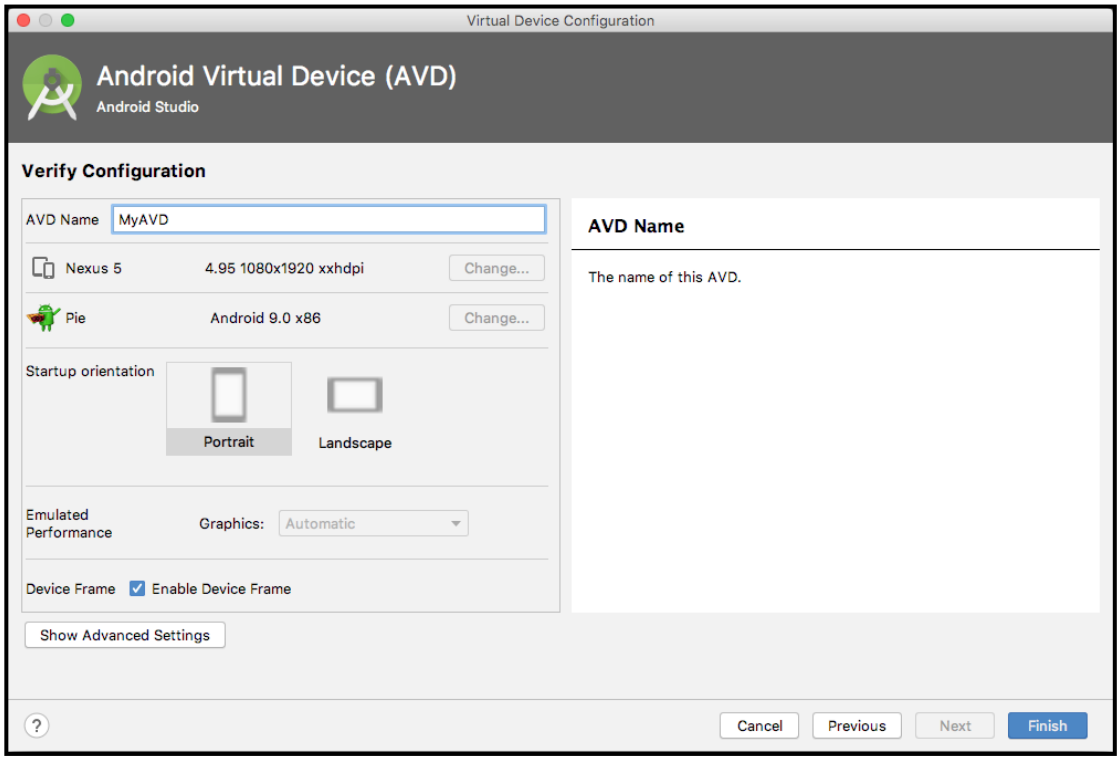


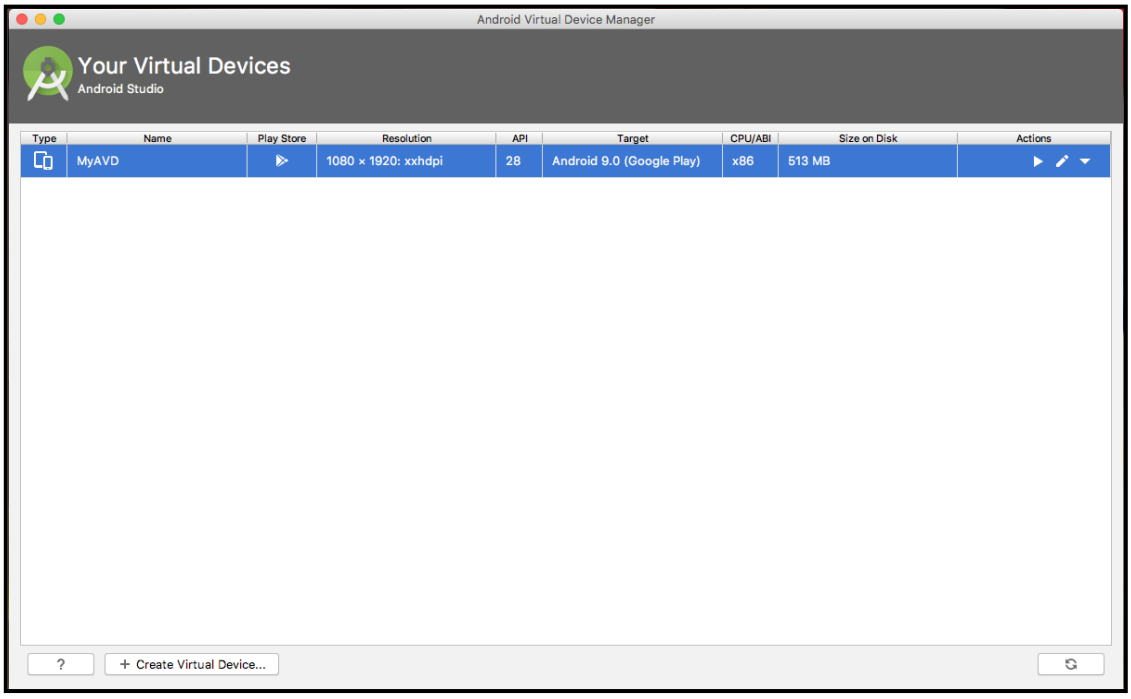
- Select Nexus 5 from the list and click next button



- Select a system image with the API Level 28

- Write a name for Android Virtual Device (AVD) and click finish button



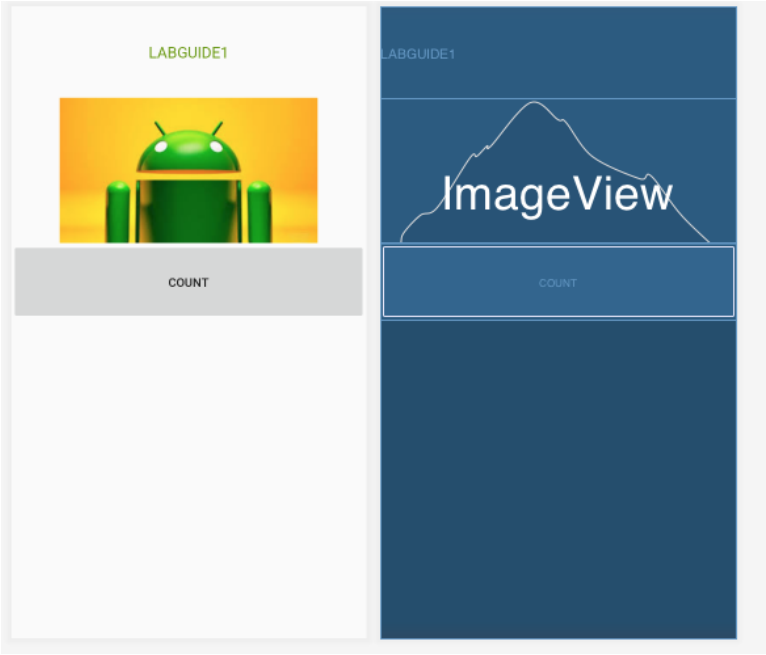


➔ You can use Genymotion for creating Virtual Device easily by the following url; https://www.genymotion.com/fun-zone/

Q1. Create the following layout, bu using the Android Components;

- Use Vertical LinearLayout
- Textview; text is "**LABGUIDE1**" give any color which you want,
- ImageView; put the **android.jpg** to the drawable folder
- Button; text is "**COUNT**"

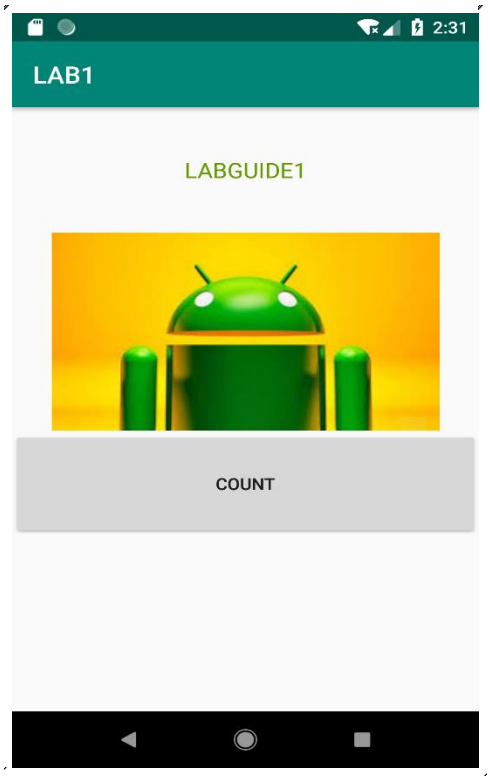
Check the activity_main.xml file content.



activity_main.xml

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/txtLab1"
        android:layout_width="match_parent"
        android:layout_height="106dp"
        android:gravity="center"
        android:text="LABGUIDE1"
        android:textColor="@android:color/holo_green_dark"
        android:textSize="18sp" />

    <ImageView
        android:id="@+id/imgAndroid"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        app:srcCompat="@drawable/android" />

    <Button
        android:id="@+id/btnCOUNT"
        android:layout_width="match_parent"
        android:layout_height="90dp"
        android:onClick="onClick"
        android:text="COUNT" />

</LinearLayout>
```

In the main part, when the user clicks on the **COUNT** button Toast Messeage will be shown and count operation will be held on.



MainActivity.java

```
public class MainActivity extends AppCompatActivity {

    int number=0;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }

     public void onClick(View view) {
          number++;
          Toast.makeText(this,"Number is"+number,Toast.LENGTH_LONG).show();
     }
}
```