

Android Studio - 'Hello World'

Objectives: In this tutorial you will learn how to create your first mobile app using Android Studio. At the end of this session you will be able to:

- Create Android Project.
- Run Android Project in an Emulator.
- Build and locate your projects' apk file.



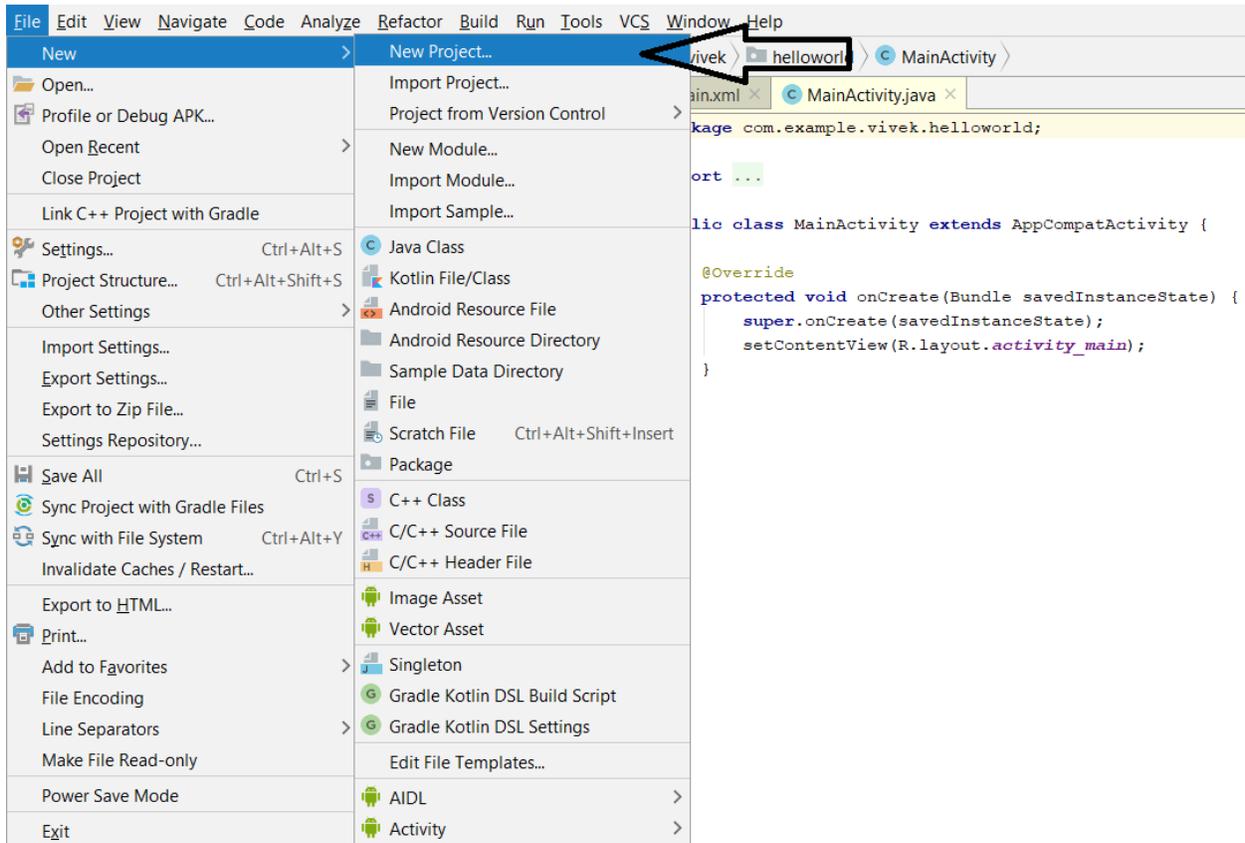
Android Studio is google's official IDE(Integrated Development Environment) for Android Developers.

Android Studio's job is to provide the interface for you to create your apps and to handle much of the complicated file-management behind the scenes. The programming language you will be using is Java and this is installed separately on your machine. Android Studio is simply where you will write, edit and save your projects and the files that comprise said projects.

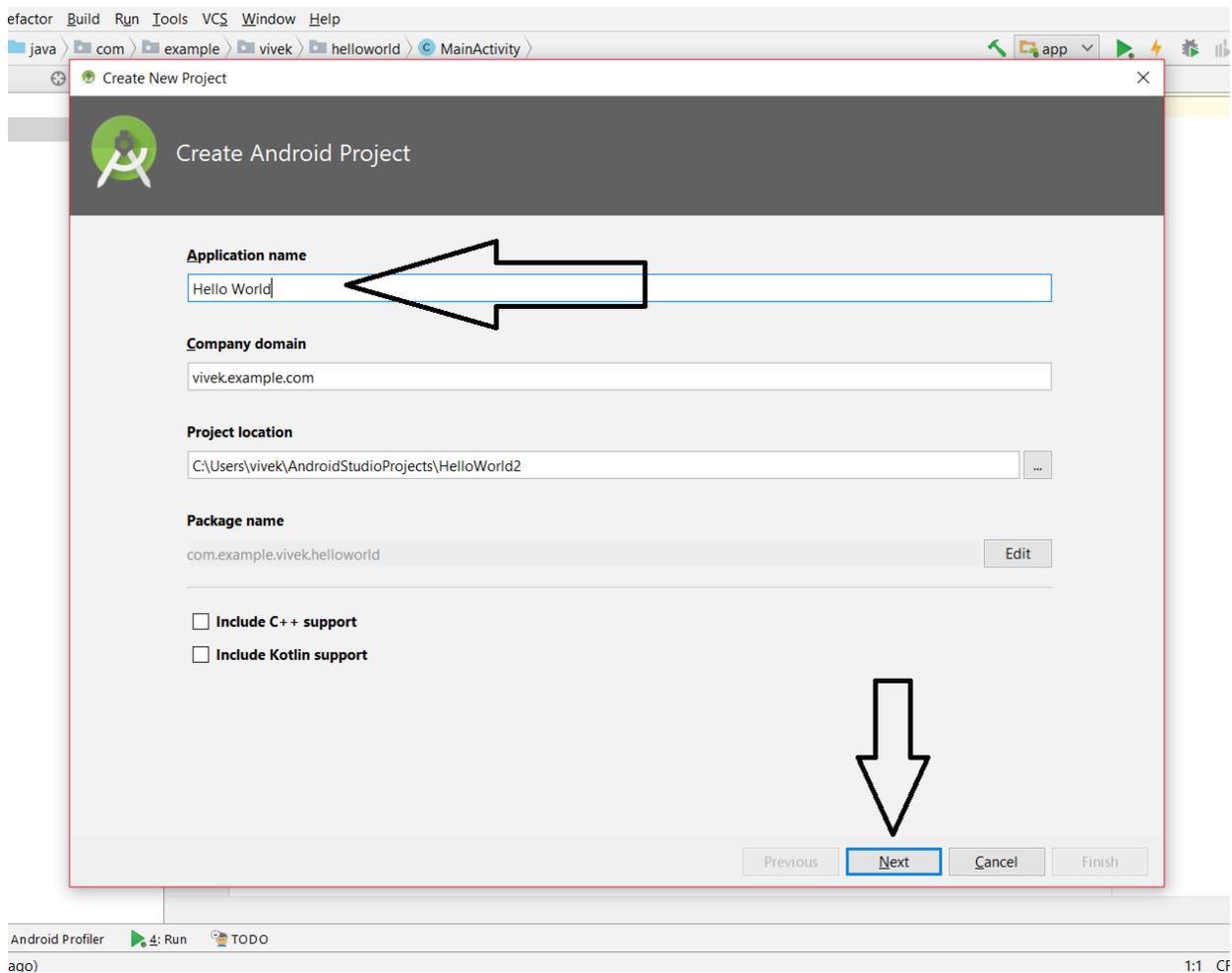
Part 1: Create New Project

To create our first Android project, follow the below 4 steps:

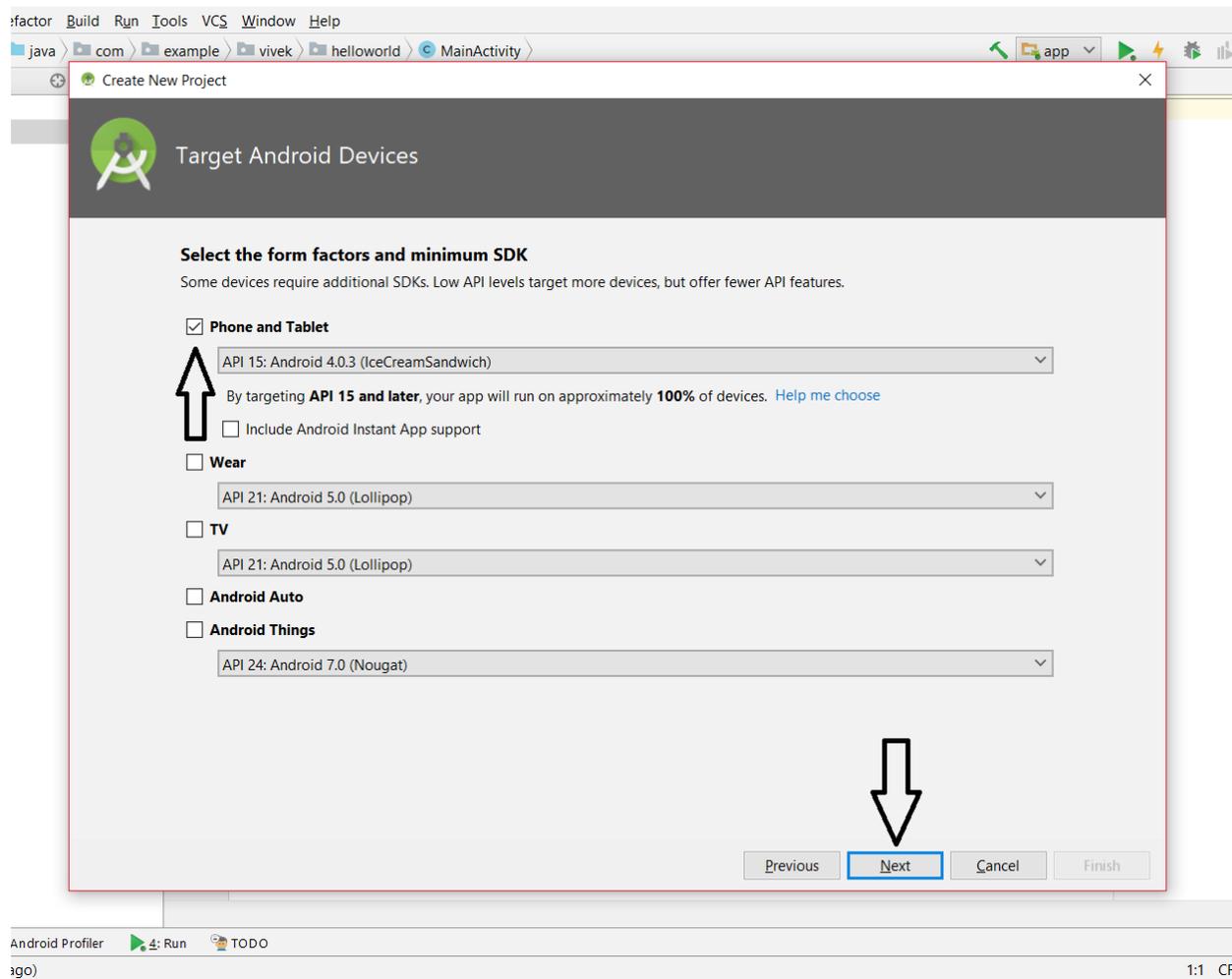
1. Go to 'File' -> 'New Project...'



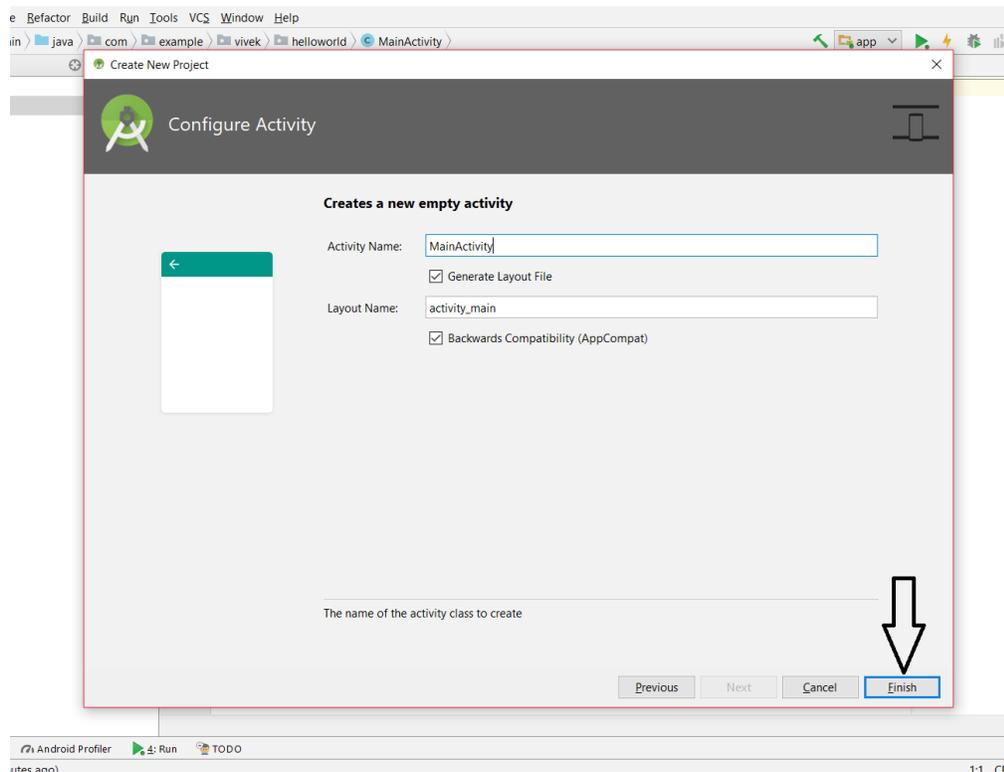
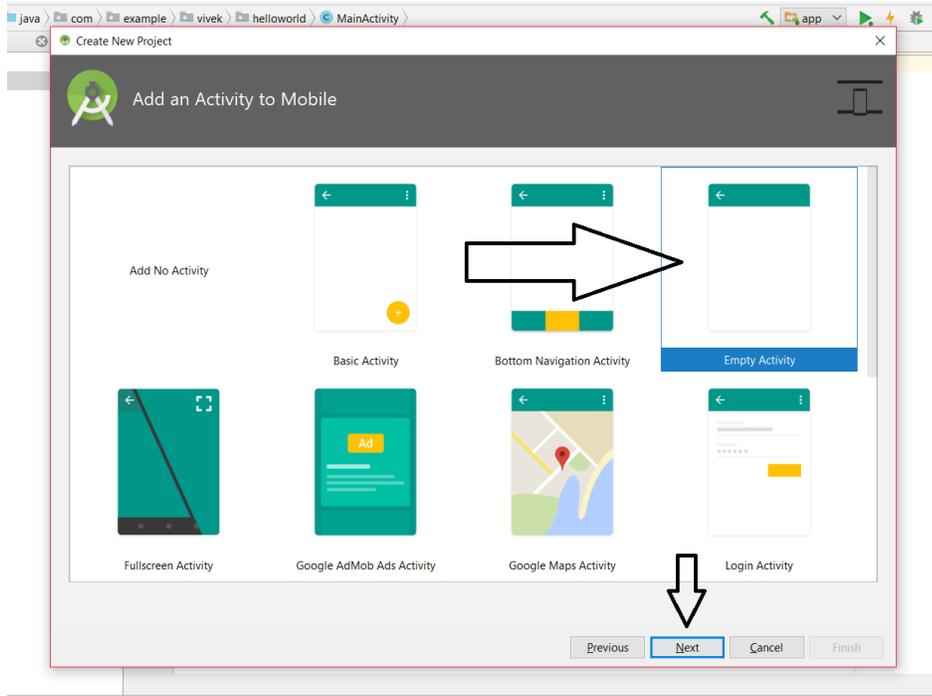
2. Give Application name e.g. 'Hello World' and click 'Next'



3. Select 'Phone and Tablets' and click next.



4. Select 'Next' -> select 'Empty Activity' -> Select 'Next' -> 'Finish'



#End_of_Part_1

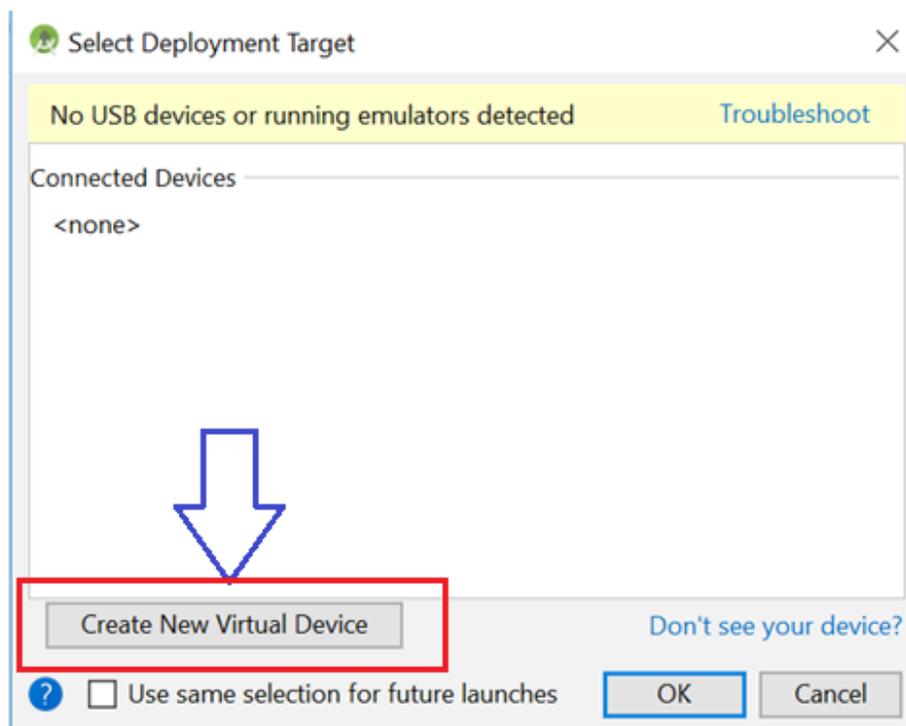
Part 2: Running your application

Now that we created the Hello World application, let's run it. Follow the below 4 steps:

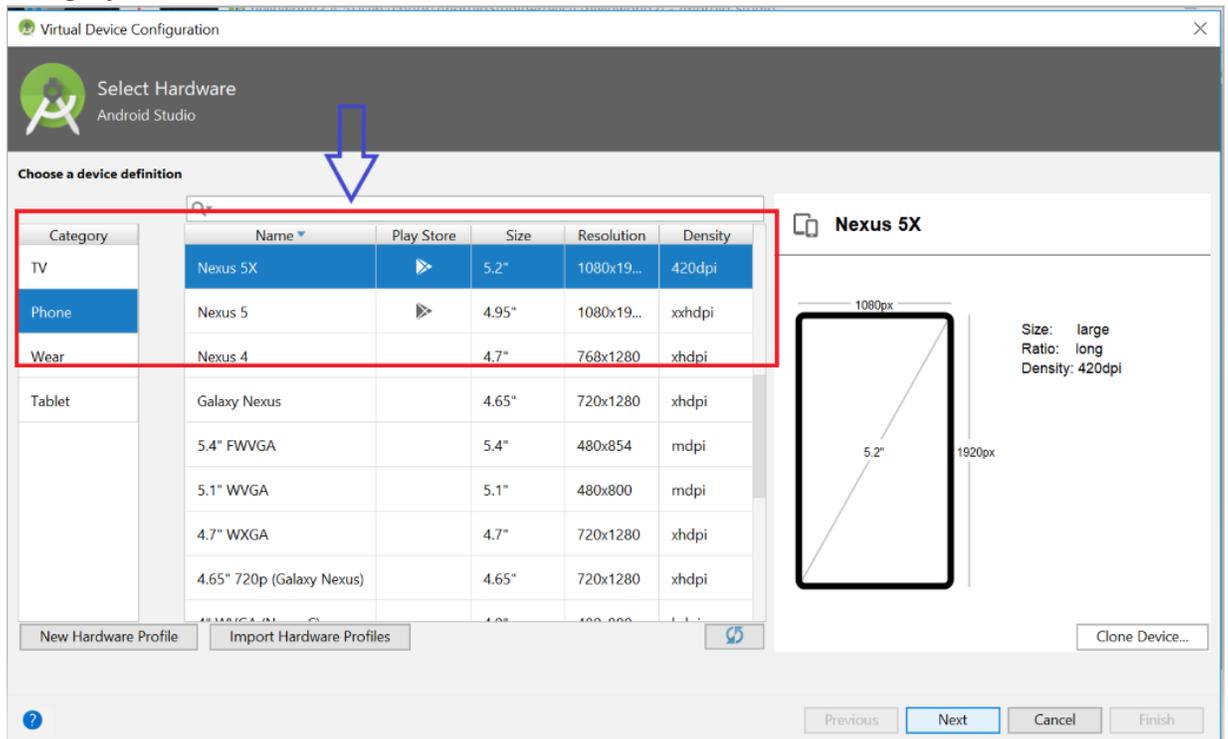
1. Click on the 'run' icon present in upper right section of IDE or press 'Shift + F10' keyboard shortcut.



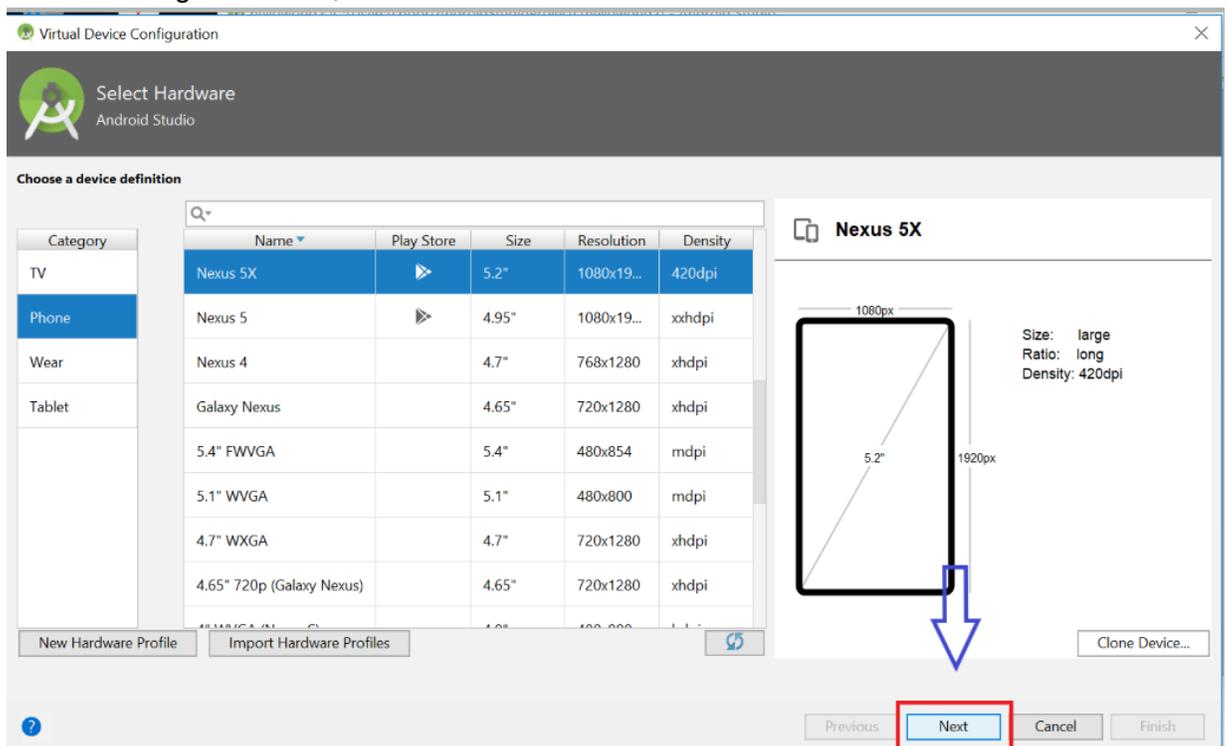
2. Now a pop-up window will appear titled 'Select Deployment Target'. Click on 'Create New Virtual Device'.



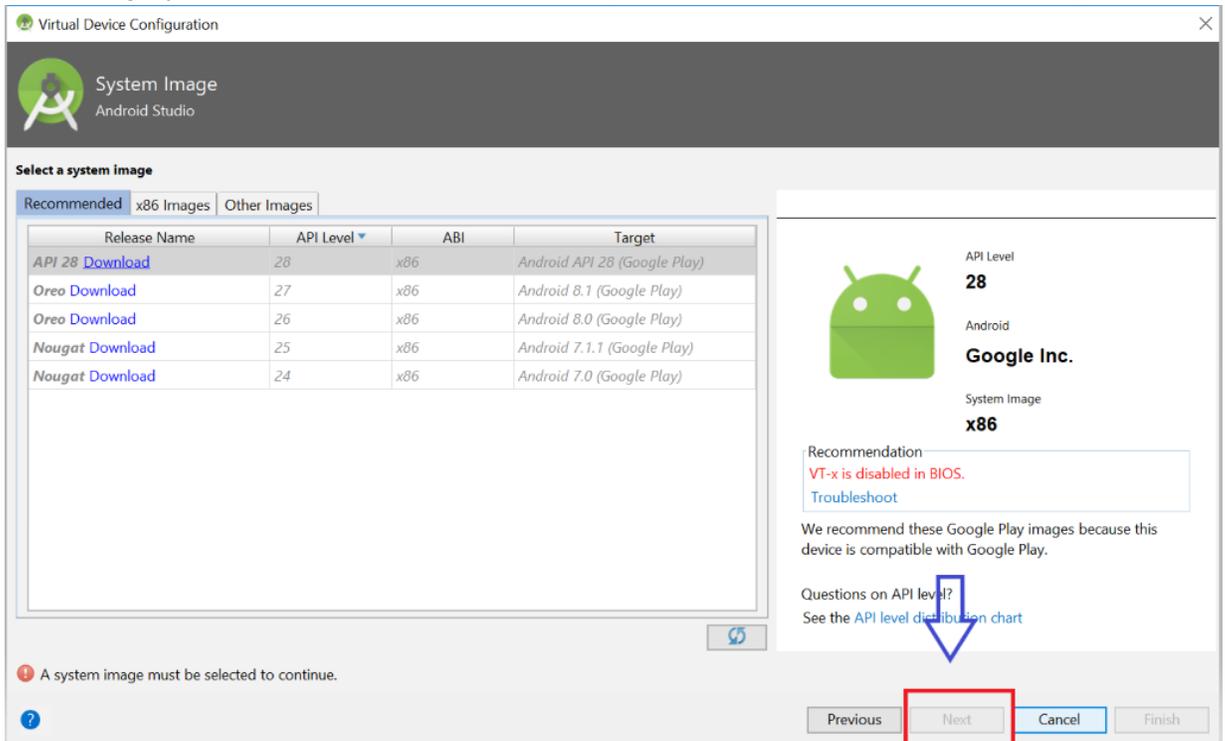
- Now you should see a screen that shows the list of available devices. Select the category as “Phone” and then choose the device “Nexus 5X”.



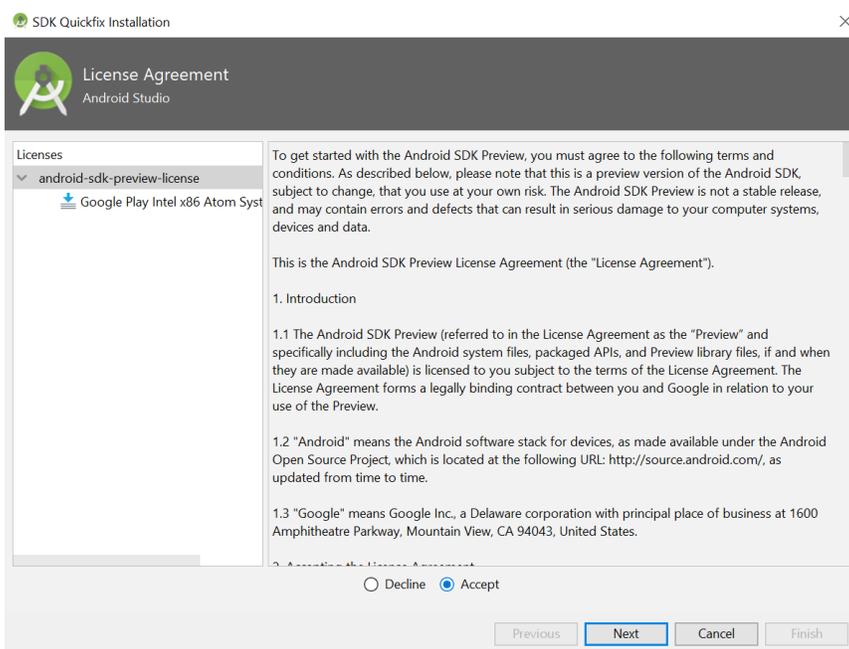
- After selecting the device, click on “Next”.



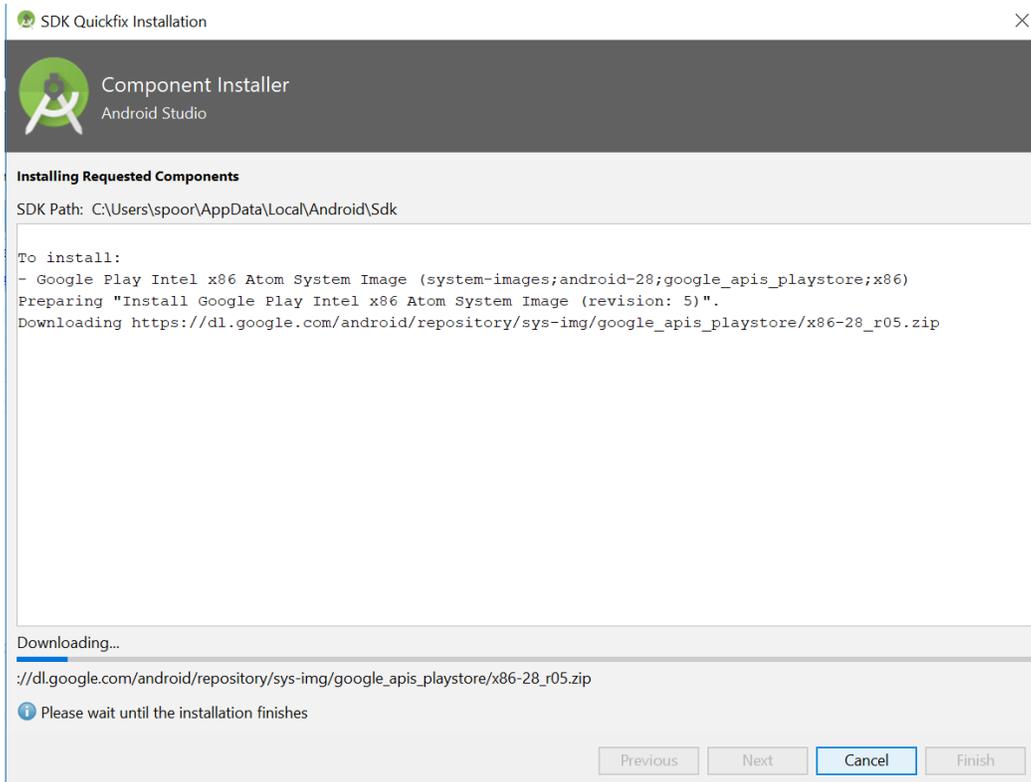
- Now you will see a window titled “Select a system image”. Select the one “Recommended” (API 28). Note that you are unable to proceed further as the Next button is greyed out. Click on the “download” option available next to the “API 28” option.



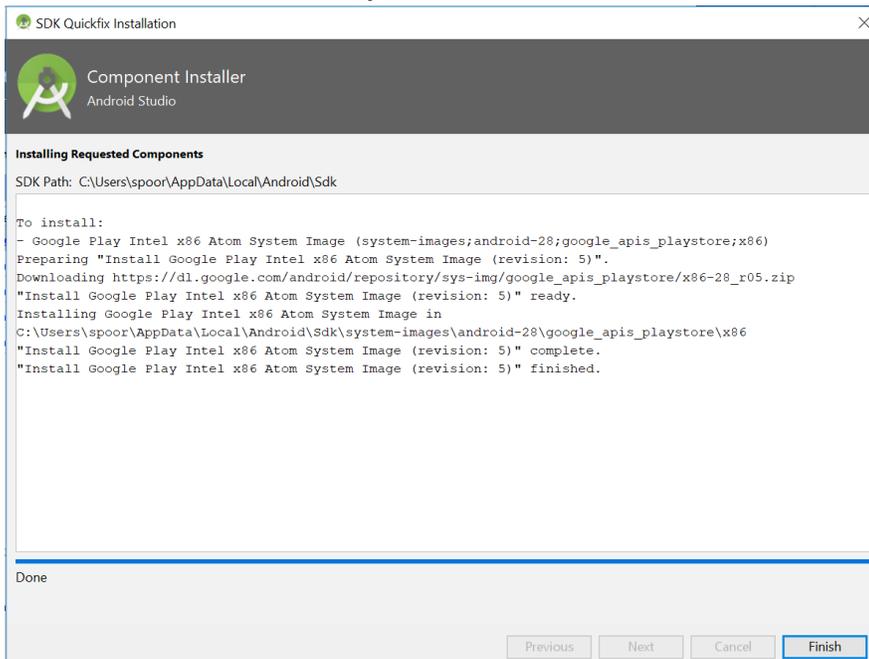
- You will be popped to a screen like shown below. Accept the “terms and conditions” and click “Next”



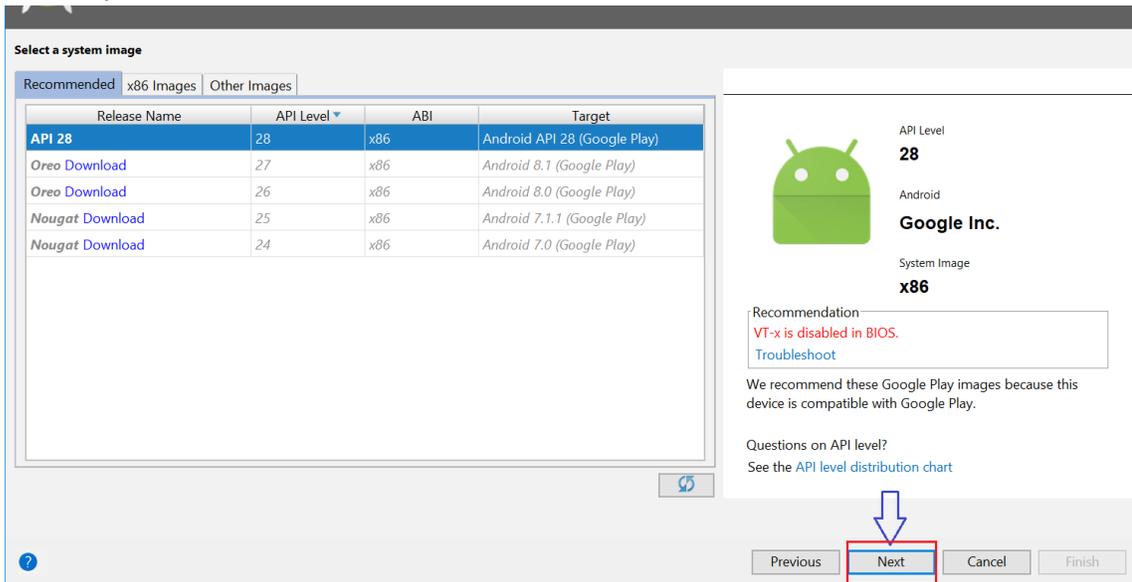
7. You'll see a window that shows that the required files for setup are being downloaded.



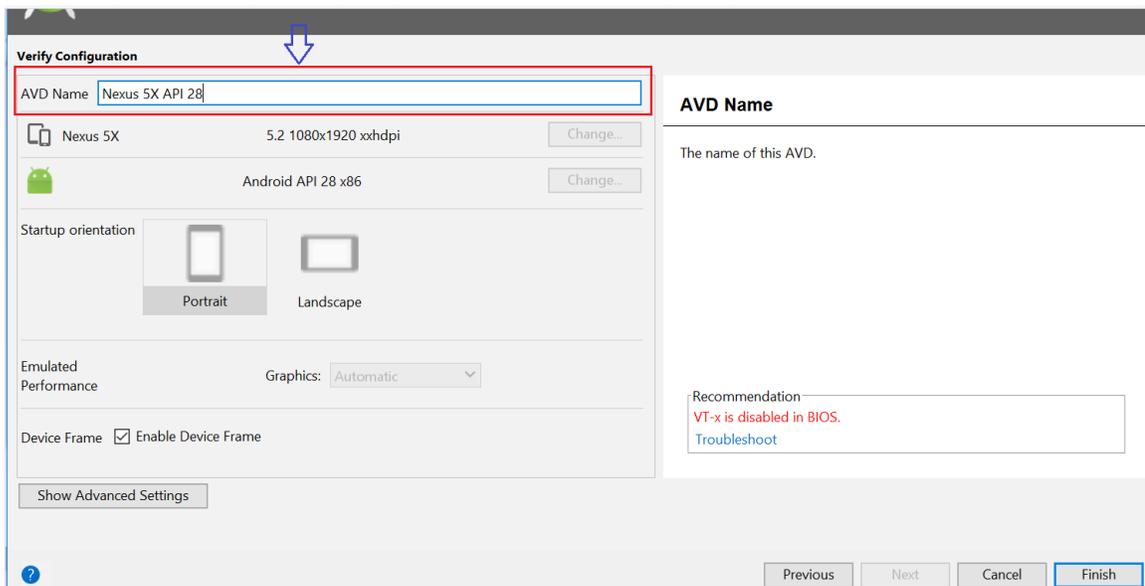
8. After the download is done, you'll see a window as shown here. Click on "Finish".



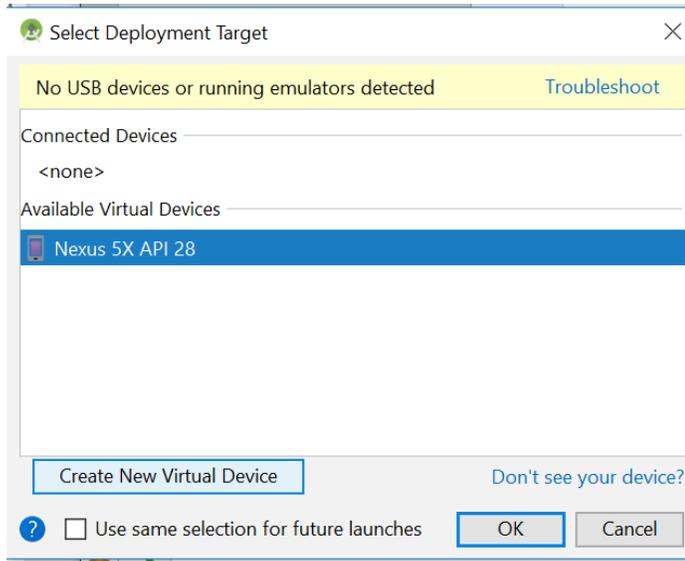
- Now you are taken back to the screen you have seen in step 5 and you'll see that the "next" option is enabled. Click Next.



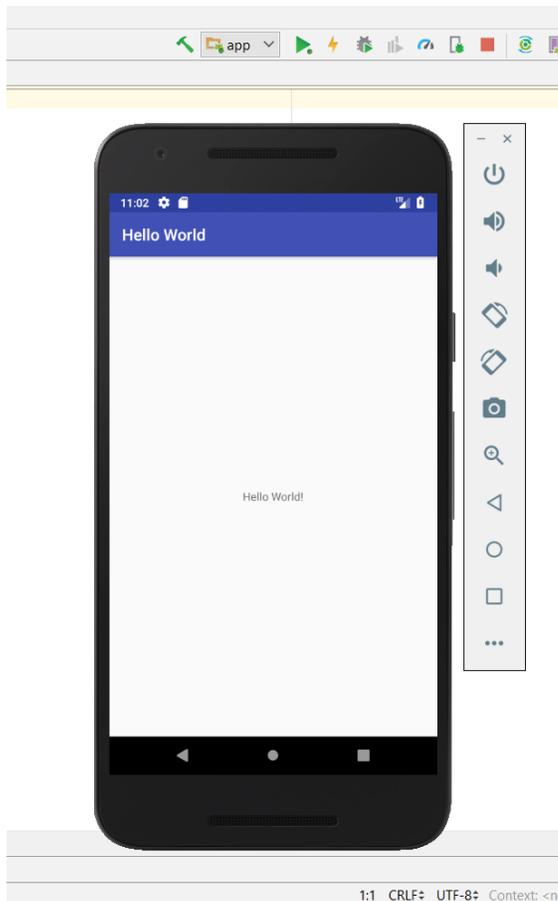
- You'll see that you can give any name you like to the Android Virtual Device (AVD), but for now we'll leave it as is. Click "Finish" and you'll see that the AVD you created is listed now under "Available Devices".



11. Select a virtual device from the 'Available Virtual Devices' by clicking on it. Click 'OK'.



12. Now you should see a virtual device appeared on the screen with the desired output.



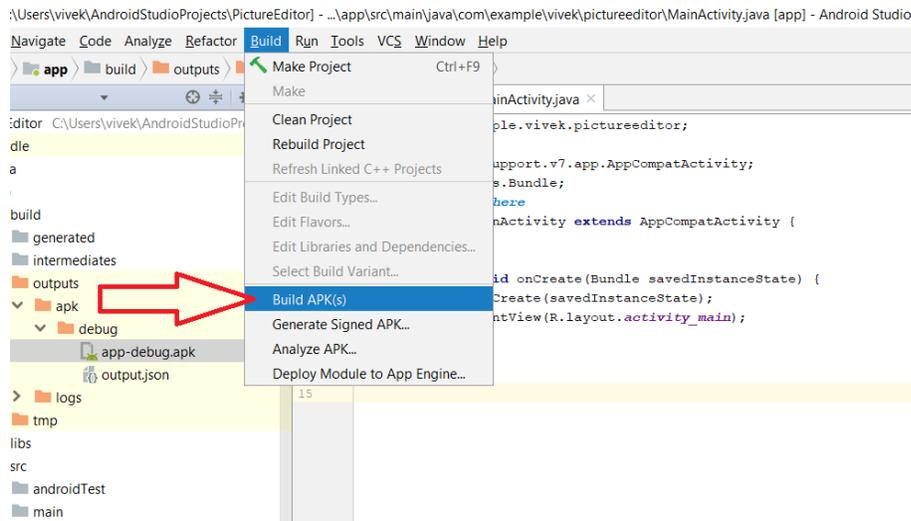
#End_of_Part_2

Part 3: Building your application (APK file):

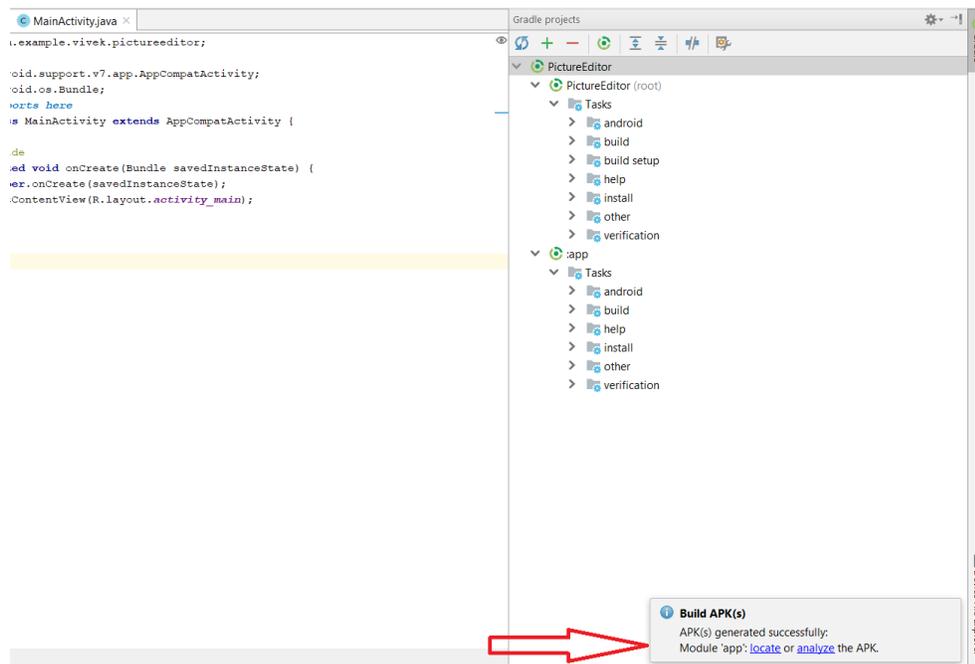
NOTE : The difference between running and building the project is when we run a project only the preview of our app is shown not the actual app is created whereas in the process of building a project, IDE produces the installable apk file for us.

Now we are ready to create and locate 'Hello World' application's apk file. Follow the below 5 steps.

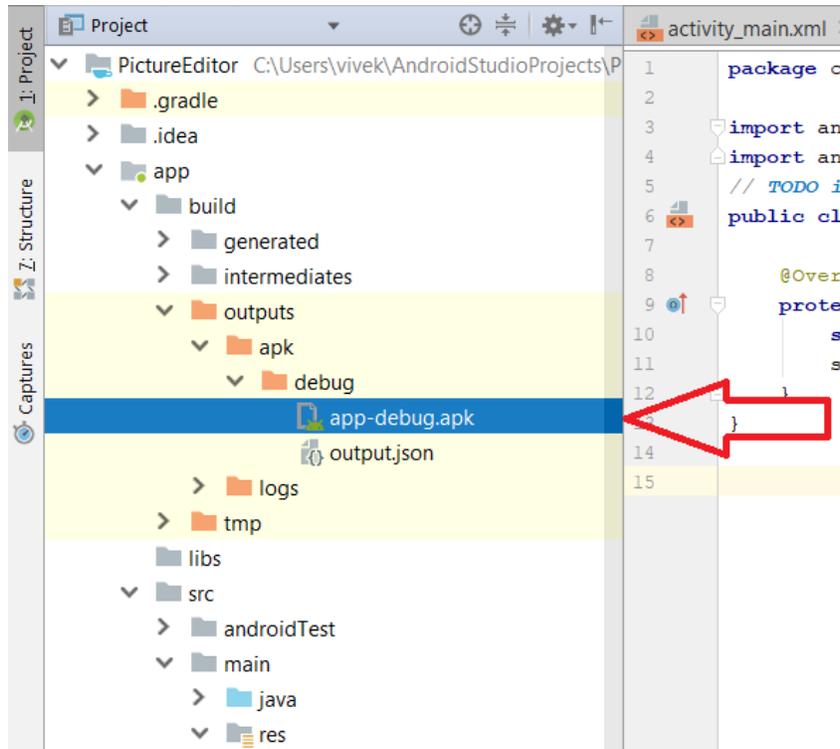
1. Select 'Build' from the menu bar
2. Select 'Build APK(s)'



3. Click on 'locate' from the pop up at bottom right corner.



4. In case you missed the pop - up from the bottom right, go to Project window, select 'Project' scope from the drop down menu
5. Expand 'Hello World', then expand 'app' -> 'build' -> 'outputs' -> 'apk' -> 'debug' as shown in the following image.



#End_of_Part_3

#End_of_Tutorial_1