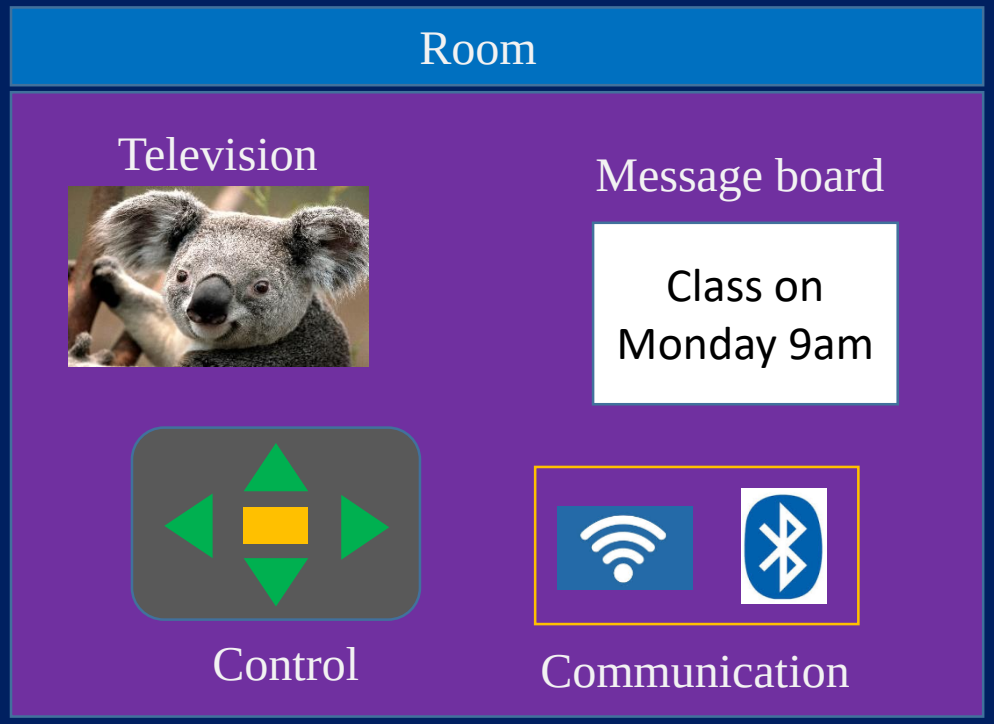
Android Studio

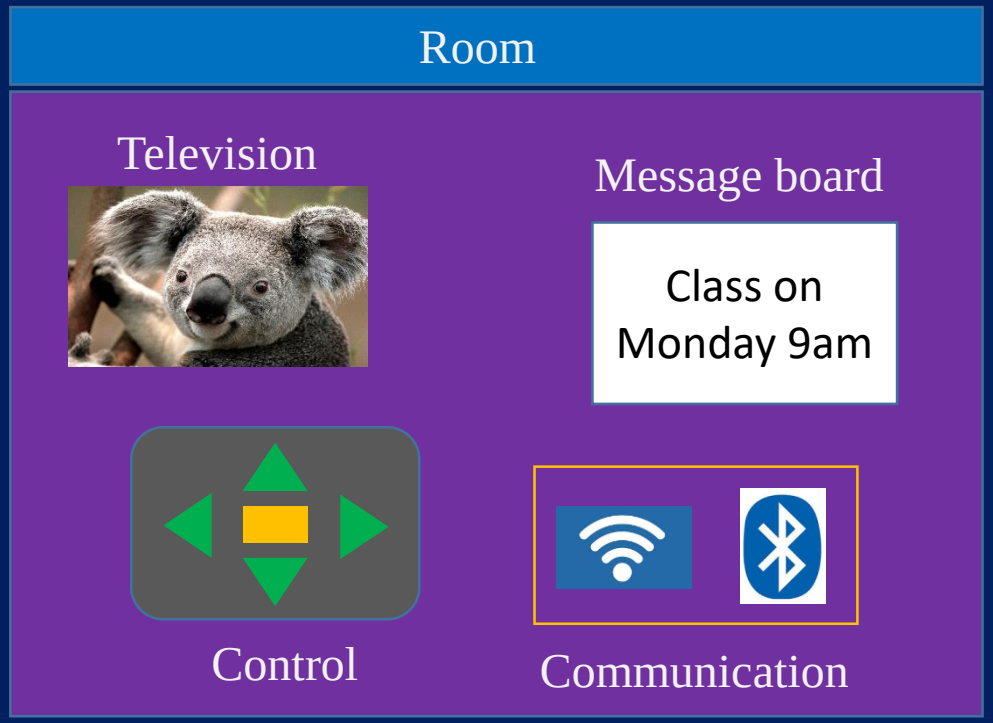
A development tool for building Apps on Android devices (e.g. a mobile phone)



No, just like decorating a room on an electronic device, using software program

Android Studio

How to write an Apps with Android Studio?



Step 1:
Create a new program (usually refer to as a project).

Standard step, practice a few times and you will get use to it.

Android Studio

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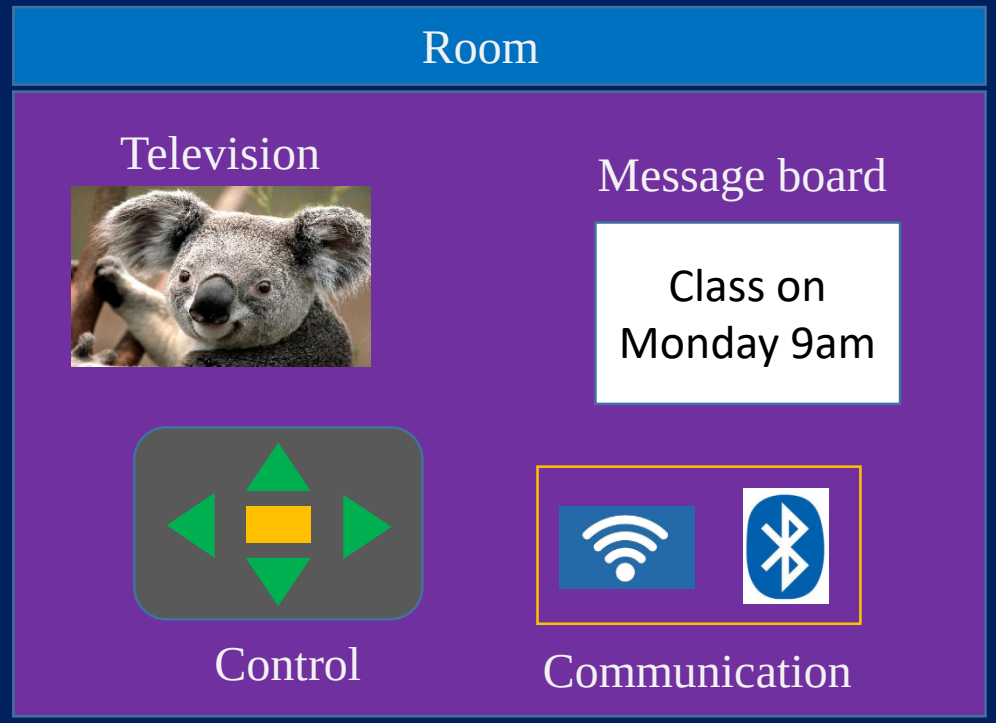

Step 2:
Decorate your canvas by dragging different objects from the library.

For simple design, you usually only need to select a few standard objects. The example on the left are typical objects to select.

Image box: For say, a painting or a Television

Text box: For a message board

Buttons: For controlling, e.g. write a message on the message board.

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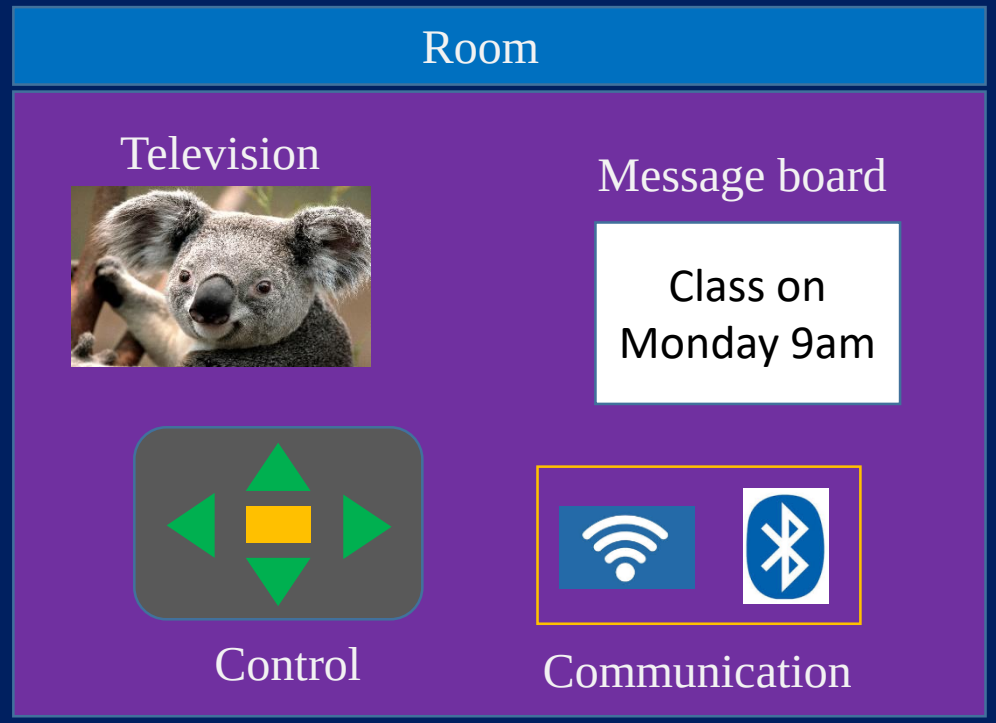


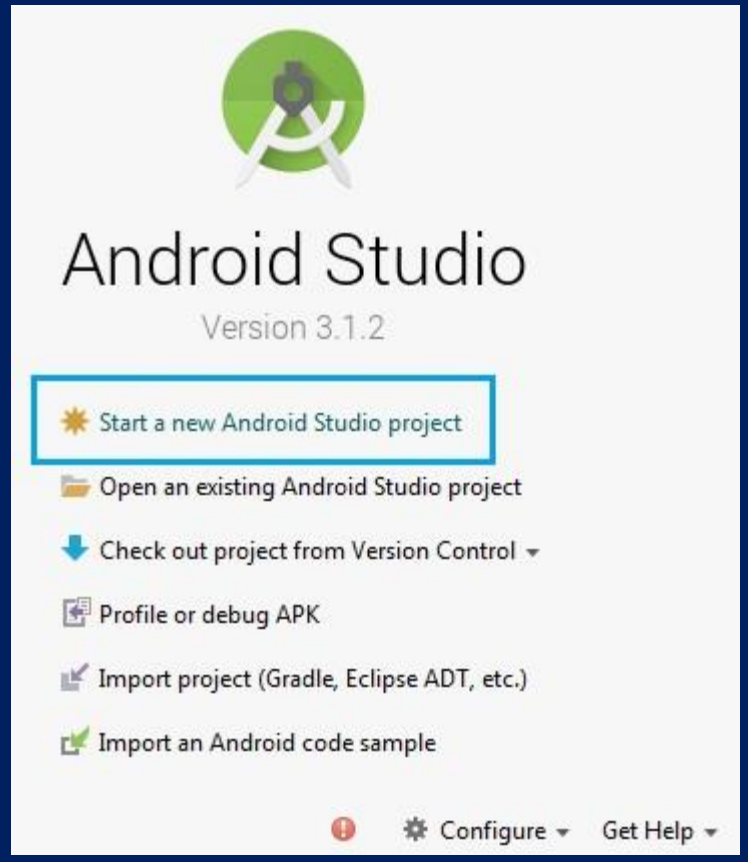
Step 3:
Build some interactions between different objects in the room.

This is the step that require you to do some programming. For example,

Push a button and display a picture on the image box (television). Write a message on the text box (message board) and send it via Bluetooth to a remote mobile device (e.g. your friend's mobile phone)

Step 1: Start a new project

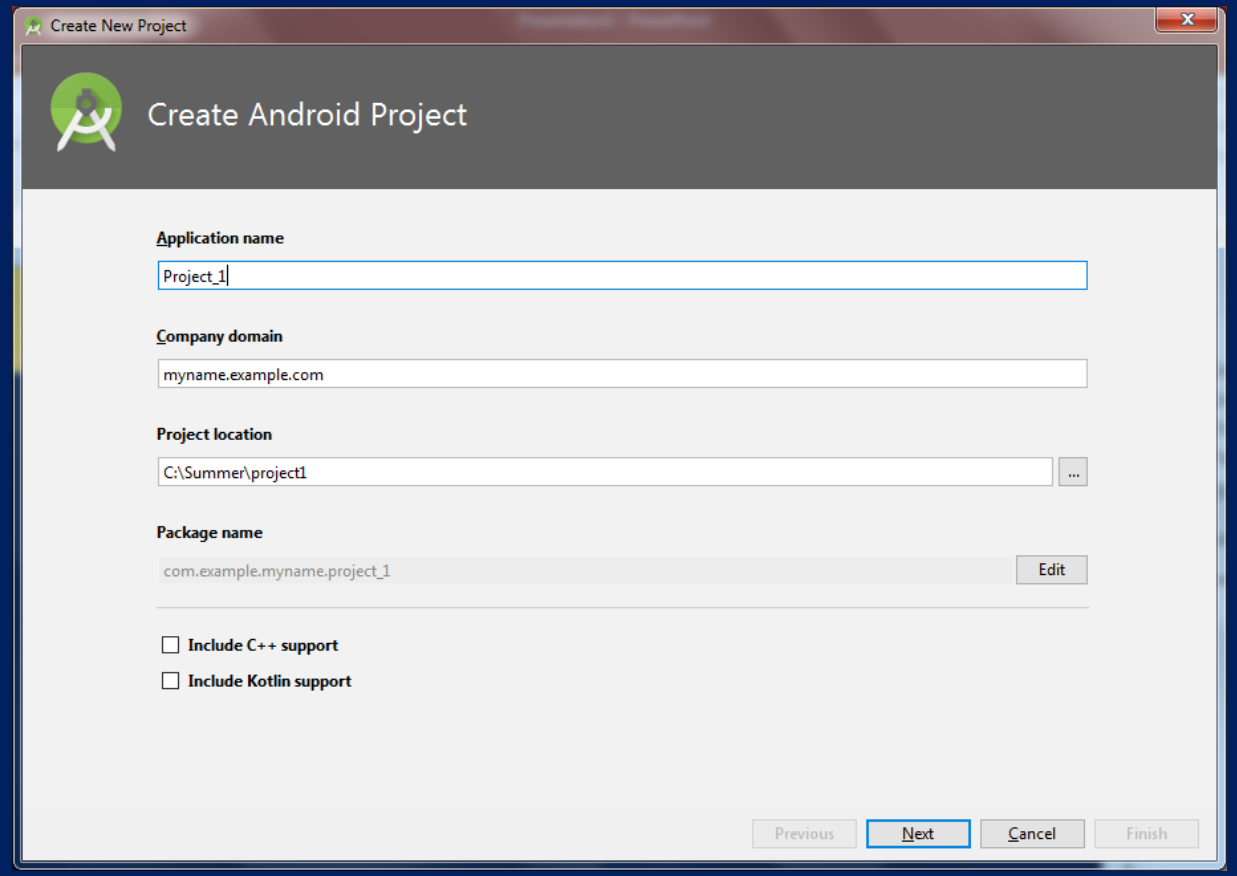
1. Activate Android Studio, and start a new project.



Select “Start a new Android Studio project”

Step 1: Start a new project

1. Activate Android Studio, and start a new project.



Customize the following if you do not want to use the default settings.

Application name: Name of your Apps

Company domain: URL of you company

Project location: The file directory for saving the project.

Click “Next” to move on.

Step 1: Start a new project

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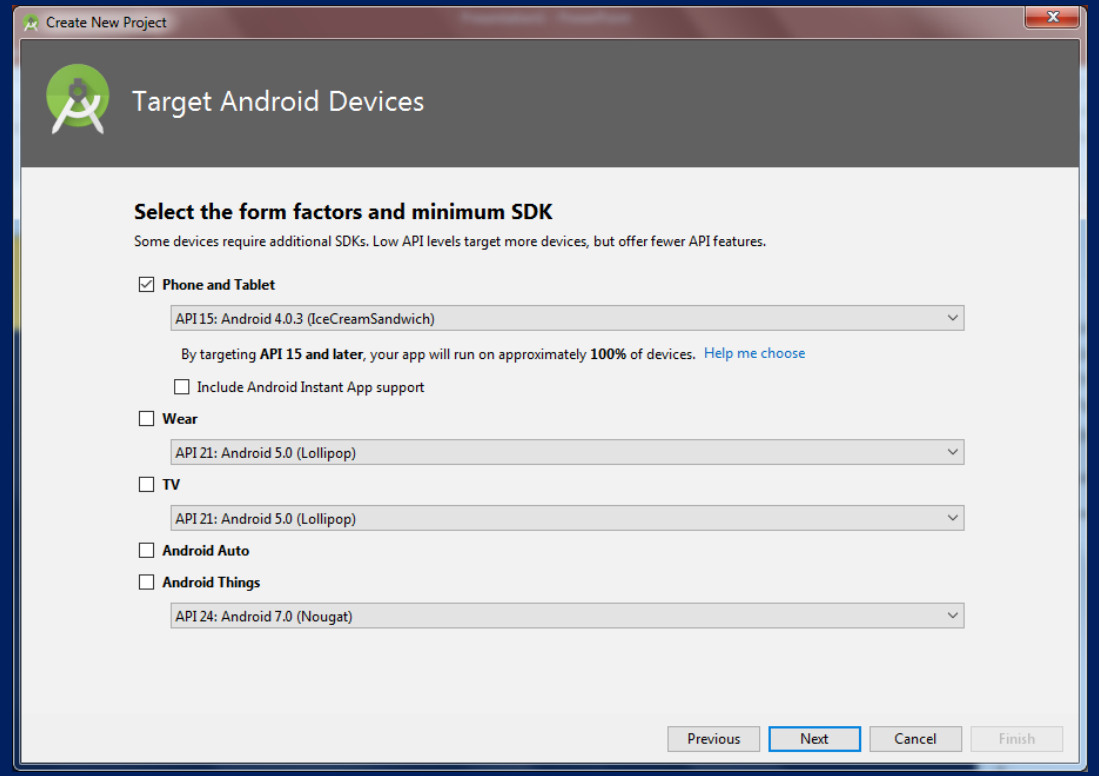
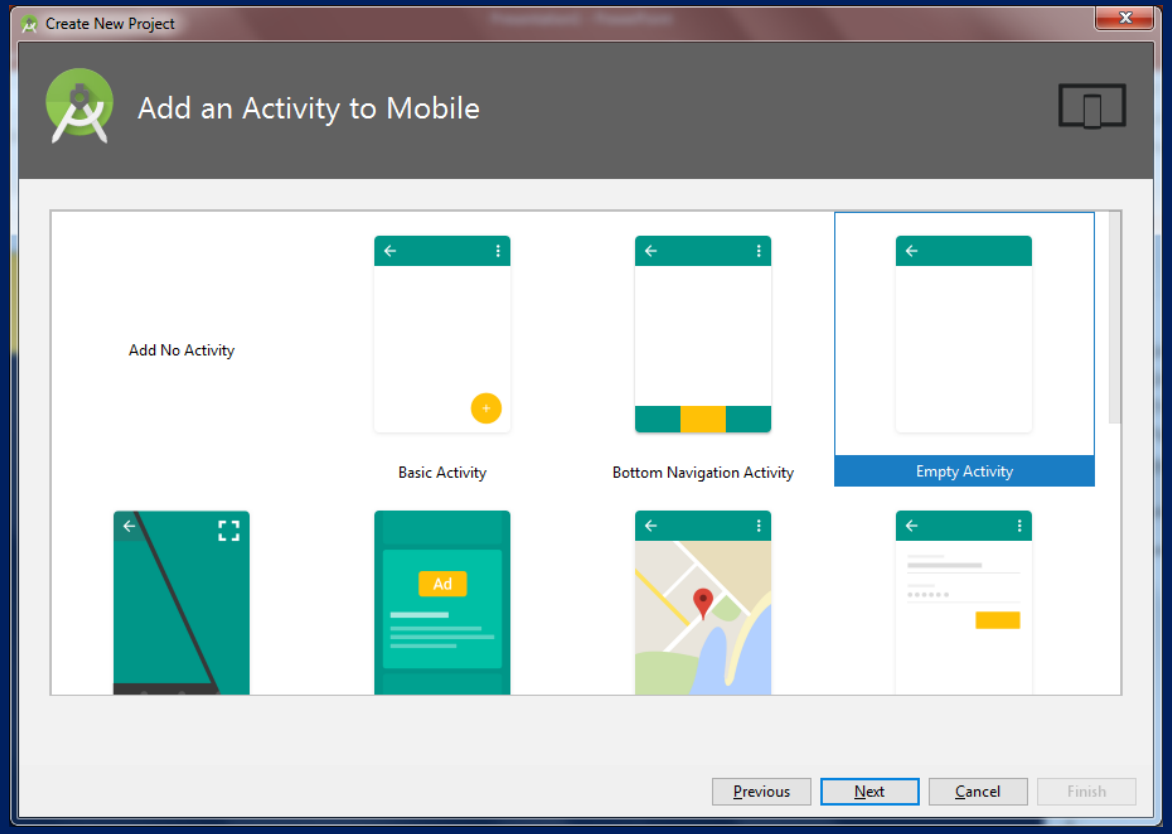


No need to do anything unless you have a special device.

Usually just click “Next” to move on.

Step 1: Start a new project

1. Activate Android Studio, and start a new project.



Usually just click “Next” to move on.

Step 1: Start a new project

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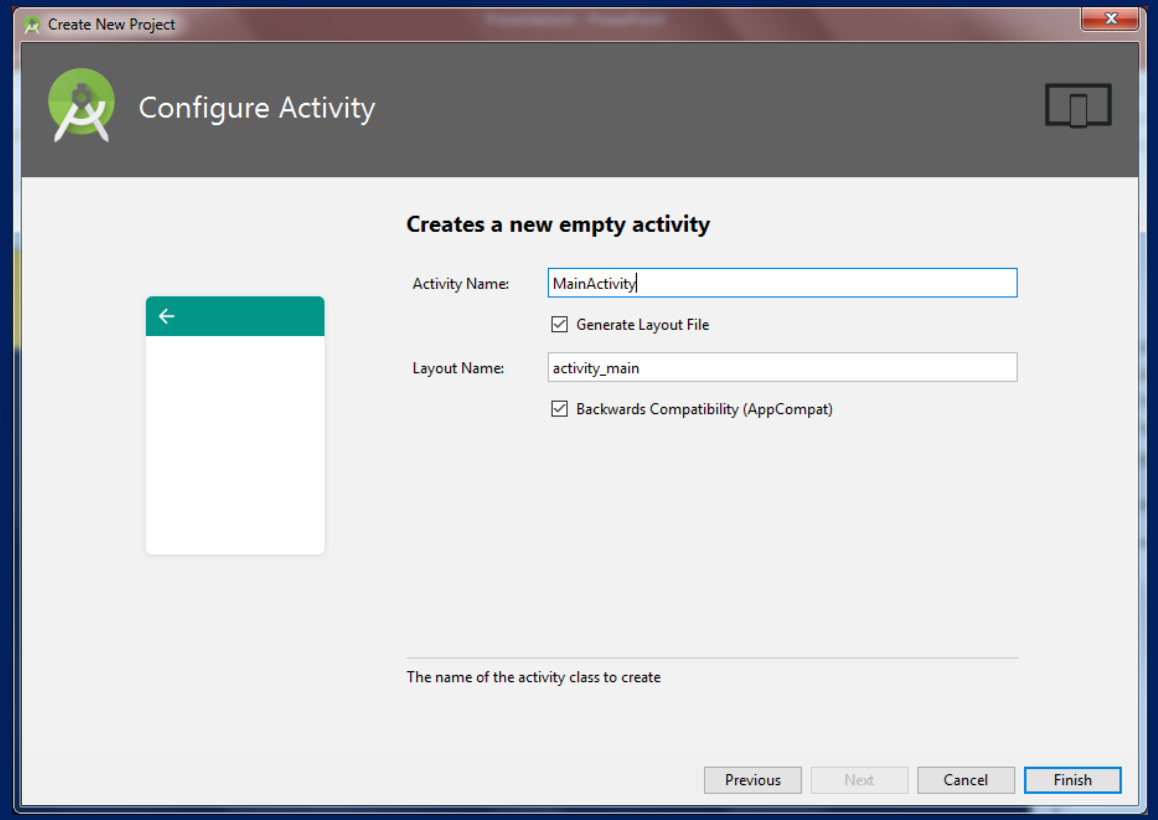
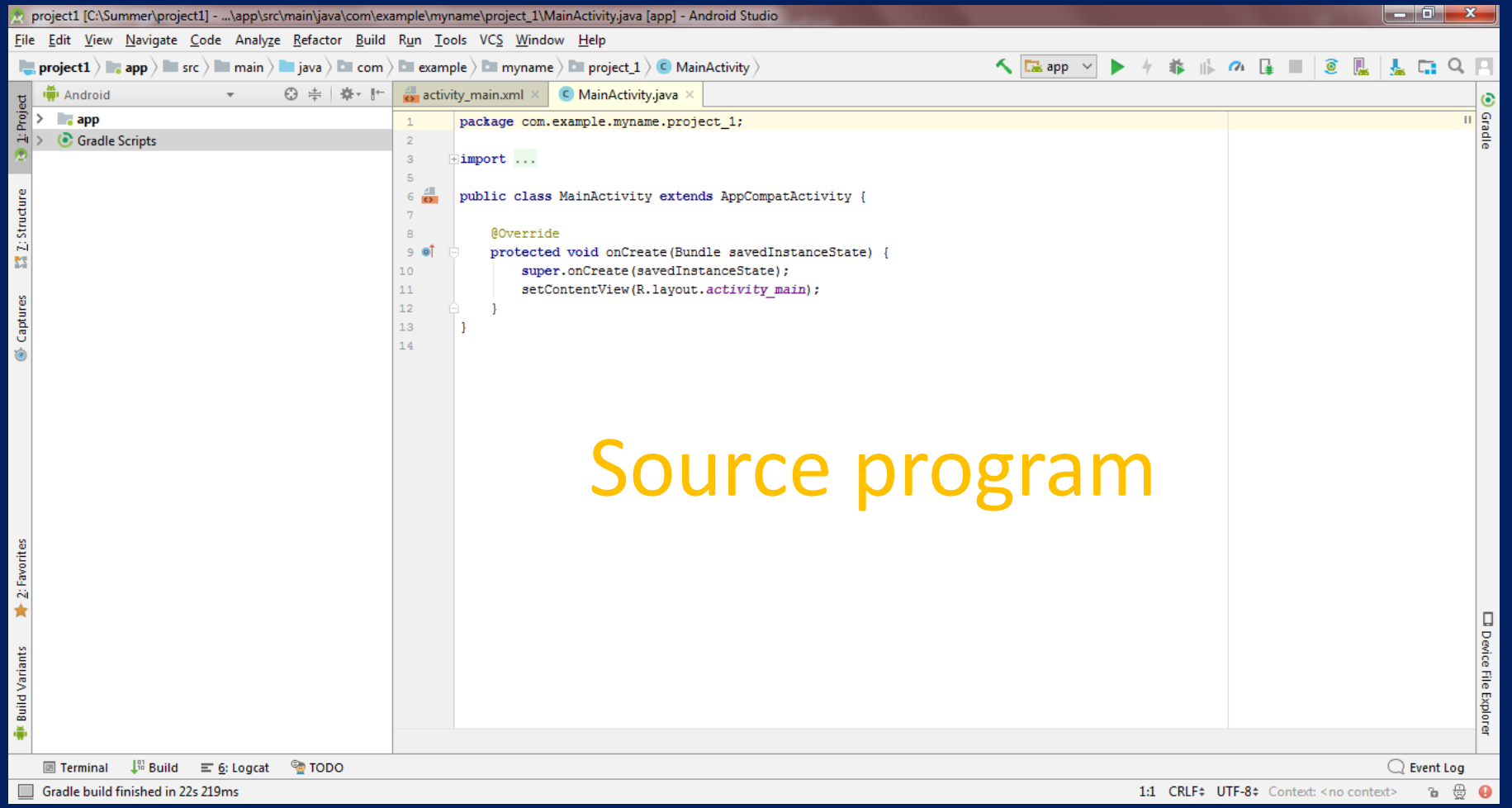


Usually just click “Finish” to complete Step 1.

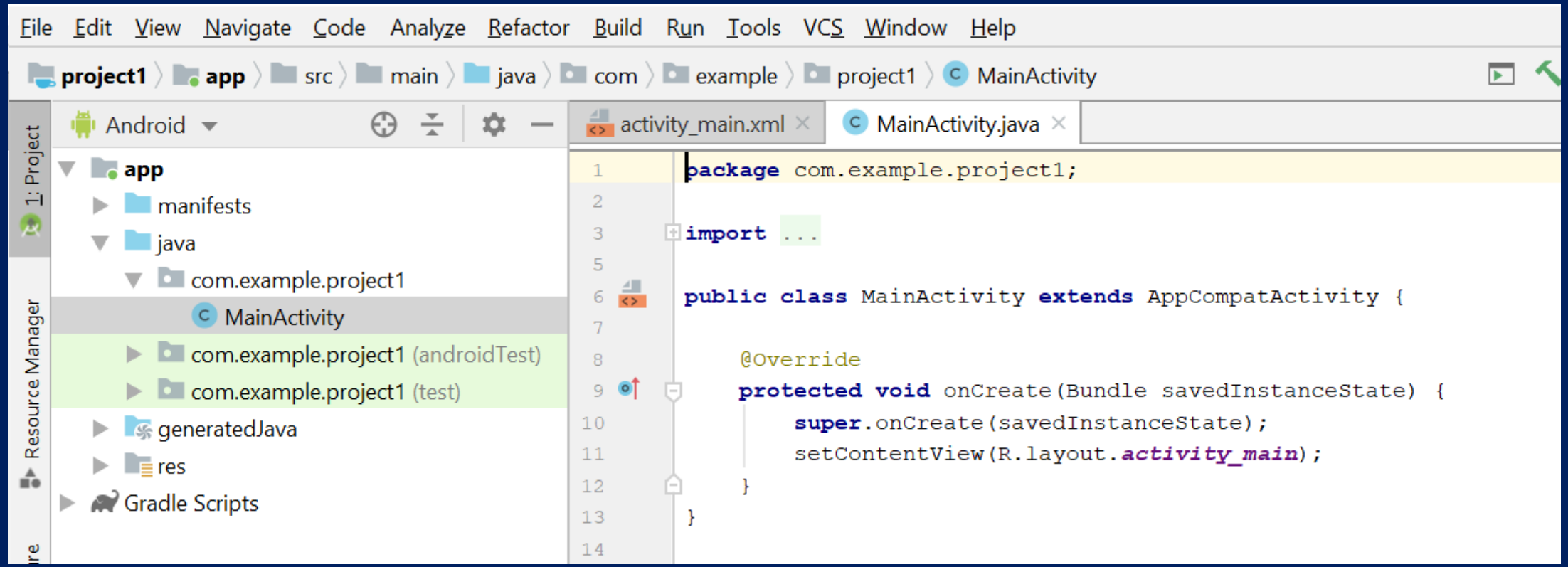
Step 1: Completed

WAIT for a while, and you shall see the following screen. The source program is on the left window.



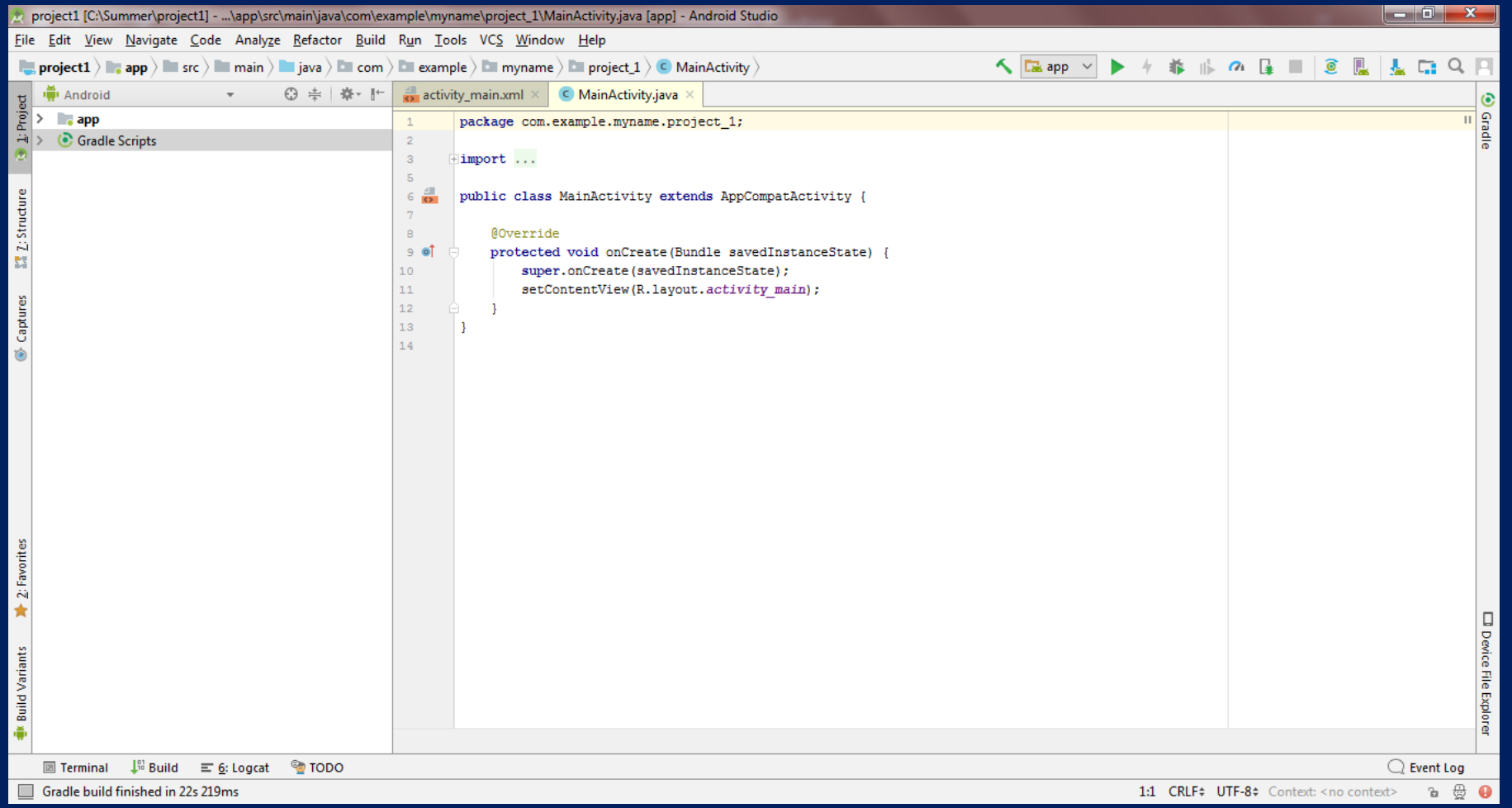
Location of the source program

Click on the down arrow icons of “app”, “java”, “com/example.project1” to see the source code “MainActivity”



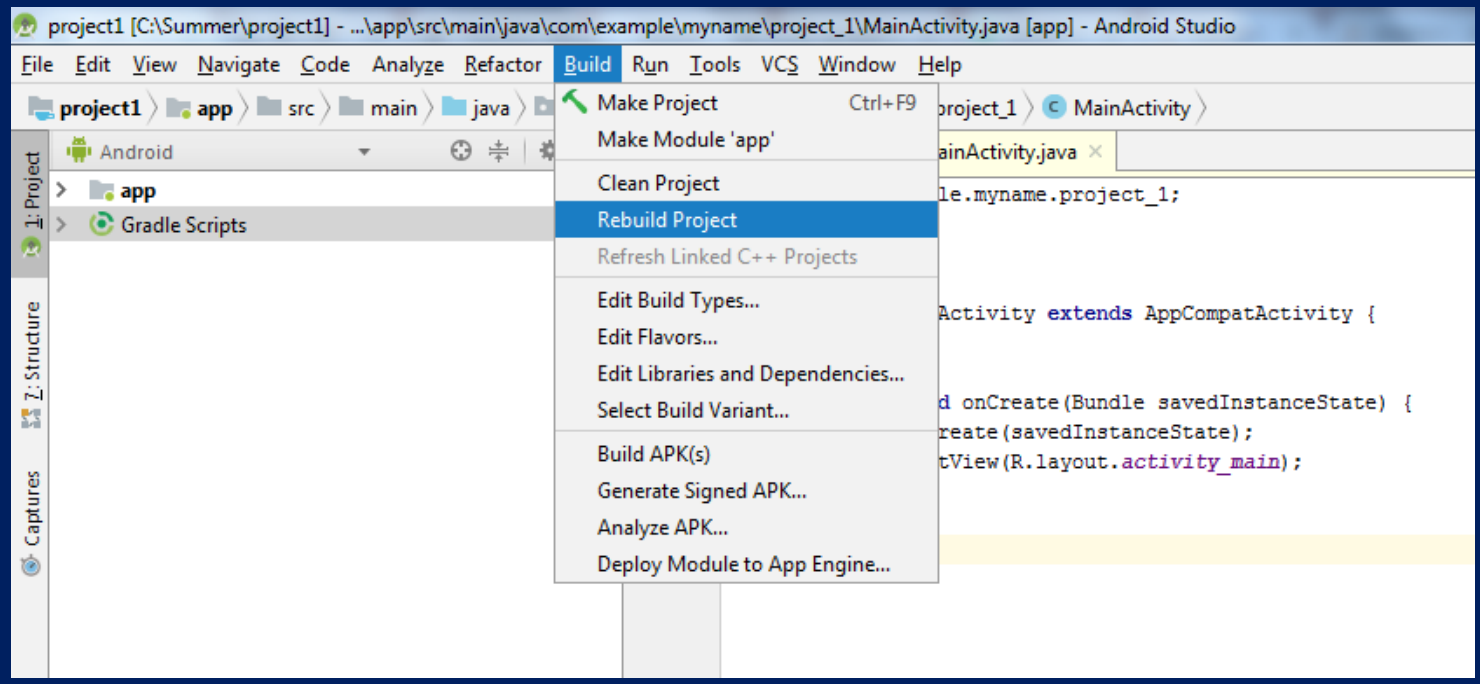
Building your Apps

After completing Step 1, you have created a new Apps that can be put on your mobile phone.



Installing and running your Apps

Click ‘Build’, and then click ‘Rebuild Project’ in the dropdown menu.

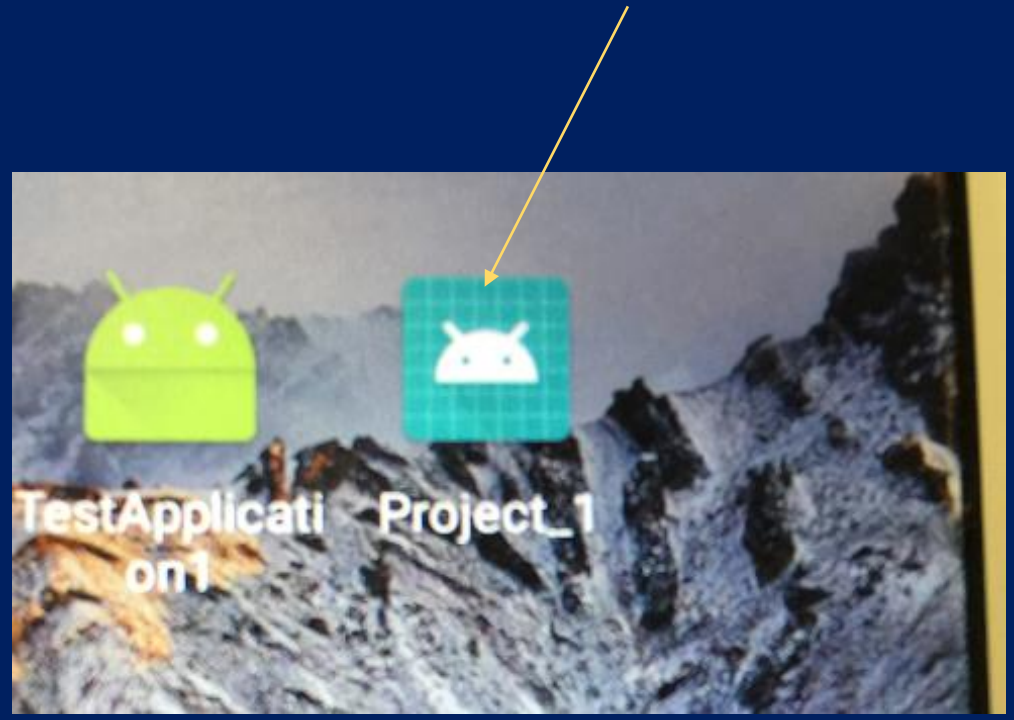


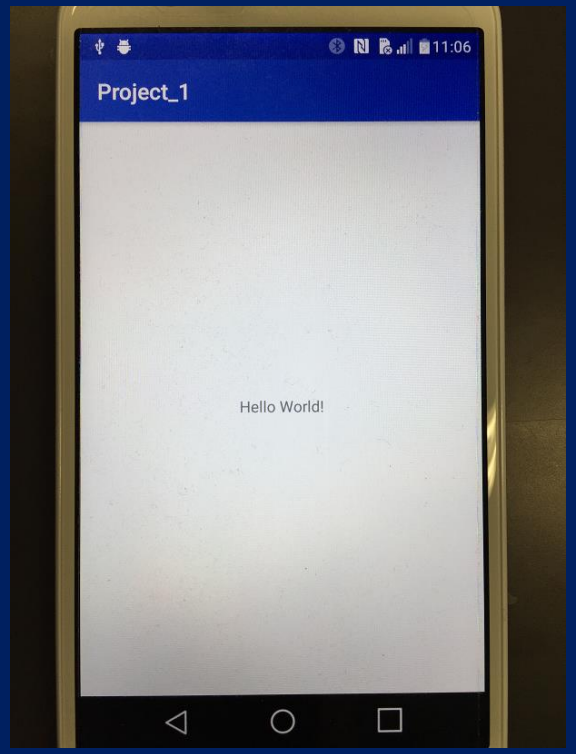
If there is no error message (which should not have any in this simple example), click ‘Run’.

Select your mobile device on the pop-up menu, and click the ‘OK’ button. Your Apps will start running on your mobile device.

Installing and running your Apps

On your mobile screen, an icon of your project is added. Click on it to run.

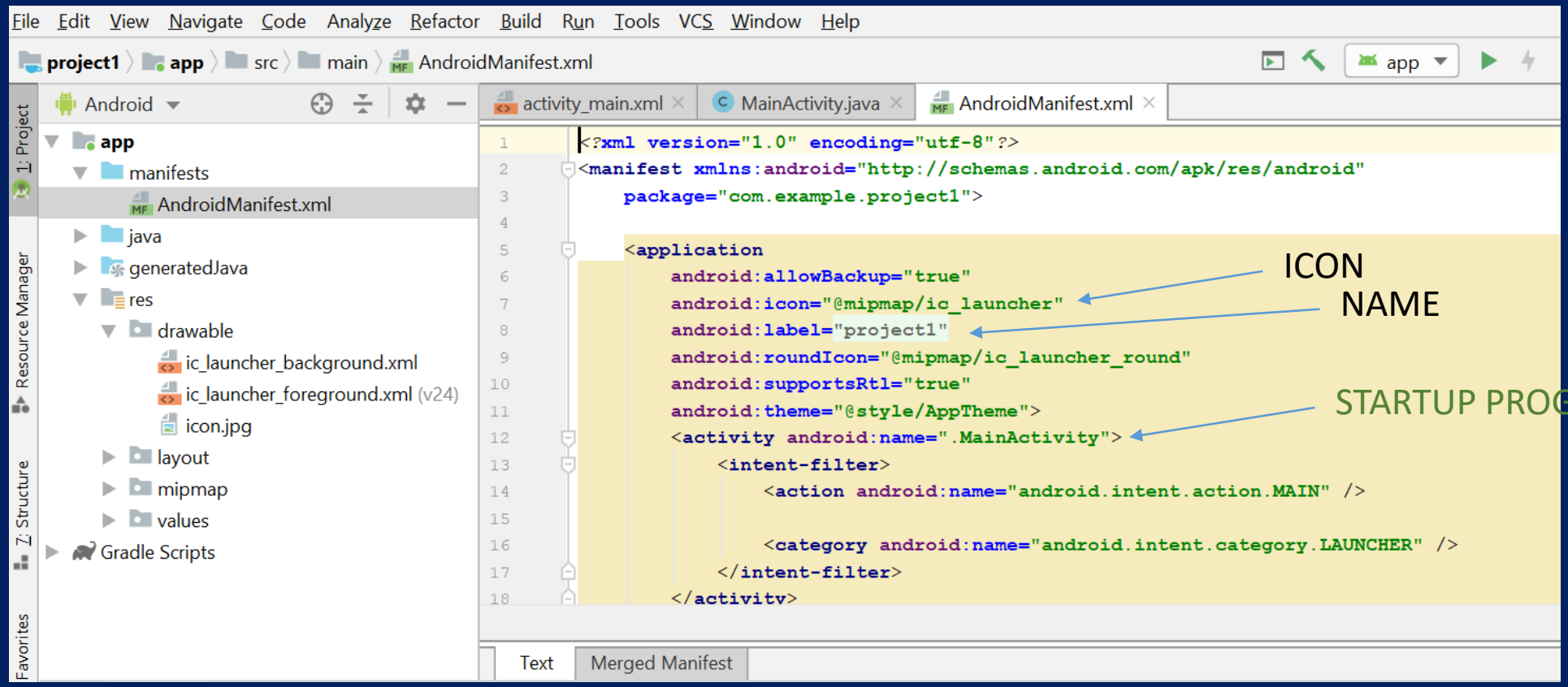




The screen of your Apps only contains the default message ‘Hello World’, because you haven’t decorated your canvas.

Changing icon and app name

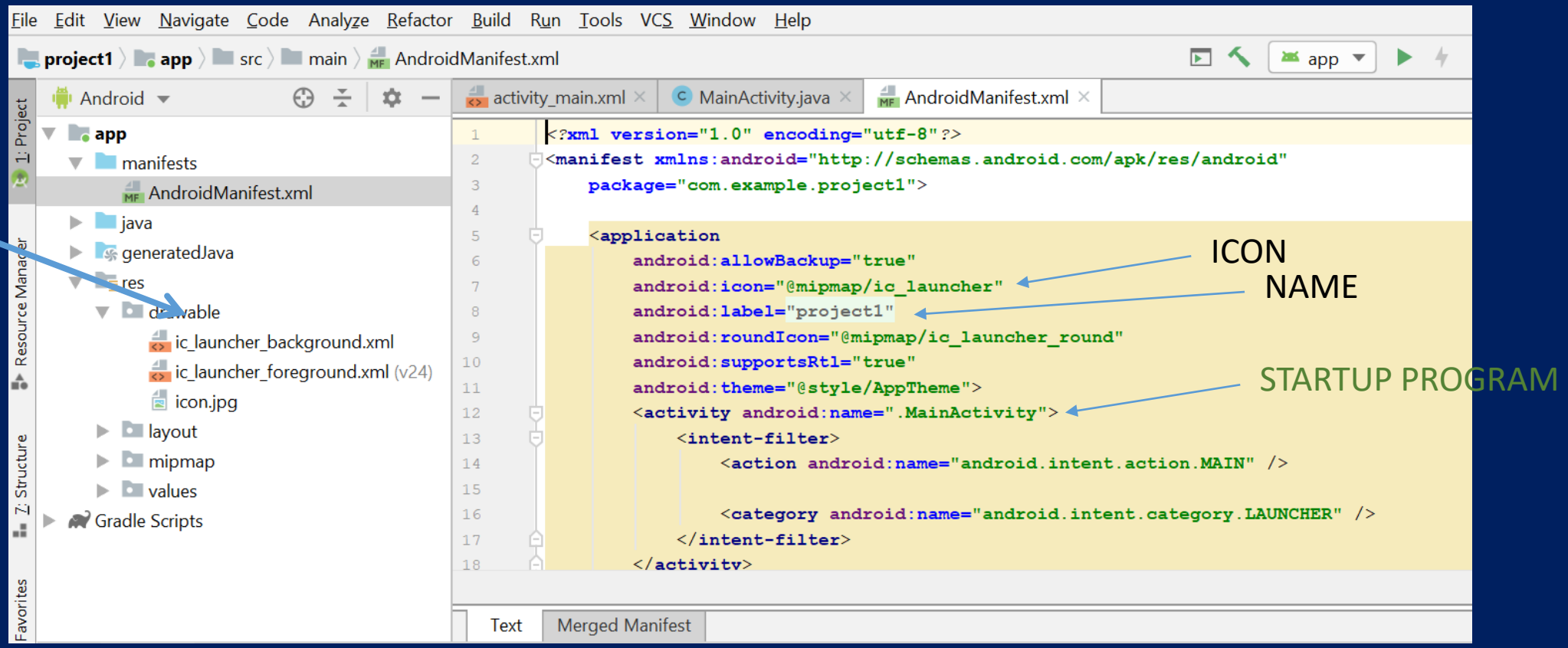
Click the down arrow of “manifests”. Double click on “AndroidManifest.xml” to show the file on the left window. This file contains the essential information of the project, such as icon, name, startup program, etc.



Changing icon and app name

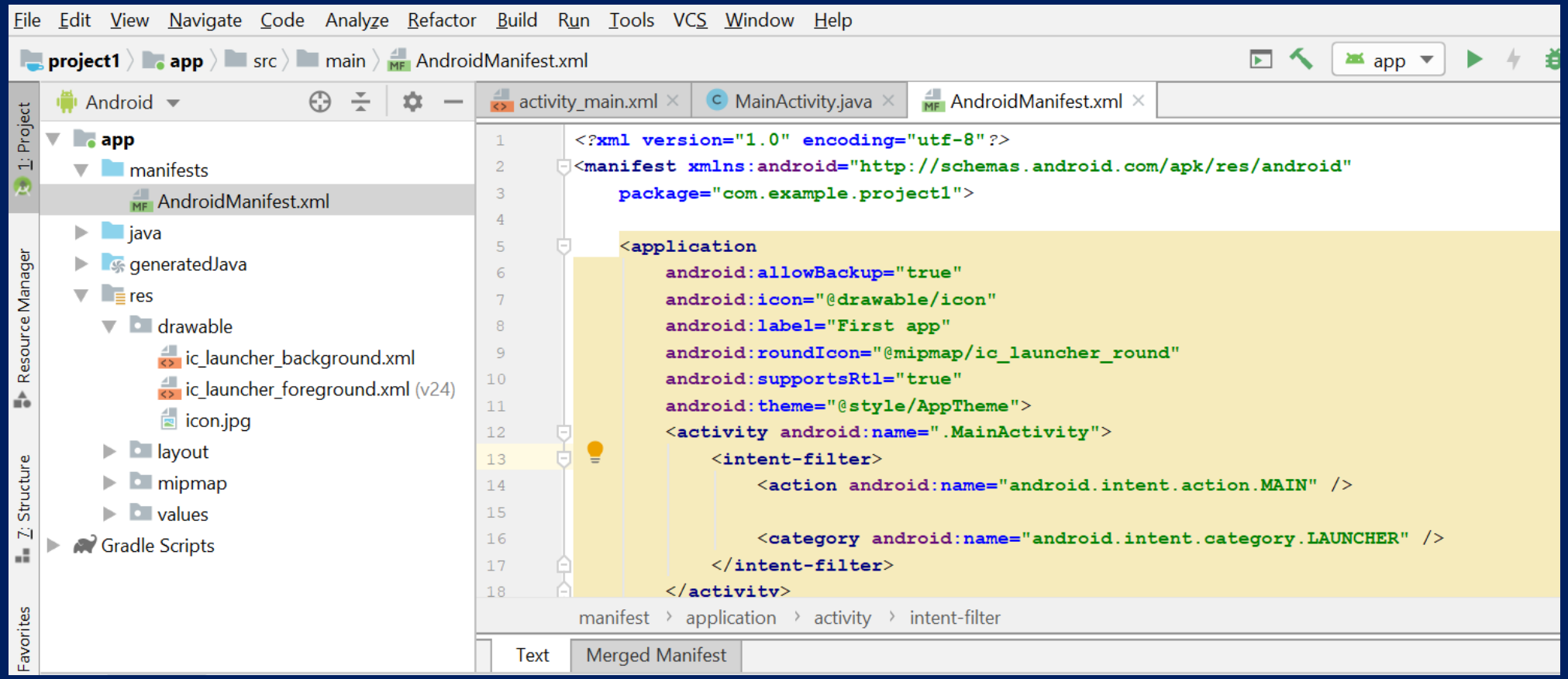
Click the down arrow of “res”, and then “drawable”. Create a small image file “icon.jpg”, and dragged it from the “File explorer” to the “drawable” folder.

Icon.jpg



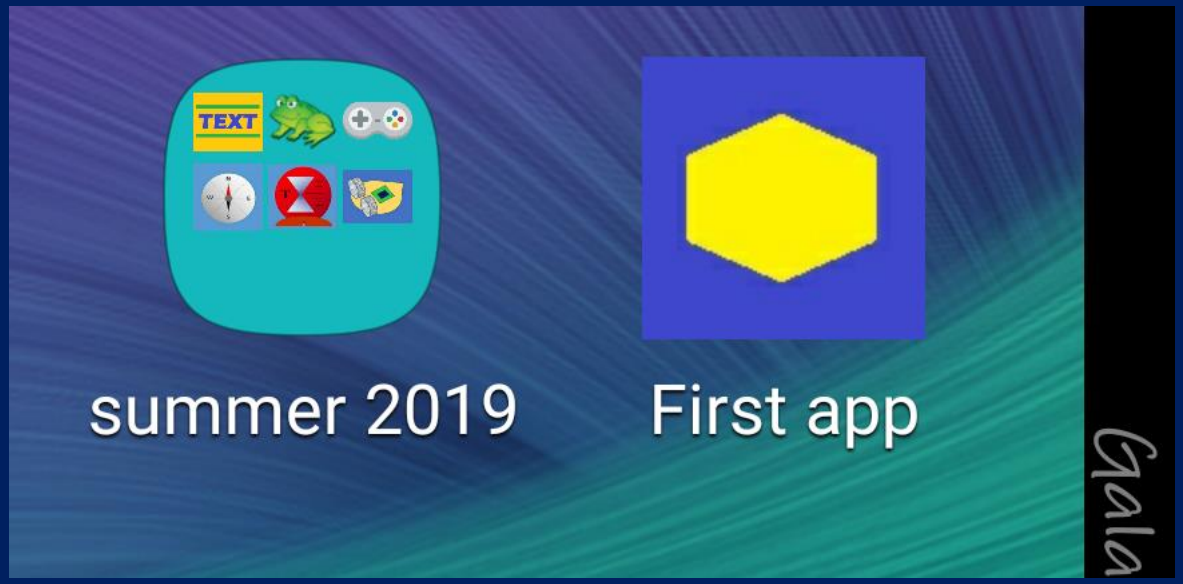
Changing icon and app name

Change the ICON name to @drawable/icon, and the NAME to “First app”.



Changing icon and app name

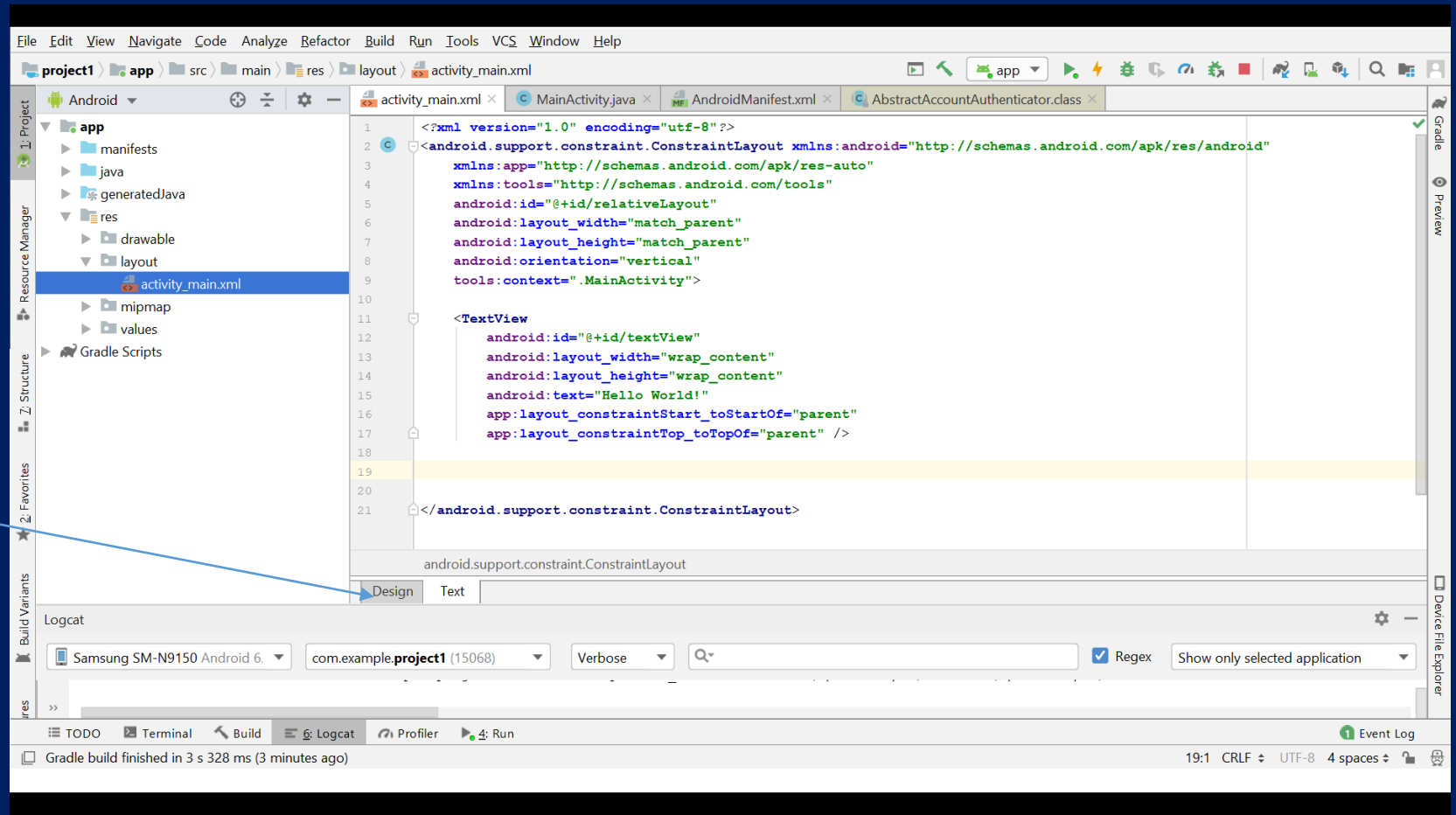
Run the app and installed it on the mobile phone. The icon and name of the app have been changed.



Add some components to app

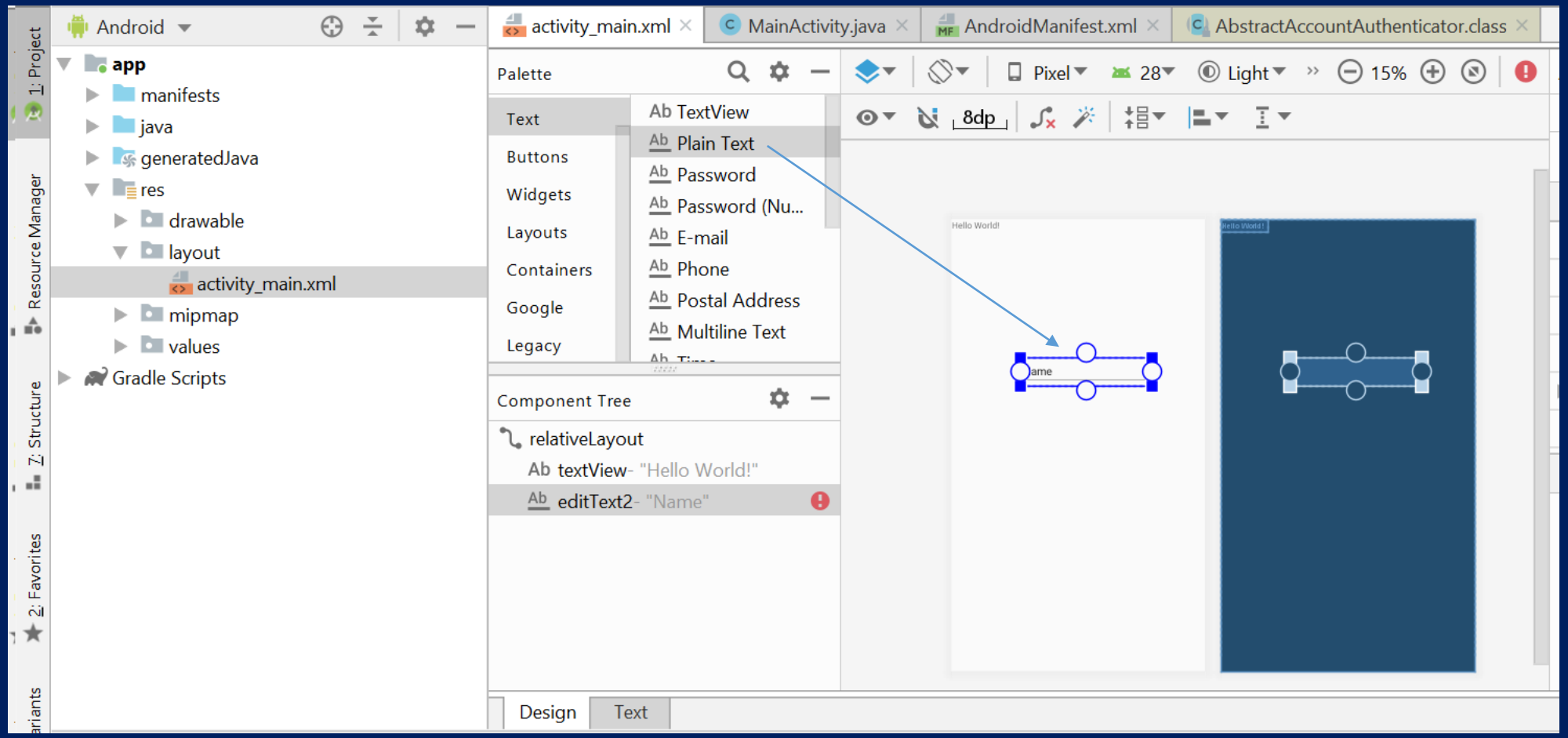
Click the down arrow of “res”, and then “layout”. Double click “activity_main.xml” to launch the app layout file on the left window. Click “Design” button to switch to layout view.

Design



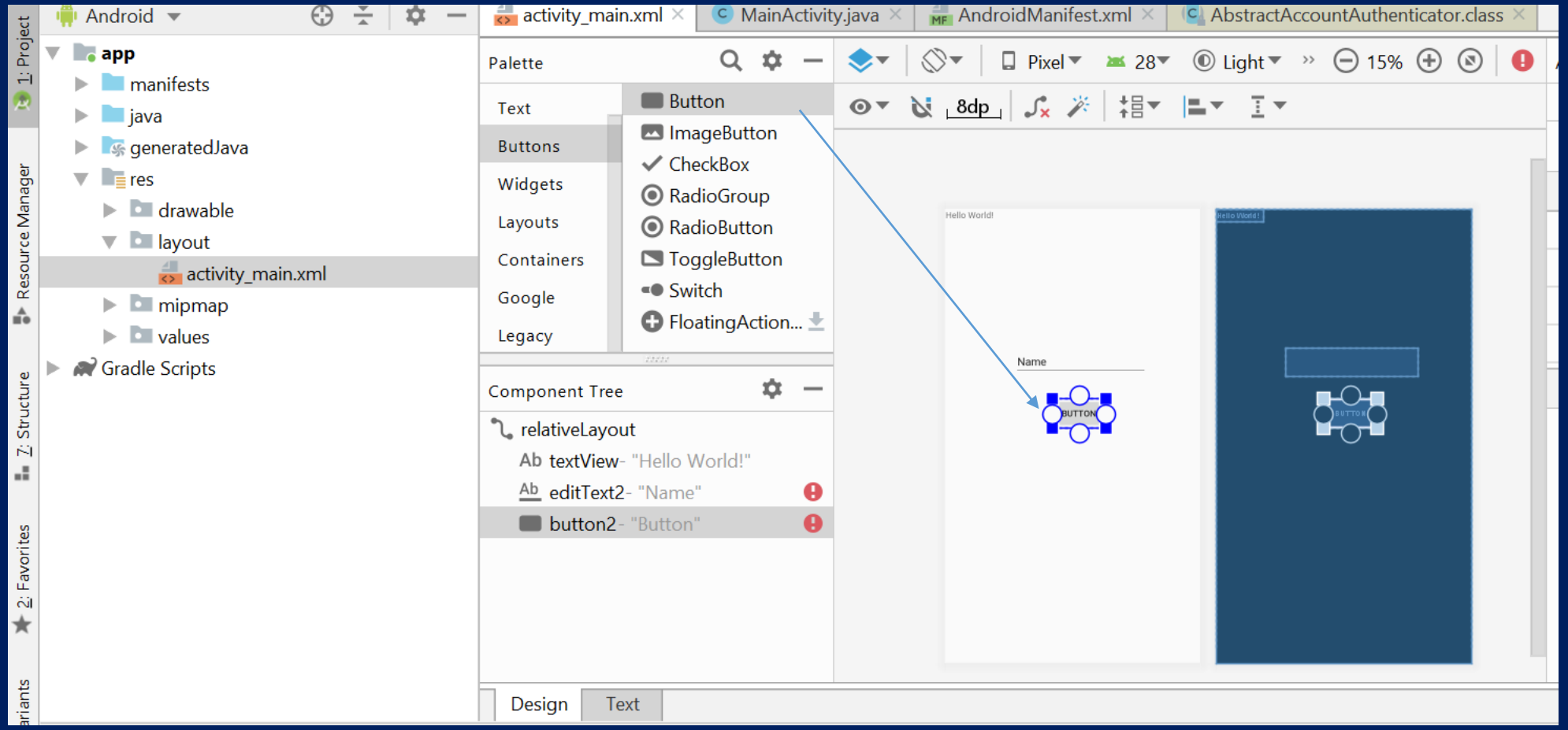
Add some components to app

Click Text, and drag “Plain text” to the canvas to add a text box.



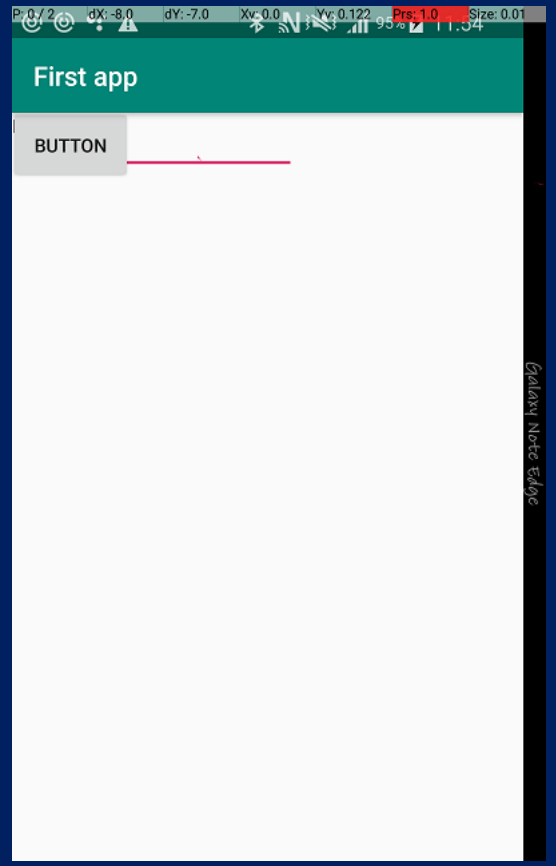
Add some components to app

Click Buttons, and drag “Button” to the canvas to add a button.



Add some components to app

Run the app and installed it on the mobile phone. The textbox and the button has been added. Type something into the textbox.



Layout not organized well, we'll learn how to make it better next time.