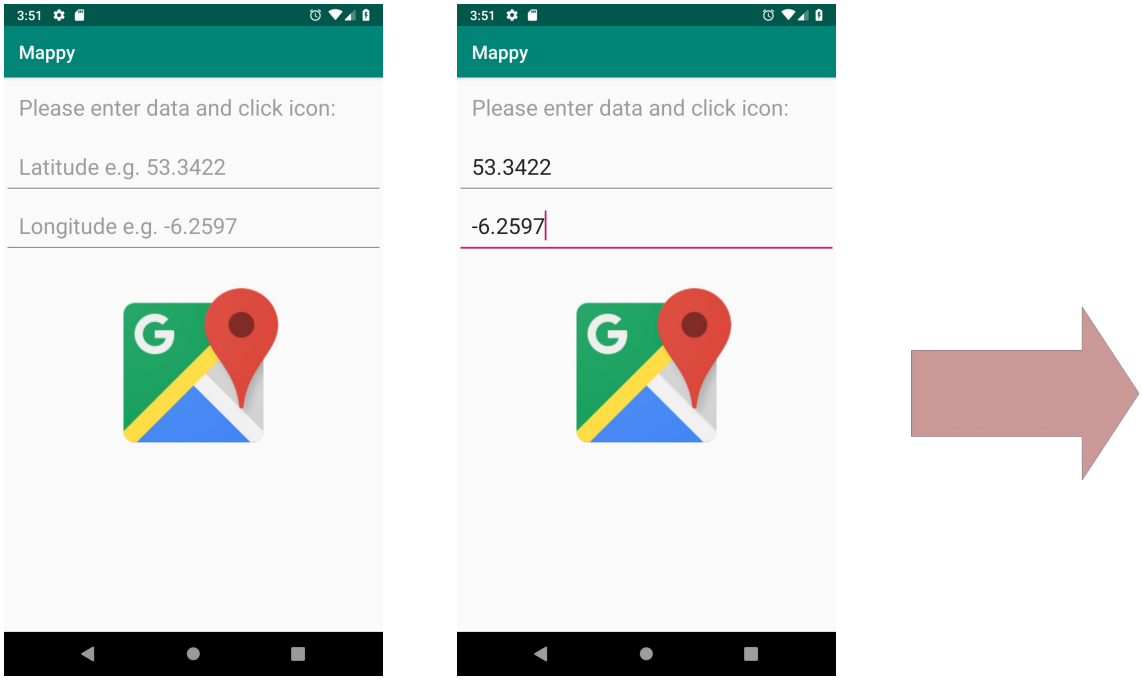
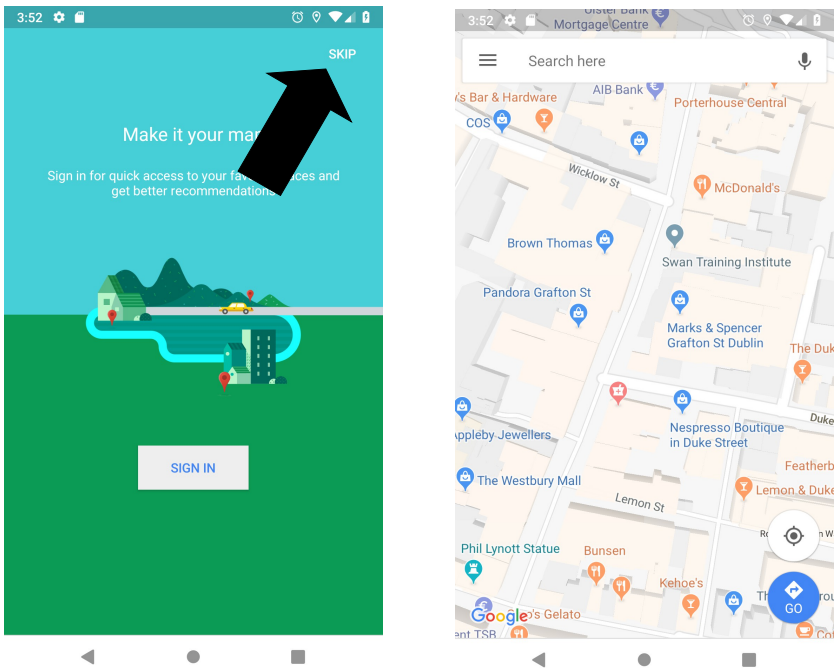
Last week we created an app with a **grid of text fields** containing the names of cars. When the user clicked a text field, a toast message appeared on the screen stating that “I love” the corresponding car. This week we would like to explore using **intents** to move us beyond a single UI screen (**Activity**). How this new app works is simple: **1.)** It launches with the UI screen shown below and the user enters some latitude and longitude info.



2.) when the user clicks the map icon, the system launches Google Maps and displays the location!



Based on the same procedure used the last couple of weeks create a new project, you can call the application “My Fourth App”.

Part 1 Set up User Interface

As we can see above the user interface contains some widgets 1.) A TextView for the instructions, 2.) two EditTexts to allow the user to enter the latitude and longitude co-ordinates and 3.) an ImageView with a map icon (map.png) that the user clicks to launch Google Maps.

Describe this layout in **activity_main.xml**

Part 2 Set up Event Handling

As it stands the UI is passive (just displaying things) and we would like to make it more active i.e. capable of responding to user events. In our case there is **only one event**, the user clicks on the icon. Set up the event handling code i.e. tell the Android system where to find the code when the user clicks the icon. There are 3 different ways to do this, so you can use whichever one you prefer. For now the app should just **display a toast** when the user clicks the icon e.g. “User clicked Icon”. Test that this works and we'll write the actual code inside **onClick** in a minute...

Part 3 Extracting the User Input

We are now working inside the method that will handle the click e.g. **onClick()**. Our first task is to get the text from each of the two **EditText** views i.e. the latitude and longitude data that the user entered and convert each to a String e.g. we could call these variables **lat** and **lon**. Once we have done this, the next step is to create a String (e.g. call it **location**) of the form:

“geo:” + lat + “,” + lon + “?z=18”

Note: the z at the end of the string is for setting the level of zoom of the map at the end, in this case, we've chosen the value 18.

Part 4 Launching Google Maps

Finally, after all our hard work, we will launch Google Maps with the user info. Continuing in the **onClick()** method,

1.) create a new **Uri** object by calling Uri.parse(**location**).

2.) Create a new **Intent** object with Intent.ACTION_VIEW in the constructor.

3.) Set the data for the Intent object using the Uri object just created as an argument.

4.) Double check that there is an app on the phone that displays mapping info (do this in Java).

5.) Use the Intent to start the new Activity.