

# Assignment 3 Documentation

## Installation:

- 1) Open Android Studio
- 2) Open assignment project
- 3) Connect mobile phone to computer via USB
- 4) Run project and app will appear on mobile device

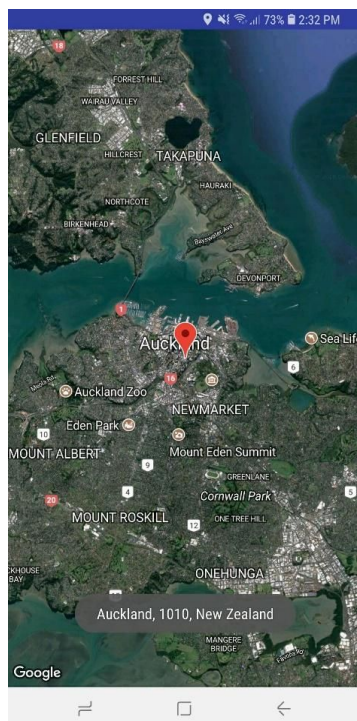
## Application Description:

This Android mobile application makes use of three features. It has a map activity which finds the users current location using google maps and displays a toast message of the address you are at. It also has a weather service feature which can tell you the current weather based on user input. Finally, it has a bluetooth chat feature which allows user with the app to pair and connect via bluetooth and exchange messages.

## Application Components:

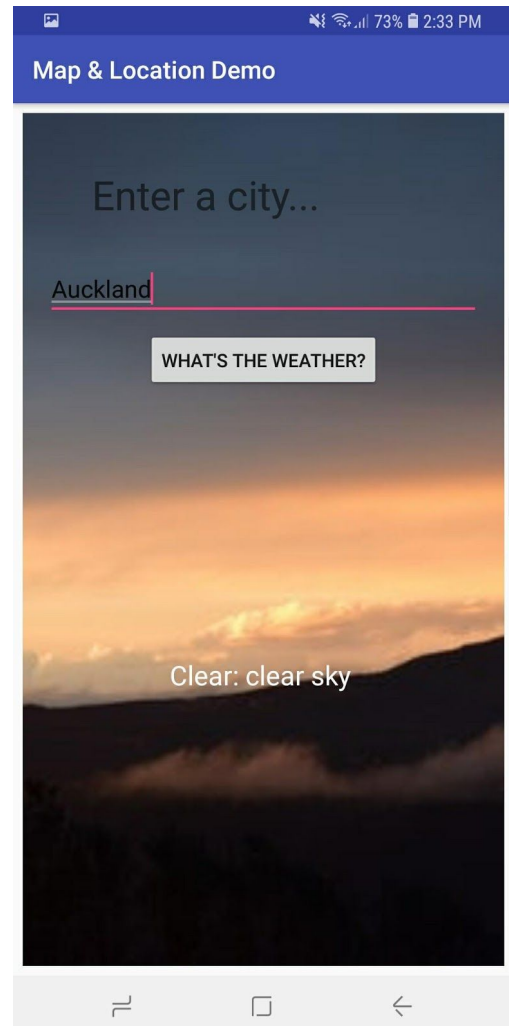
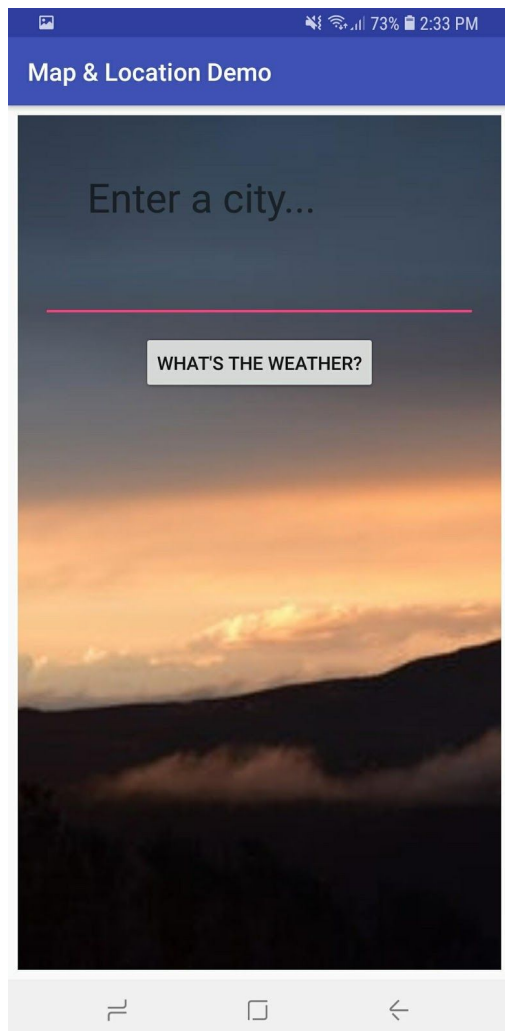
### Location Service Component

The location based service in this app makes use of the Google maps API, inside the android manifest file the access fine location permission allows Mylocation functionality. A request is prompted to the user on initial start up to allow access to the devices location services. It uses a location manager and location listener to access permissions for use of Google maps services, then using these services the map will update itself to the user location as well as clear the users last known location and update it to the newest found one. It also uses Geocoder to find the address of the current user location via Google maps which will then be presented to the user in a toast message.



## Weather Service Component

The weather activity makes use of JSON and an open weather API. It uses an input manager to allow input from the user. In the background it uses Async for connecting to the URL and reading and returning of data to be passed to the JSON object. From there the JSON object is able to retrieve the specific parts from the web API which is then ready to be passed on to the UI once the button is hit.



## Bluetooth Component

The bluetooth component makes use of the android Bluetooth adapter class to enable/disable bluetooth functionality on the device, as well as device discovery and discoverability. It also makes use of bluetooth sockets and UUID for exchanging information like text data in this case.

Steps in using bluetooth feature to send messages:

- 1) press on/off button to turn bluetooth on for each device
- 2) press enable discoverable on each device
- 3) press discover on each device
- 4) select each device name on list on both devices

- 5) press connect on only one of the devices
- 6) now is ready to send and receive messages to each other view the text box and send button
- 7) received messages appear in space where “incoming messages” is seen

