

Trackie Talkie APP

Assignment 3

Location-based Service:

A mobile device obtains current location information and user information, uses HTTP to communicate with a server (Google Map Server) using Google MAP API.

- Navigation
- GPS
- Displaying a Location Address
- Getting the Last Known Location
- Receiving Location Updates

Messaging Service:

It utilizes SMS and/or MMS messaging between mobile devices. Your app will provide an appropriate User Interface to send and receive the messages.

- SMS messages to send/receive/look/delete

APP: Trackie Talkie

➤ MAP

- Last known marker location (current to end position)
- Shown locations (from start and end)
- Able to assume distance/duration
- Able to display distance/duration
- Using Google Map API
- Using Google Map Direction API
- Able to Zoom in/out
- Able to monitor the current location
- Latitude and Longitude: both is showable
- Geocoder, convert Lat/Long into an address
- Able to display your current location/address
- Able to search the address
- Only to know the time and distance from where you are at TO where you touch the map or search the address, the track will be displayed with the duration/distance.
- Able to change mode: Driving or walking mode: time and distance will be different whenever you click.
- Able to change the map style: Terrain, Hybrid, Satellite, and normal.
- Able to see the traffic on map.

➤ SMS/MMS

- Able to send message (SMS)
- Able to receive messages (SMS)
- Able to read SMS messages
- Able to read Draft messages
- Able to read your sent messages
- Able to delete the SMS messages

➤ Alternative Activities

- Able to take photos
- Able to save photo (Automatically if permission is granted)
- Able to access the camera and use.
- Walking (metre) – Increasing when you move (using assumable calculation)
- Timer – Increasing when you click start, stop when stop and pause when pause.
- Record the duration and distance in the end
- Enable to copy the record
- Date displayed/time start-stop using this app

The project can be installed and tested BY:

Import the project in Android Studio

- Gradle
- TargetSdkVersion: 25 || Minimum: 22
- Able to deploy to an android (Tested by API 24)
- A Test Android Project is zipped up in .zip
- Google Maps Android API

UML Diagram

7 Activities within Javas

1. *MainActivity*
2. *StartActivity*
3. *SMSActivity*
4. *CameraActivity*
5. *MapsActivity*
6. *SMSFolder*
7. *EndActivity*

2 Java files

1. *DirectionJSONParser*
2. *SMSIncoming*

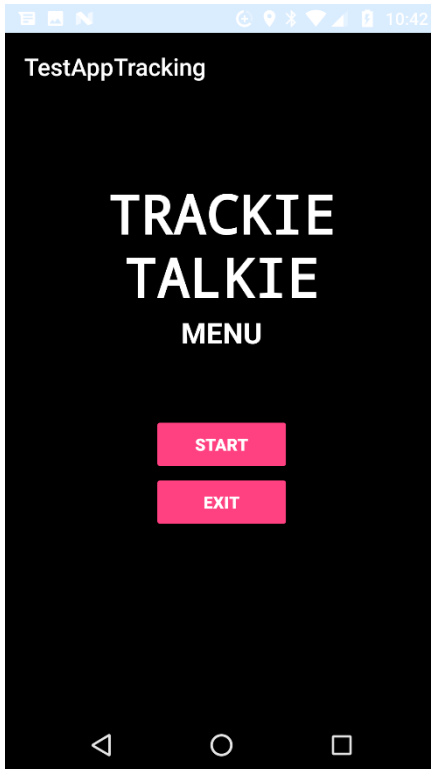
5 xml files

1. *colors*
2. *google_maps_api*
3. *strings*
4. *styles*
5. *menu*

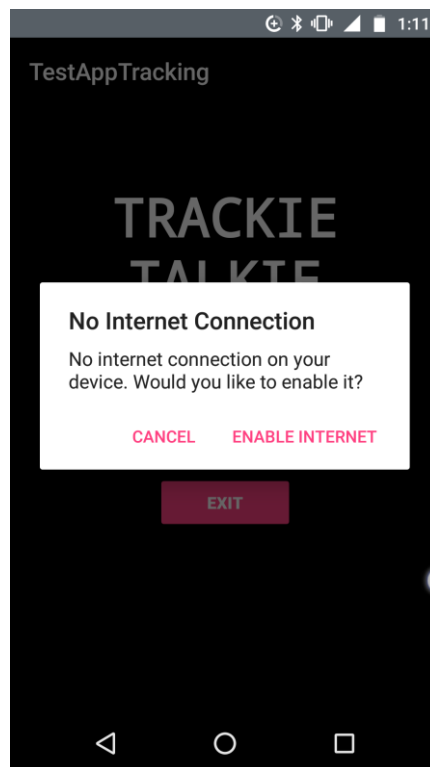
One UML diagram (a separate PDF will be attached in .zip)

Instructions/Manuals (How to use or what to expect to see):

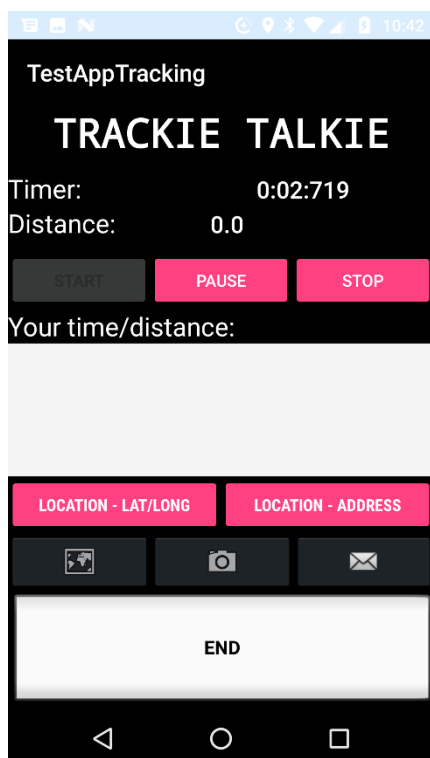
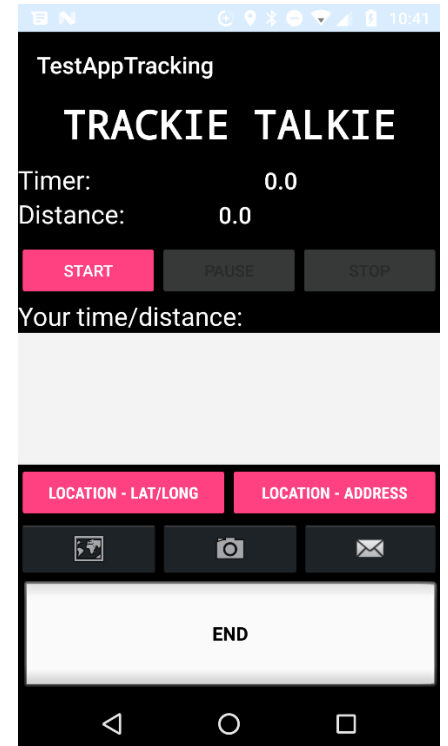
Start-up should be looked like this:



If there are no internet connection in your area, pressing START will display the dialog, request internet connection, like this:

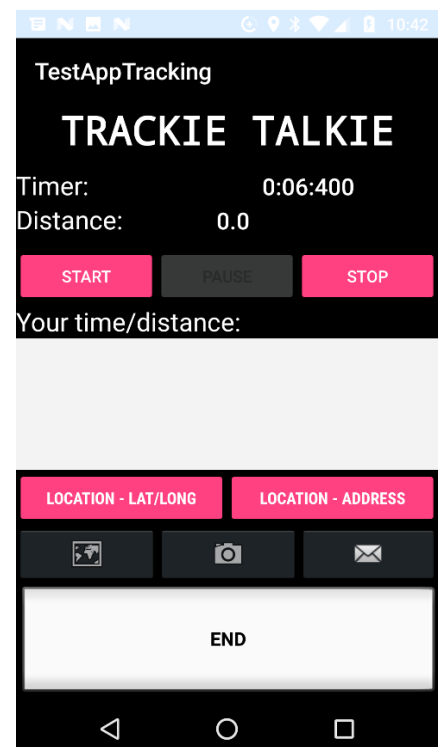


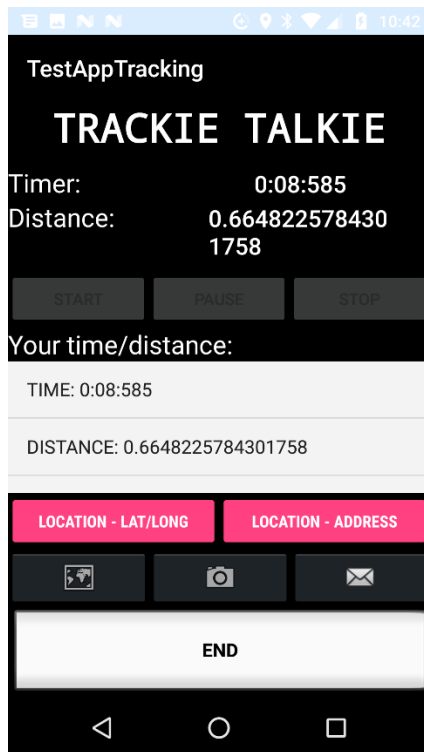
If any internet is enable, start button should have led you to this main activity.



The timer will start running if you press start, pause if you pressed pause.

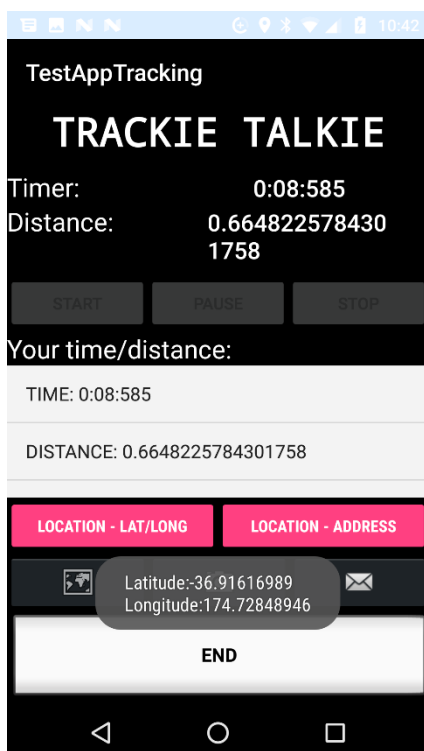
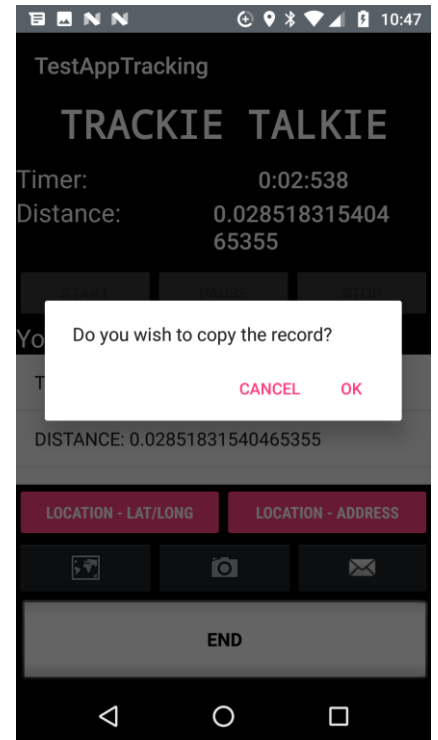
NOTE: Pressing START will only lock the END button until you press STOP button.



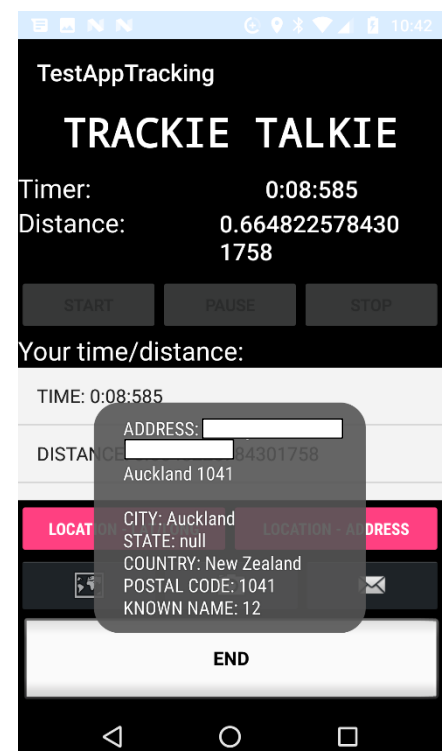


The timer will stop increasing when you press stop. Also, the record could be copied if you pressed the listview a bit long, the dialog will be displayed and ask if you want to copy the record or not.

The timer won't be able to reset as it doesn't have a button for it unless you go other activities and return to this activity.



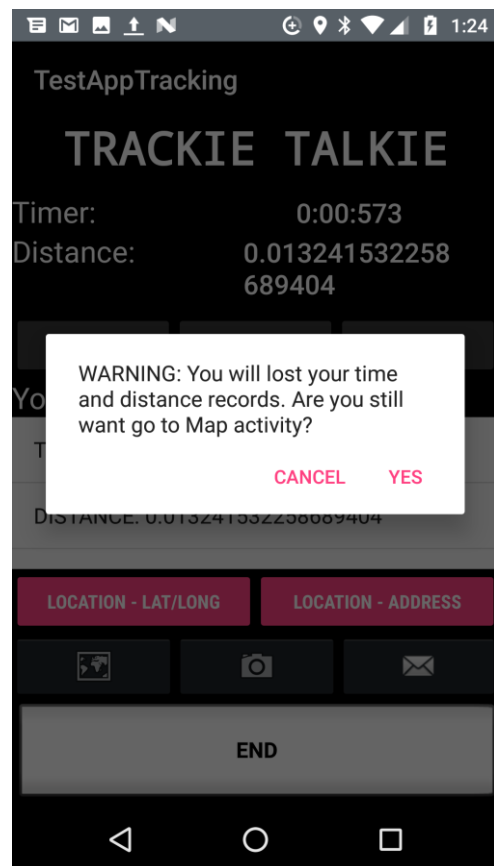
When you click the either Location button, it will be displayed in Toast view, regarding to what you read.



If the timer either running or record already, the warning will be displayed whenever you want to go to any activity, such as camera, map, SMS so you know that you will lost the data.

If no record or timer running, the warning should not be displayed.

(NOTE: IN every activity, the back pressed button will be work, after pressed, the intent will return to the previous activity except some situations, the dialog will pop up)

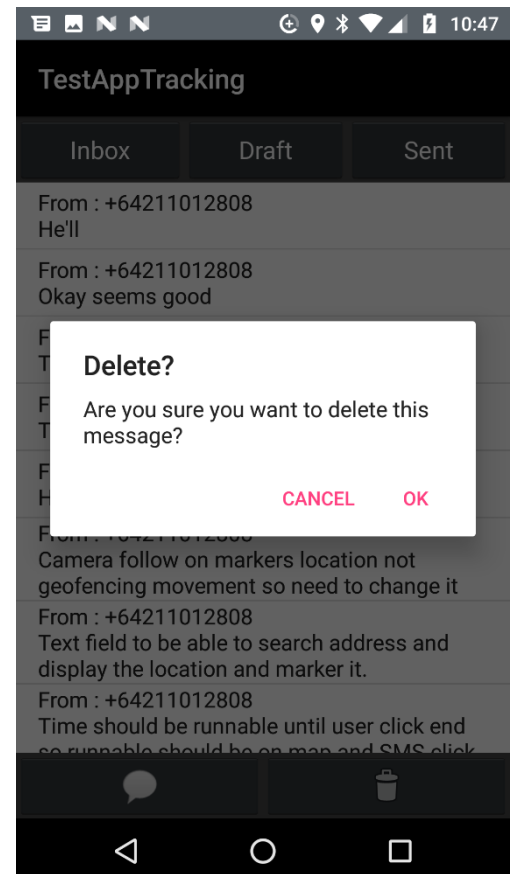
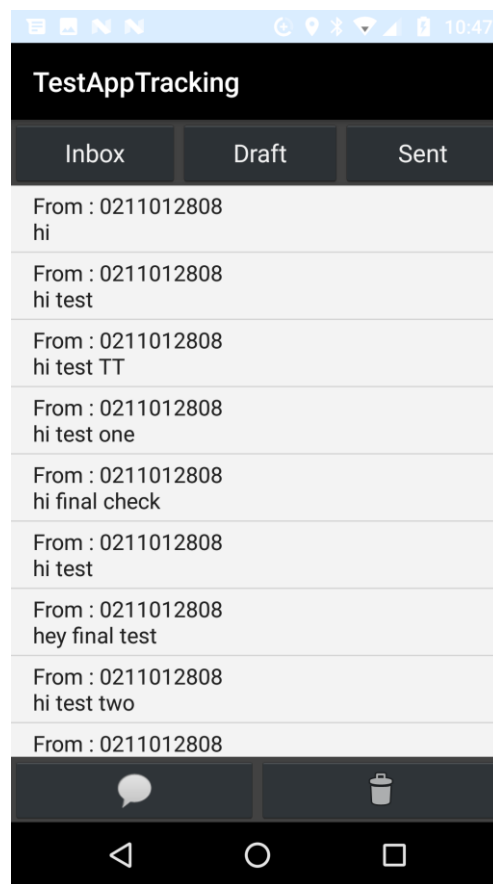
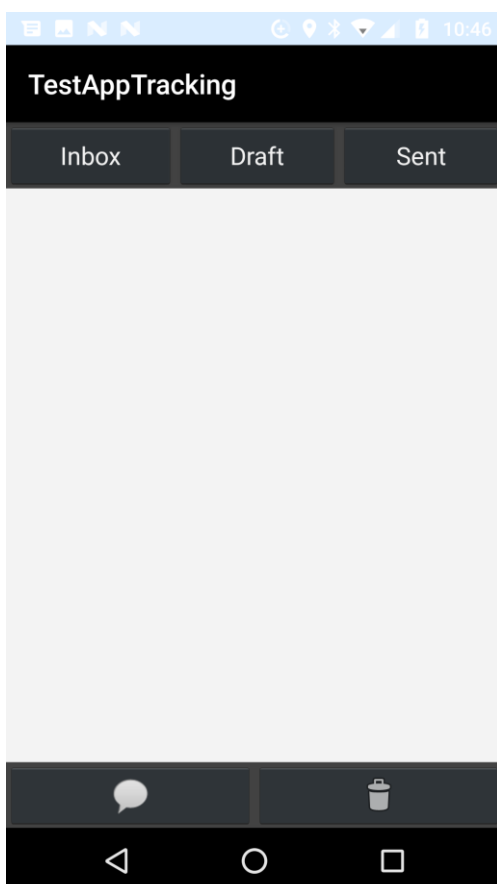


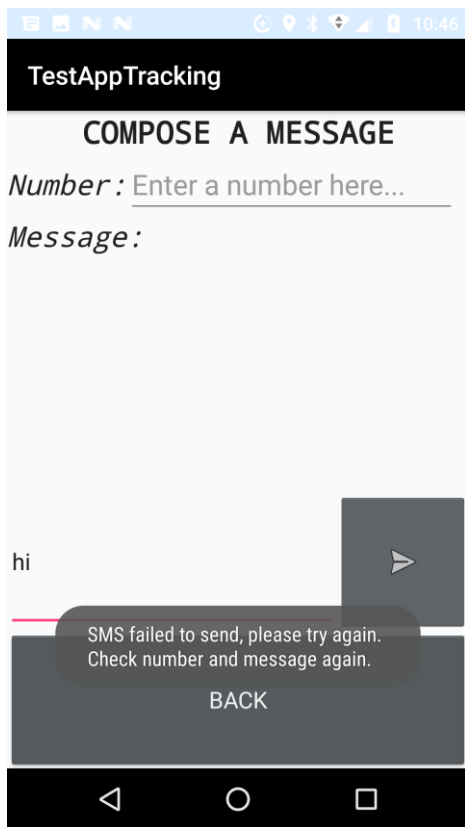
SMS Folder/SMS Activity

When you click letterbox button, the SMS folder should be displayed like this:

The SMS Folder will be contained of your internal messages after you granted the permissions.

Whenever you touch the listview, each message, the Dialog will be displayed and ask if you want to delete the message or not.



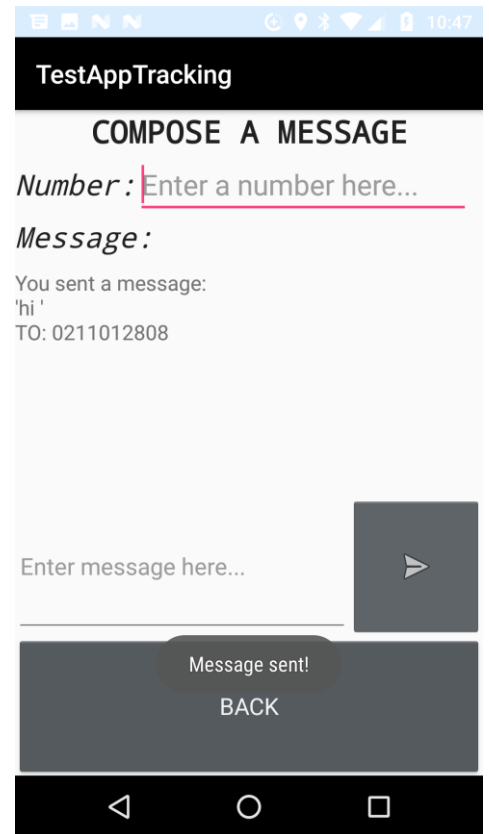


When you click the balloon chat, you will see a SMS that ready to send, a compose message.

You will need to put number and message, otherwise you will see the Toast error pop up.

When you click send, you will see your message and the number you put show up on the Textview.

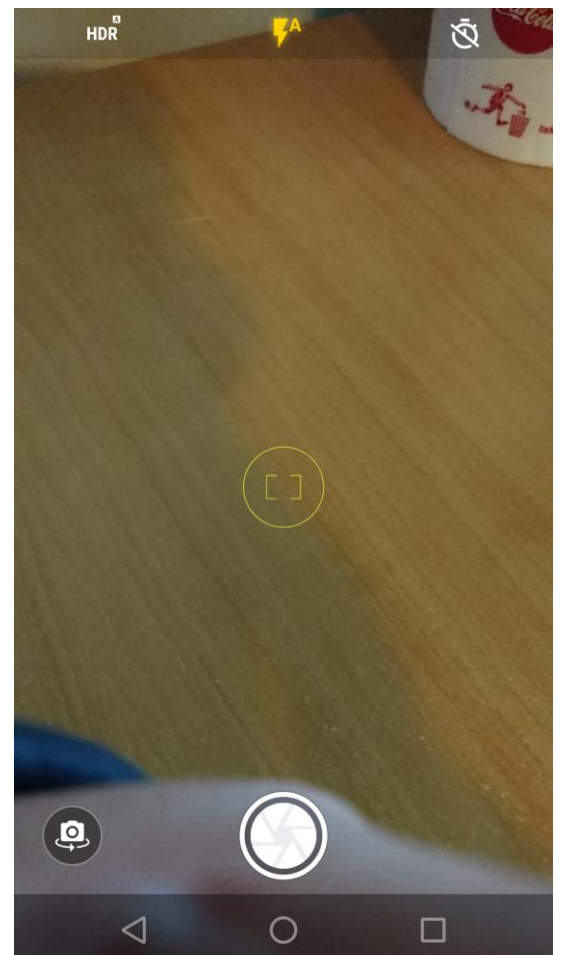
Also, the toast will pop up and say message sent!



Camera Activity

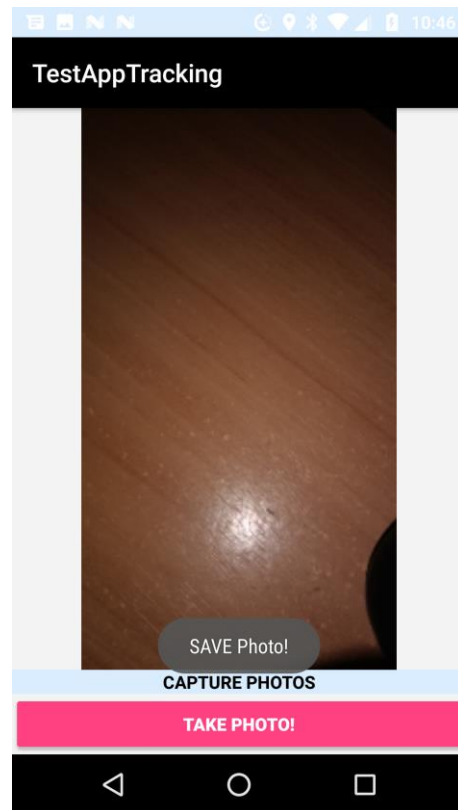


Camera activity, will be showed like this, where you can click on the button to start up camera after you granted the permission to use the camera and your storage.

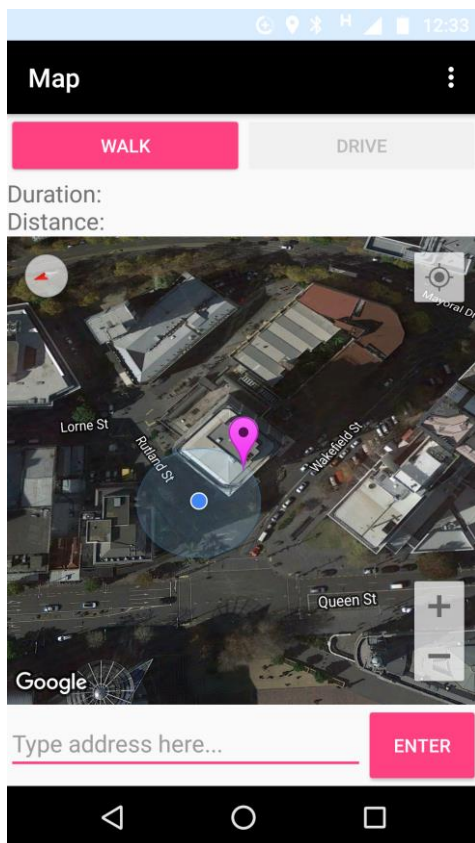


After you took the photo, the image view thumbnail will be replaced with what you took.

With the Toast pop up saying SAVE PHOTO! Which means the picture should be saved into your internal storage.



Map Activity



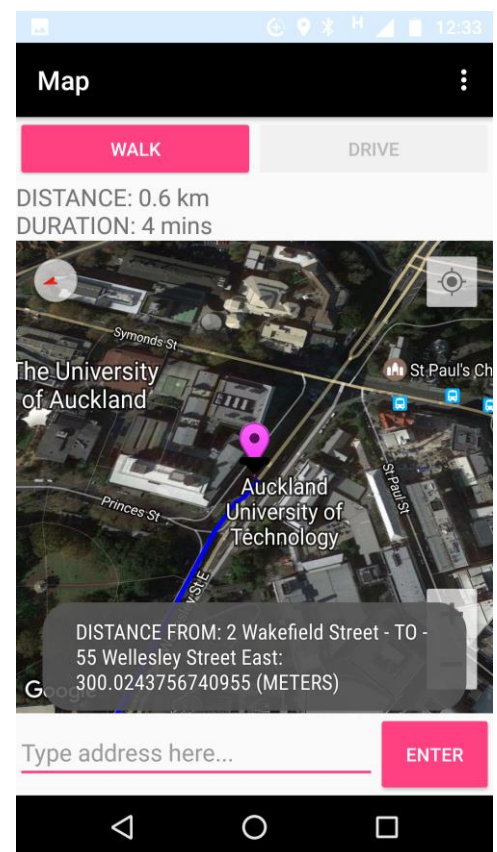
When you start Map activity, it should be showed where you are at after you granted the permission.

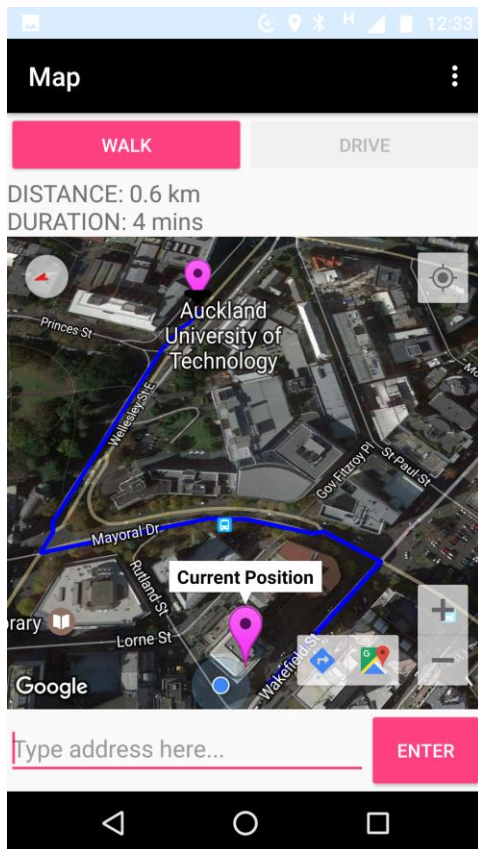
The route will be automatically as a Driving mode. You can change the mode.

(The mode will be affected to the distance and duration)

You able to touch any place and the route will be connected from your current marker TO where you put marker or (search address).

The Toast will show the assume distance using an alternative calculation.

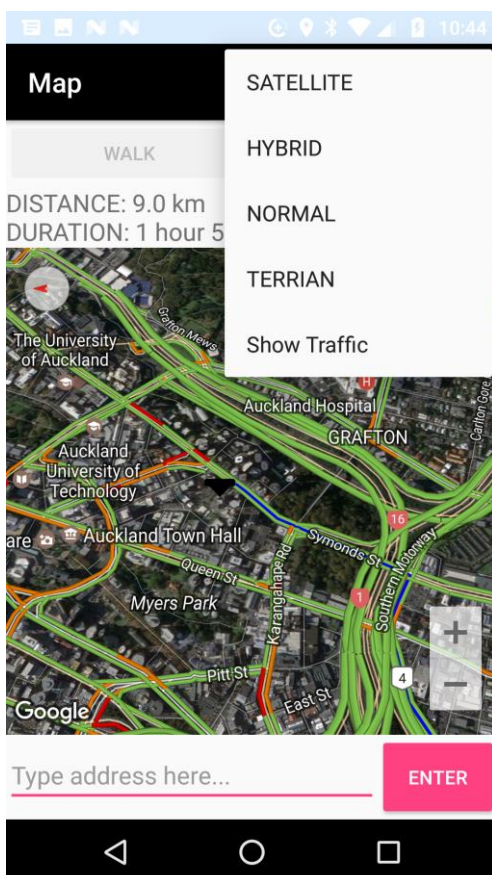
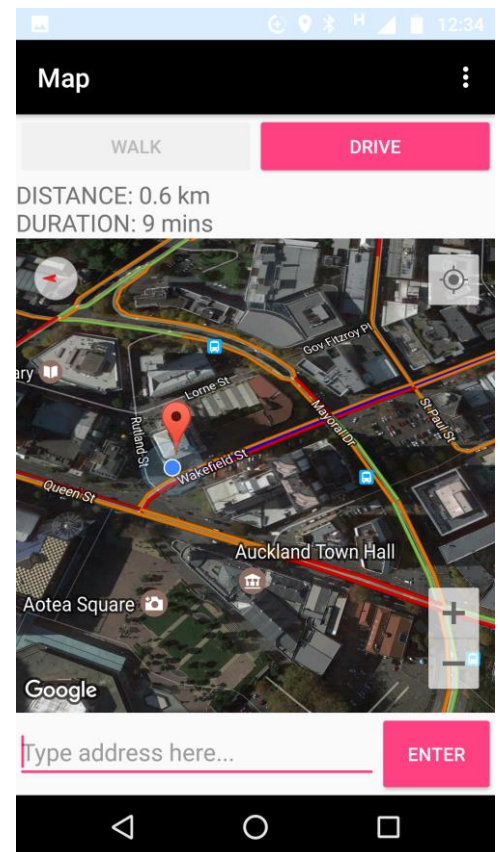




The route will be displayed as shown when you touch any place.

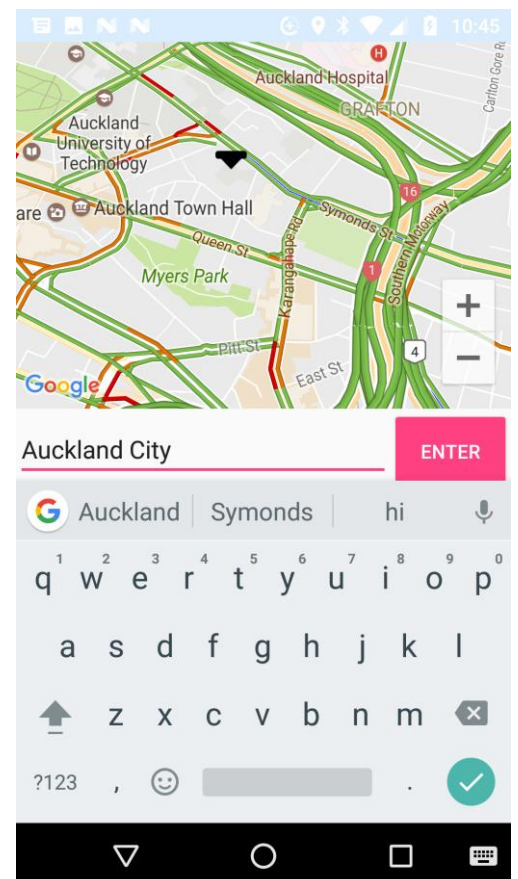
The textview at the top will show you the actual assumption distance and duration for either driving or walking mode.

You also can click the google map button to access the google map's real map.



You can also change the map mode (styles) or see the traffic when you click the menu at the top right.

You can enter the address in the address bar to search the place and display up the location with the route from where you are to your search of address.



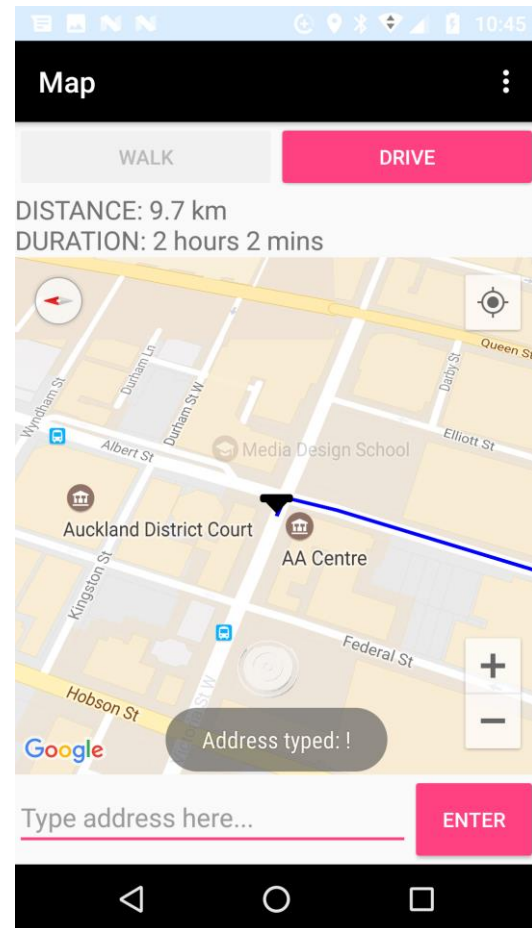
After you enter the address, the camera will be moved to the location where you want to see.

The distance and duration will be also changed to fit the address search.

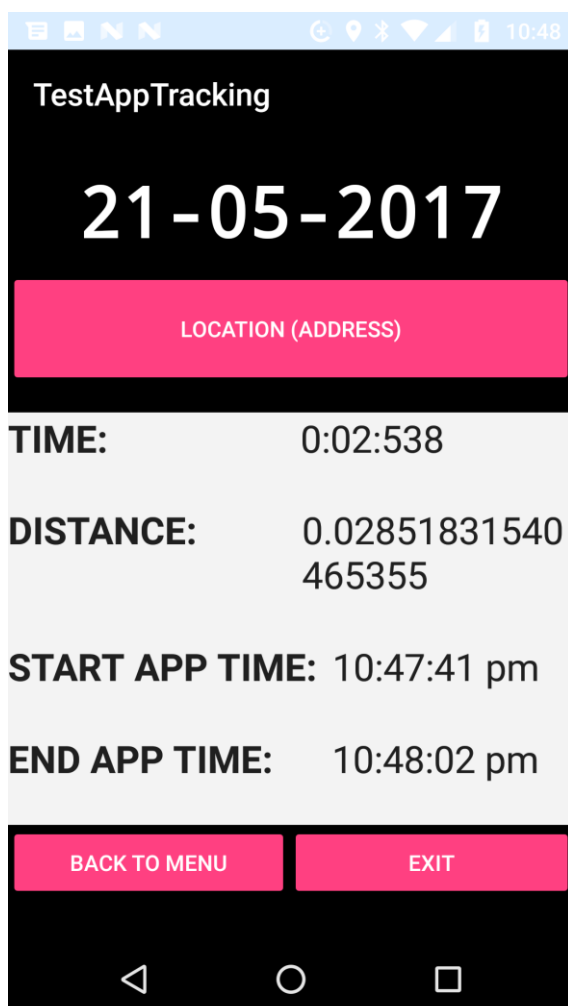
Toast will be displayed up that you have entered the address.

The compass and location marker are both able to use.

The zoom in and out are enable.



End Activity



When you click the end button from Start Activity, the layout will be looked like this.

With a current date at top layout.

Location when you can see where you are at now.

Time and distance are recorded unless you lost it after attend to other activities.

App time using will be recorded by when you start the start activity and until you click end button.

(NOTE: Distance will be calculated by a mathematic method so it will be vague with a bit error because the position of latitude/longitude are still "locating" even when you stay still)