Basic Instructions:

1. In every file submitted you MUST place the following comments:
   a. Assignment #.
   b. File Name.
   c. Full name of all students in your group.
2. Each student should submit only one assignment. This is a special in class assignment that will be an individual effort and will count as one of the homework assignments.
3. Please download the support files provided with this assignment and use them when implementing your project.
4. Export your Android project as follows:
   a. From eclipse, choose *"Export…"* from the File menu.
   b. From the Export window, choose *General* then *File System*. Click *Next*.
   c. Make sure that your Android project for this assignment is selected. Make sure that all of its subfolders are also selected.
   d. Choose the location you want to save the exported project directory to. For example, your *Desktop* or *Documents* folder.
   e. When exporting make sure you select *Create directory structure for files*.
   f. Click Finish, and then go to the directory you exported the project to. Make sure the exported directory contains all necessary files, such as the .java and resource files.
5. Submission details:
   a. When you submit the assignment, compress your exported Android project into a single zip file. The format of compressed file name is InClassAssignment#.zip
   b. You should submit the assignment through Moodle: Submit the zip file.
6. **Failure to follow the above instructions will result in point deductions.**

In Class Assignment 7 (100 Points)

Important App Requirements:
Points will be deducted if your application does not follow the below requirements:
1. The required Android Virtual Device (AVD) should have **minimum SDK version set to 14 and target SDK at least 17**. The app should display correctly on 3.2" QVGA (ADP2) (320x480: mdpi). Your assignment will not be graded if it does not meet these requirements, and you will not be granted any points on your submission.
2. You will have to install the google play services on the GenyMotion virtual device by following the steps indicated in the video:
    a. YouTube Video : Installing Google Apps on GenyMotion (http://youtu.be/iCRNqCXGNK0)

In this assignment you will implement a simple location tracking application. The application tracks the user's current location using the device's GPS and draws the tracked user's path on a Google map using polylines.
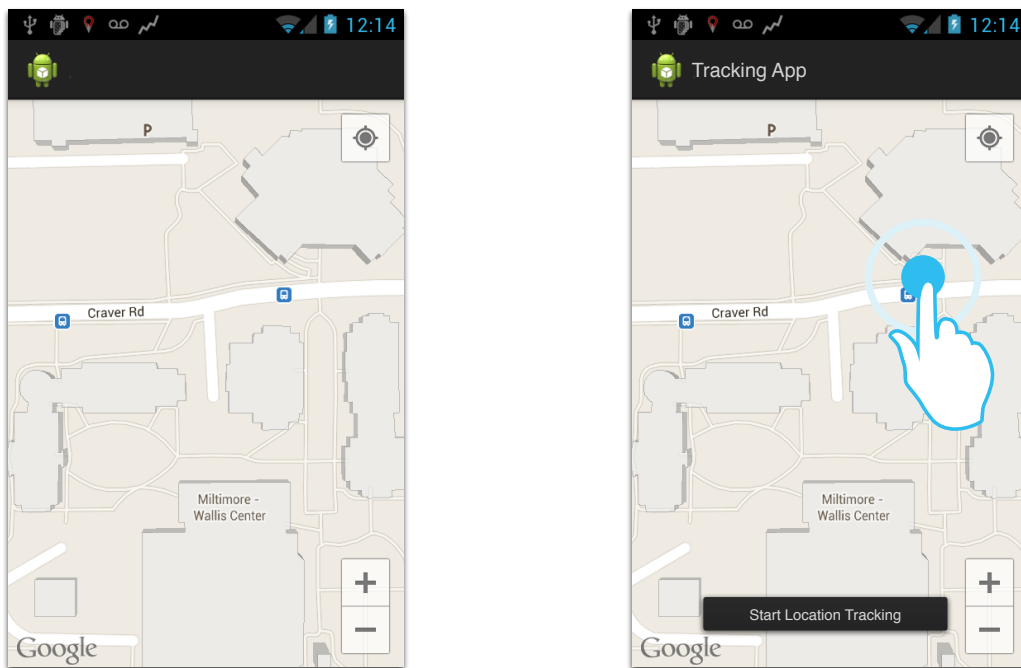
   (a) Displaying empty map   (b) Location tracking started using long touch

Figure 1, Main Activity

MainActivity: This app is composed of a single activity. This activity should display a Google Map Fragment. The implementation requirements include:
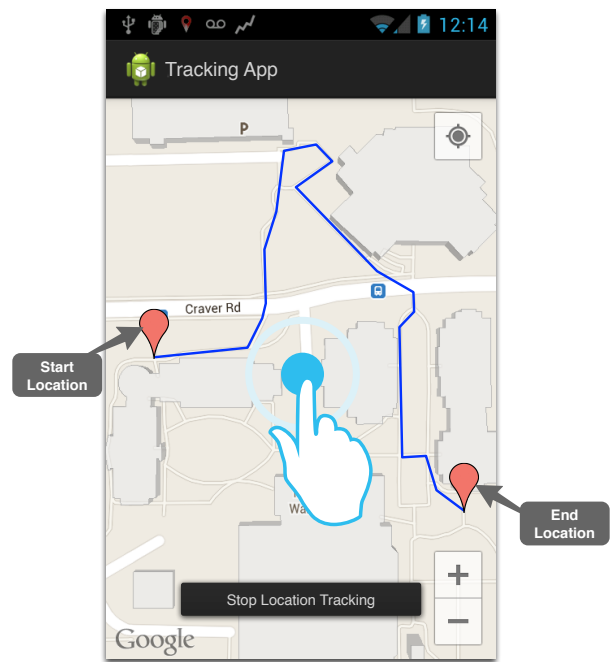1. A location manager should be used to retrieve your current location, through activating the location provider (GPS). Make sure to configure the location listener's minimum distance and time appropriately.
2. Location tracking includes the logic required to enable the location provider and listener, it also includes the logic required to draw the tracked locations on the Google

map. The location tracking is initially turned off when the app starts. Upon a long touch the location tracking should be started, a toast message should be shown to indicate that the tracking has started, see Figure 1(b). Finally if the user long touches the map while tracking this should end the location tracking, a toast message should be started to indicate that the tracking has stopped.

3. A marker should be used to display the start and end locations on the Google map.
4. Using PolyLine display on the map the path taken so far by the user. The path should be updated periodically when the user's location changes. For more information about PolyLine: https://developers.google.com/maps/documentation/android/shapes
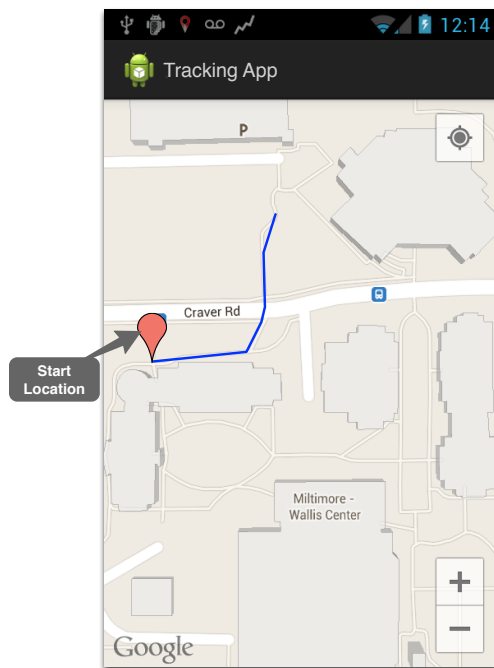
(a) Start marker and polyline tracking location   (b) Location tracking stopped using long touch

Figure 2, Main Activity