Mobile App Development

In-Class Assessment 9 (2 Hours)

Basic Instructions:

1. This is an In Class Assessment, which counts for 10% of the total course grade.
2. This assessment is an individual effort. Each student is responsible for her/his own assessment and its submission.
3. Once you have picked up the assessment, you may not discuss it in any way with anyone until the assessment period is over.
4. During the assessment, you are allowed to use the course videos, slides, and your code from previous home works and in class assignments. You can use the internet to search for answers. You are NOT allowed to use code provided by other students or solicit help from other online persons.
5. Answer all the assessment parts, all the parts are required.
6. During the assessment the teaching assistants and Instructors will pass by each student and ask them to demonstrate their application. Your interaction with the teaching assistants and instructors will be taken into consideration when grading your assessment submission.
7. Please download the support files provided with the assessment and use them when implementing your project.
8. Your assignment will be graded for functional requirements and efficiency of your submitted solution. You will loose points if your code is not efficient, does unnecessary processing or blocks the UI thread.
9. Create a zip file which includes all the project folder, any required libraries, and your presentation material. Submit the exported file using the provided canvas submission link.
10. **Do not try to use any Social Messenger apps, Emails, Or Cloud File Storage services in this exam.**
11. **Failure to follow the above instructions will result in point deductions.**
12. **Any violation of the rules regarding consultation with others will not be tolerated and will result disciplinary action and failing the course.**

In-Class Assessment 9 (100 Points)

In this assignment you will interface Google Maps into your app, and include poly lines and markers in the app. This is a single Activity application.

Part 1: (60 Points)

1. Goto https://console.cloud.google.com/ to create a new project that has Google Maps SDK enabled.
2. Integrate the Google Maps SDK in your project by following the steps posted on : https://developers.google.com/maps/documentation/android-sdk/config
3. Add a map to the activity layout and follow the steps in for adding the map to the layout xml file and the activity integration: https://developers.google.com/maps/documentation/android-sdk/map-with-marker

Part 2: (40 Points)

After the map is successfully loaded perform the following tasks:

1. Use the DataServices.getPath() method to retrieve the list of LatLng objects that represent the path points.
2. The retrieved trip points should be plotted on the Google Map using “Polyline” shape https://developers.google.com/maps/documentation/android-sdk/polygon-tutorial
3. The start and end points of the trip should be indicated with markers https://developers.google.com/maps/documentation/android-sdk/map-with-marker
4. The map should be auto zoomed to include all the trip points in the map’s bounding box.
   - 4.1. For zooming: https://developers.google.com/android/reference/com/google/android/gms/maps/CameraUpdateFactory
   - 4.2. LatLngBounds: https://developers.google.com/android/reference/com/google/android/gms/maps/model/LatLngBounds

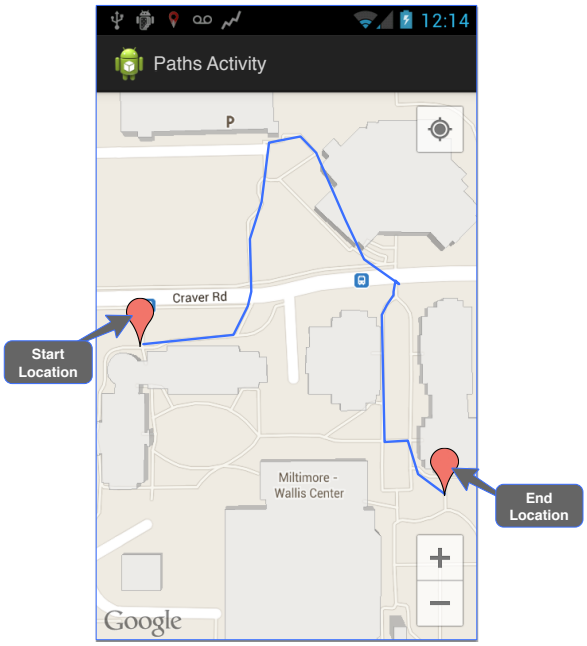

Figure 1, App Wireframe

Section:	
Student Name:	
Student ID:	

Part #	Features	Total	Grade	Comments
P1	Successfully insert a new Drink item in the database using the Rooms Library.	60		
P2	Displays the poly line correctly	20		
P2	Displays the markers for start and end correctly	10		
P2	Uses the bounding box correctly and zooms and pans to enclose the poly line	10		
Total		**100**		

Table 1: Grading Key