**Lab Assignment #5**

Purpose: The purpose of this lab assignment is to:

1. Develop Android applications with Location Service and Map-based activities

References: Textbook, ppt slides and Android tutorials (<https://developer.android.com/training/location>, https://developers.google.com/maps/documentation/android-sdk/start). This material provides the necessary information that you need to complete the exercises.

**Exercise 1**

Write an Android app that allows a visitor to locate various landmarks in the city of Toronto. Your interface should display a list of available landmarks and their address. The application should display the **map and satellite map** of the landmark whenever user selects the name in the list.

Make sure to classify landmarks according to their **type**. For example: *old building* (like Casa Loma, etc.), *museums*, *stadiums*, *attractions* (CN Tower), etc. The first activity shows a list of different landmark types. Other activities show the **list** of landmarks belonging to the selected type. When user selects a landmark, another activity shows the map with a **marker** pointing to the selected landmark.

Provide a friendly and nice UI. Use RecyclerView controls for displaying the list of landmarks types and landmarks. Use styles to create nice displays of lists.

(10 marks)

**Evaluation:**

|  |  |
| --- | --- |
| **Functionalities**:   * Correct implementation of UI (use of RecyclerView, etc.) * Correct implementation of maps * Correct implementation of markers   Proper naming of activities, variables, and methods. Provide comments.  Provide explanation when asked during the demonstration of the app. | 30%  30%  15% |
| **UI friendliness** (proper layout, controls, styles, themes, images) | 15% |
| **Declaring resources** in proper resource files | 5% |
| **Innovative features** | 5% (for example using  [https://developers.google.com/maps/documentation/javascript/places API](https://maps.googleapis.com/maps/api/place/) or https://developers.google.com/location-context/geofencing) |
| **Total** | **100%** |

You must name your Android Studio project according to the following rule:

**yourfullname\_COMP304Labnumber\_Exercisenumber**.

Example: **johnsmith\_COMP304Lab5\_Ex1**

**Submission rules:**

Submit your projects as **zip files** that are named according to the following rule:

**yourfullname\_COMP304Labnumber\_Exercisenumber.zip**

Example: **johnsmith\_COMP304Lab5\_Ex1.zip**

**Use Android Studio Export to zip feature to zip your projects.**