ITIS/ITCS 4180/5180 Mobile Application Development
In Class Assignment 9

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 group should submit only one assignment. Only the group leader is supposed to submit the assignment on behalf of all the other group members.
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 9 (100 Points)

In this assignment you will use the Google Places API and the Google Maps API. The app is composed of 2 activities, namely **MainActivity**, and **MapActivity**.

Notes:
1. The recommended Android Virtual Device (AVD) should have minimum SDK version set to 11 and target SDK at least 17. The app should display correctly on 3.2" QVGA (ADP2) (320x480: mdpi).

API Description

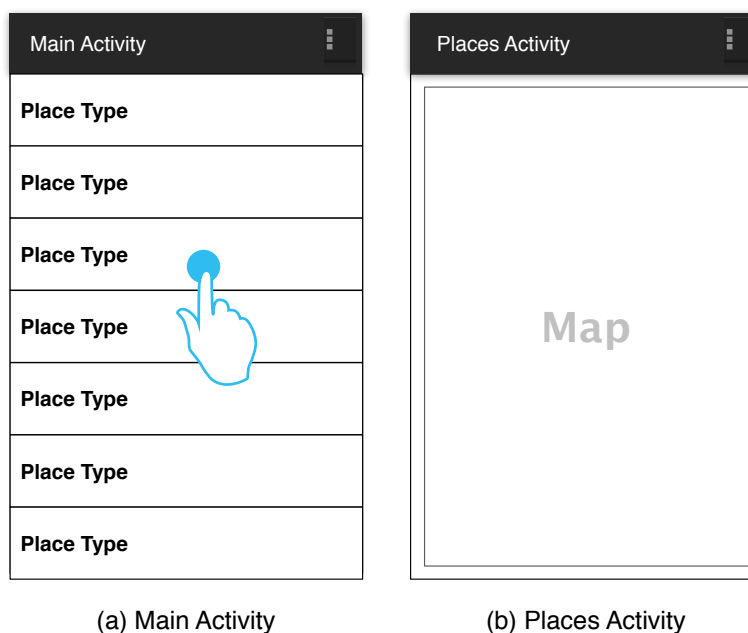• The API used in this assignment is the Google Places API. For more information visit: https://developers.google.com/places/documentation/search

(a) Main Activity   (b) Places Activity

Figure 1, Application User Interface

Part 1 (10 Points): News Activity
The interface should be created to match the user interface (UI) presented in Figure1(a). You will be using layout files, and strings.xml to create the user interface. The Main Activity is responsible for loading the list of supported place types listed in the Places API in https://developers.google.com/places/documentation/supported_types The implementation requirements include:
1. You can create a fixed array of some of the supported types and display them in the ListView and setup the required adapter.
2. Tapping on a list item for a specific place type item should setup the required intent to start the **Places Activity** and to pass it the selected place type information.

Part 3 (90 Points): PlacesActivity

This activity should receive the selected place type information from the Main Activity. The activity should retrieve your current location using a location provider, and should communicate with the Google Places API to retrieve the places within 200 meters from your current location that are in the place type selected. The retrieved places should be displayed on a Google Map embedded in the Places Activity. The implementation requirements include:

1. A location manager should be used to retrieve your current location, through activating the location provider (GPS).
2. AsyncTasks/Threads should be used when communicating and parsing the Google Places API.
3. The results retrieved from the Google Places API should be presented on a Google Map by using Markers. The marker title should be set to the name of the place.