Android Documentation

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Outline

1. Introduction

This document is a documentation of course project carried out in a Location Aware Mobile Application Development. The main idea behind the project is to display all the information of students in a map in a mobile. The main information that is being displayed is Student Name with his/ her Country of origin, Program, Enrolled year and Graduation year. The project has been implemented in android platform (tested with android version 4.0.4). By default all the students are displayed in the google map with markers (Orange marker for IMPIT and Blue marker for CBU). When user clicks on the marker short information of that student is displayed over the marker (Student Name, Program, and Start Year).

We have implemented five different search options by which user can retrieve the information. Search by Country, Program, Start Year, Graduation Year and Search by Name. The same features are implemented in two views, Map View and List View. In a map view all the information is displayed in a google map and in a list view all the information is displayed in list. By clicking the student information in a list view user can view that student and his/her information in google map. All the search options are available in both map view and list view except search by Name option which is only available in list view so far.
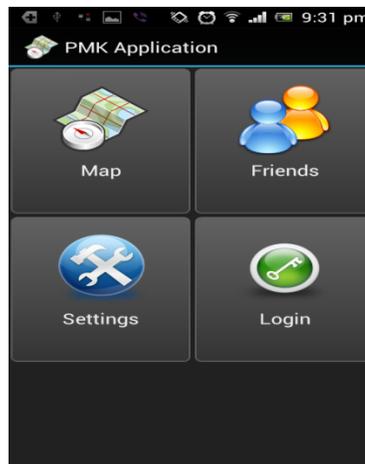
This application is a location-based application where distribution of students in university of Eastern Finland from all over the world can be viewed on the map and categorized according to the location.

2. Existing features

    2.1.   Main layout of the Application
    2.2.   View Student Information in Map
    2.3.   View Student Information in List
    2.4.   Student Search Option

3. System Interface

    3.1.   **Main Menu**

3.2. **Map View**

In a Map View we can see all the students and their information in a google map. Students with IMPIT program and CBU program are categorized by color of the marker in the map. IMPIT students are denoted by orange markers whereas CBU students are denoted by blue markers. We have student search option in the Map View where we can search the student according to Country of origin, Program Pursuing, Enrolled Year and Graduation Year. When user clicks on the marker in a map it displays short information of that student.

3.3. List View

In a List View we can see all the students and their information in list format. We have all the search options available that are in map view and also Search option by typing name of the student which is now not available in Map View.
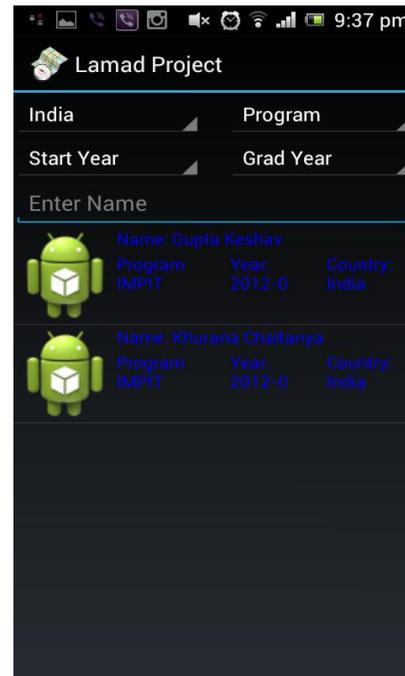
In this List View when user clicks on particular student then it displays the detail information of that stuent and also plot the student in a Map.

3.4. Search Options

We have five different search options which is very helpful in retriving information of students specially when the number of students are high.
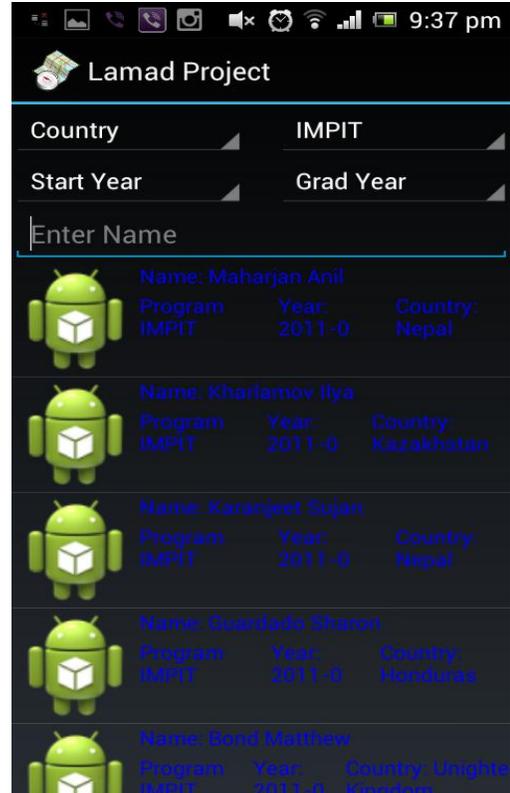
3.4.1. Search by Country

This search option narrows the search information by country of origin of students.
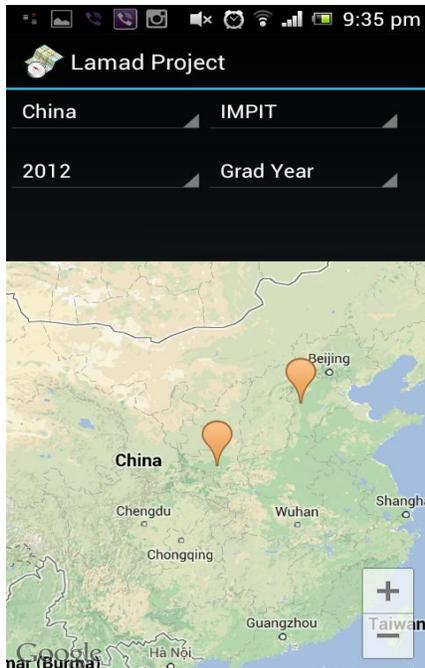
3.4.2. Search by Program

This search option narrows the search information by study program of students. Currently we have implemented two program IMPIT and CBU but other programs can be easily added in the future.
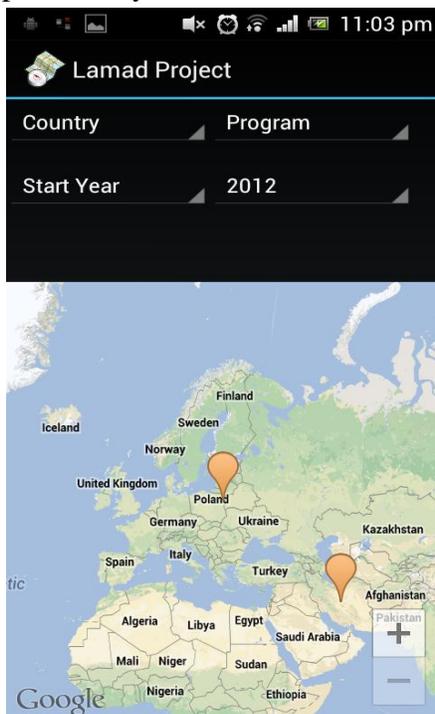

3.4.3. Search by Start Year

This search option narrows the search information by enrollment year of students. We can see how many students have been enrolled in the university in a particular year.
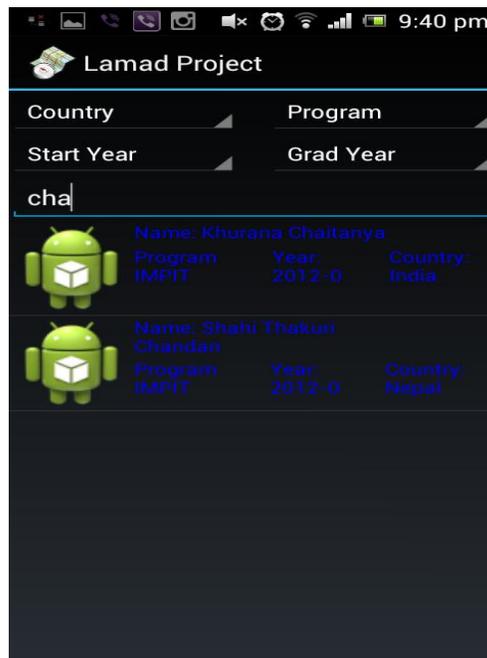
3.4.4. Search by Graduation Year

This search option narrows the search information by graduation year of students. We can see how many students have been graduated from the university in a particular year.

3.4.5. Search by Student Name

This search option narrows the search information by Name (Alphabet) typed in the text editor.

4. Future Work

The project that is completed so far is running well and fullfills all the requirement of the course project. However improvements can be done to this project which we could not do because of the time limit of the course. We have suggested the following improvements which can be done in this project.

- Interfaces for Setting and Login has already created but functionality is yet to be added.
- UI for connecting by Facebook account.
- Update students current location to server.
- Adding chat feature so that students can chat with each other in the app.
- Use clustering when students overlaps in a map.
- Synchrocizing the Map View and List View.
- Link student account with Mopsi
- Photo upload