**Prototype application specification**

V.0.2

17/11/2013

## 1. General description:

1. The application will show users location on a google map using a GPS location.
   1. The user will send his location to the server.
   2. The user will get all registers current users location from the server.
   3. Server will fetch users profile and connection from FaceBook.
2. The application is build from two main parts.

* Server - Runs on a PC
* Client - Runs on a mobile phone (Android or iOS) -First phase Android.

## 2. Server - Back end-

* database (mysql) holding 3 tables:
* profiles - id, name, password, facebook uid with authorization to look on friends and friends of friends
* location - profile id , current location , online
* FaceBook connection matrix between all registers users.
* Server receive the info from all current online users at background.
* Server send location of all users to all users.
* Server fetch facebook graph as a background process.

## 3. Client

* A login screen will pop up upon entering the application.
* The login will contain the following fields:
  + User name , password
  + Facebook authorization uid
  + Radio button for accepting the app conditions.
* Upon login the application will show a google map with an indication of the user location + all other current online registers users locations.+pictures.
* The user can zoom in/out and scroll down/up the map,

## 4. Development environments :

Eclipse

* Server :
  + Maven
  + JPA
  + Spring
  + REST

Github repository

separate modules for backend and frontend projects

sharing the same parent project

Both Client and Server side will use Spring framework. <http://spring.io/>

## 5. Miscellaneous requirements:

* Full source code provided. push to git repository.
* Ability to build the application from scratch at any time
* High level documentation.
* The client should be installed on Samsung galaxy S2/S3 and HTC One X+.
* The server should be able to run on any Windows 7 machine 64 and 32 bit.
* Both server and Client (apk) should be easy to install.

## 6. Additional details and flow:

1. There is a first-registration screen, in which the user:
   1. First fills-in username and password (which is kept in the system).
   2. Then fills-in his full name, hometown and age (--> **all details** are kept in a table, which grows with each new user).
   3. Agree to let the application access his Facebook profile and data.
2. The application takes from Facebook the information of all of his friends (names, or user names), as well as friends-of-friends (it's important for my database).
3. Then put all this into a single square matrix, the length of which is = (# of collected people from all users) [[in particular, it should recognise when someone that was collected before is also, say, a friend-of-a-friend of a new user, and not register him twice!). At the i-j place the matrix will have 1 if the i'th and j'th users are friends, and 0 if not. It means also that the system should have a number for each user (let's say simply by the order of registration). That's how it'll name him, tag him and access his info.
4. Then there should be a simple (even trivial) user interface. Which means at this point that there is a "log-in" screen, where the registered user can log-in with his username and password.
5. Right after logging, the system takes the user's GPS-read, and the user sees a map with some sign marking his own (and only his) position on it. (The mark can be anything, say, an X, for now.)
6. We should have the full information of all logged-in users at all times, on our server, where we can open the map at any time, and see the location of all users.
7. **General Architecture Diagram**

