



UNIVERSITY *of* LIMERICK

OLLSCOIL LUIMNIGH

CS4084 Mobile Application Development

Project Proposal

1. Main Idea:

Our app is a social media and network platform under the current software fashion. The app realises convenient and quick information exchange and communication based on the firebase, Google map and Android native APIs, as well as interactive activities based on geographical location. The APP mainly realises the instant information exchange with friends through the friends list, and the APP has the function of forum, and it also has built-in forum channels with characteristics. Users could share, spread and interact information in real time in the form of text, pictures and other multimedia, so as to enrich users' free life.

Users need to register an account to use the APP. After that, users could chat online with friends, upload posts on interested channels, or browse posts published by other people on this channel. Users could apply for official authentication, so they could have special tags to show their identity. Users could change their personal information on their own personal pages, and they could quickly browse their friends' moments and posts by visiting their personal pages. One of the features of the APP is that it supports the positioning function. The APP could show the distribution of friends. By sharing location information, users could find the location of their friends through map navigation, as an "online social software", our APP could fully meet people's immediate and on-demand social needs.

Here are some typical users and functions they may use:

1. Employees of a company: obtain the corresponding company information notice in real time through the official account of the company.
2. Young children: share happiness in life, record what happens in life, and communicate with friends at any time.
3. The elderly: keep abreast of the social situation.
4. Stars/Celebrities: share the daily life and performance information with fans through the personal account.

2. Use Case

Mike is a social-media celebrity.

(1) Goal: Mike wants to attend his friend's party.

Step1: Finds his friend in his friends list.

Step2: Checks the party details with his friends through the message.

Step3: His friend shares the location information to him.

Step4: Goes to the destination under the help of map navigation.

Step5: Checks in after attended the destination.

Step6: Take and post a new photo moment on the BBS.

Step7: Checks the number of views of his BBS homepage.

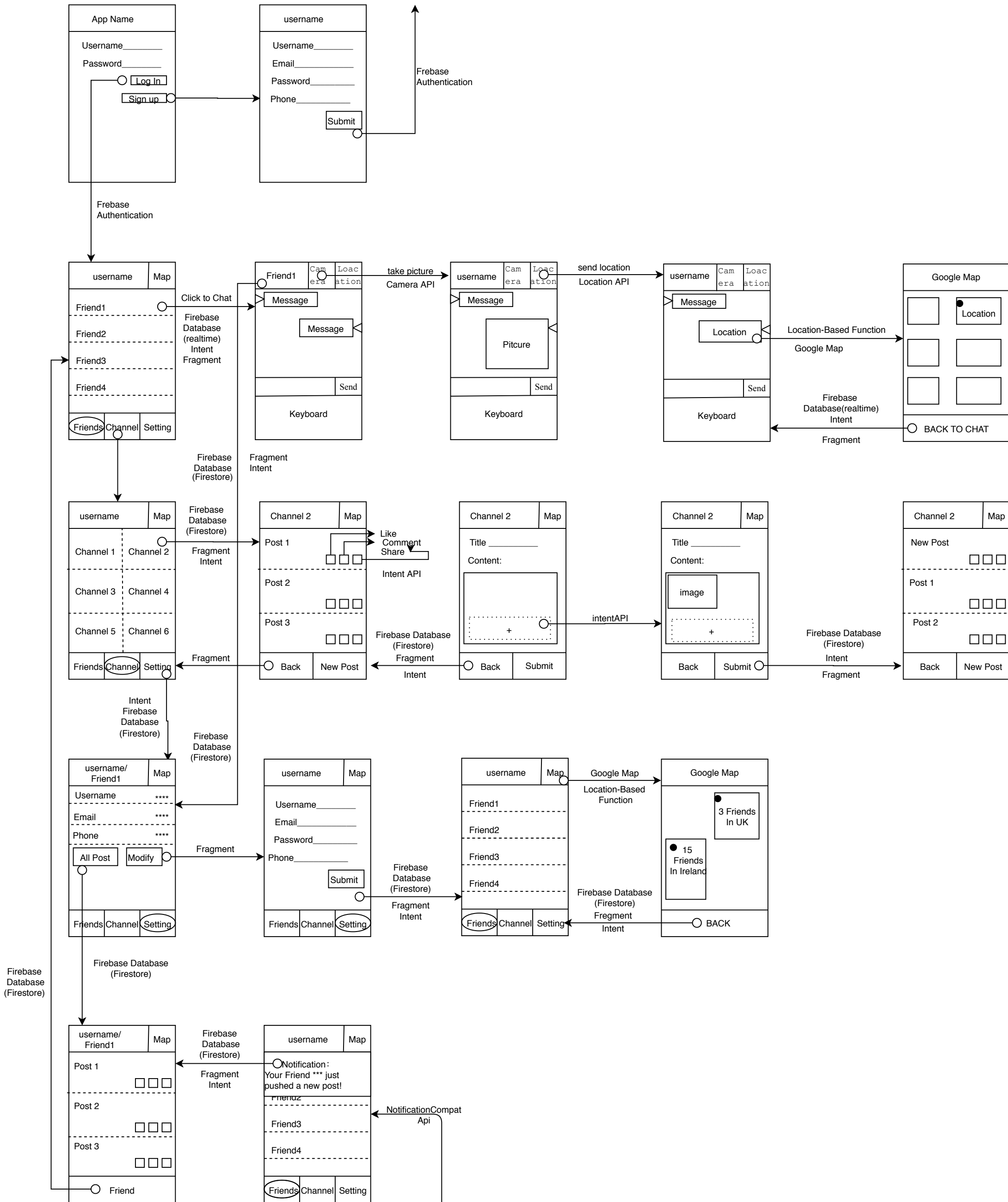
(2) Exceptional cases:

- GPS lost signal: unable to reach destination (reconnect GPS).
- Network interruption: message sending failure (reconnect network).
- Network interruption: photo upload failed (reconnect network).

(3) Precondition: Mike needs to download and log on this APP.

(4) Frequency of use: everyday(frequently).

(5) Drafted Screens (see next page).



3. Technology

- (1) Database: Firebase Database (Firestore)
 - `com.google.firebase.firestore;`
- (2) Authentication: Firebase
 - `com.firebase.ui.auth;`
 - `com.google.firebase.auth;`
- (3) Chat function: Firebase Database (Realtime)
 - `com.google.firebase:firebase-database:19.1.0;`
- (4) Location-based functions: Google Maps
 - `com.google.android.gms.maps;`
- (5) Photography: Camera & Media API
 - `android.hardware.camera2;`
 - `android.media.action;`
- (6) Position: Location API
 - `com.google.android.gms.location.sample.basiclocationsample;`
- (7) UI: View
 - `android.view.View;`
- (8) Notification: NotificationCompat API
 - `com.android.support:support-compat:28.0.0;`
- (9) Share (implement by Intent):
 - `android.content.Intent;`

4. Architecture

