Location Assistant

User Manual

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Table of Contents

Description 2

Registration 3

1. Login 3
2. Register 3

Location Map 6

Geofence 8

Location History 11

Location Information 12

Group Chat 13

Description

The app provides real time location data. It allows parents to monitor the children's location and activity with GPS tracking technology. The real-time locations of the family members within the same group are displayed on a map. When a monitored user reaches a certain location, such as school or home, the app provides automatic notifications to the guardian user. A built-in message system allows all users within the same group to send messages to each other without accessing SMS.

This user manual will give brief instructions on each screen of this application. The intended devices for this is for Android phone devices that are running Android 4.4 (KitKat) or higher.

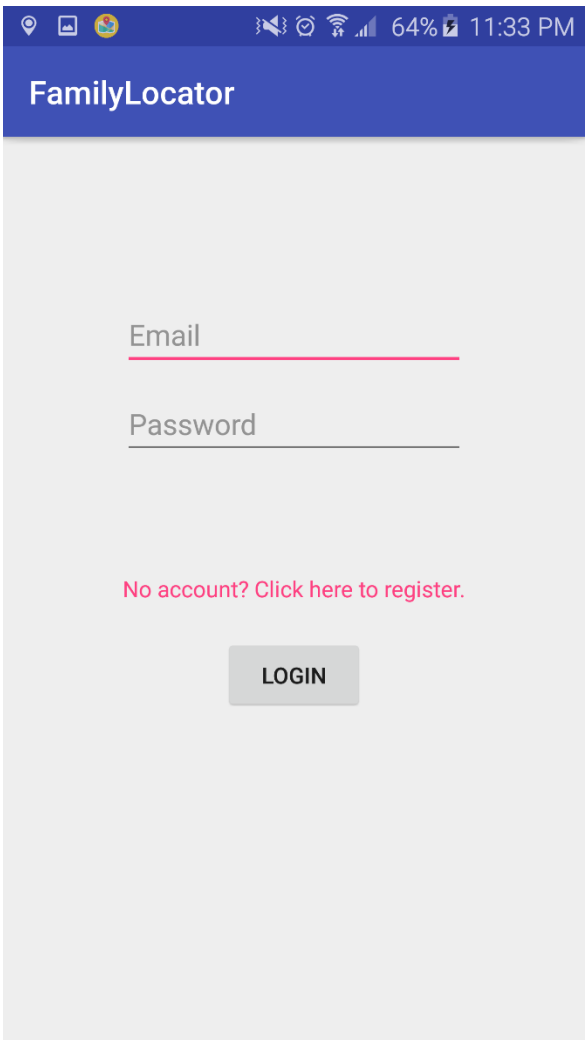
Registration

To launch the app, tap the application icon on the home screen of your Android device.

Note: This app requires your Android device to be connected to the Internet.

1. Login

The launch screen of the app is the login activity page. If the user already has a registered email and password, he/she can input these user credentials and tap **LOGIN** to login to the app. If the email and password do not match, the login is failed. And the user will see a Toast as "Login failed". If the email and password do match the information stored in the server, login is successful and the user will be directed to the map activity.

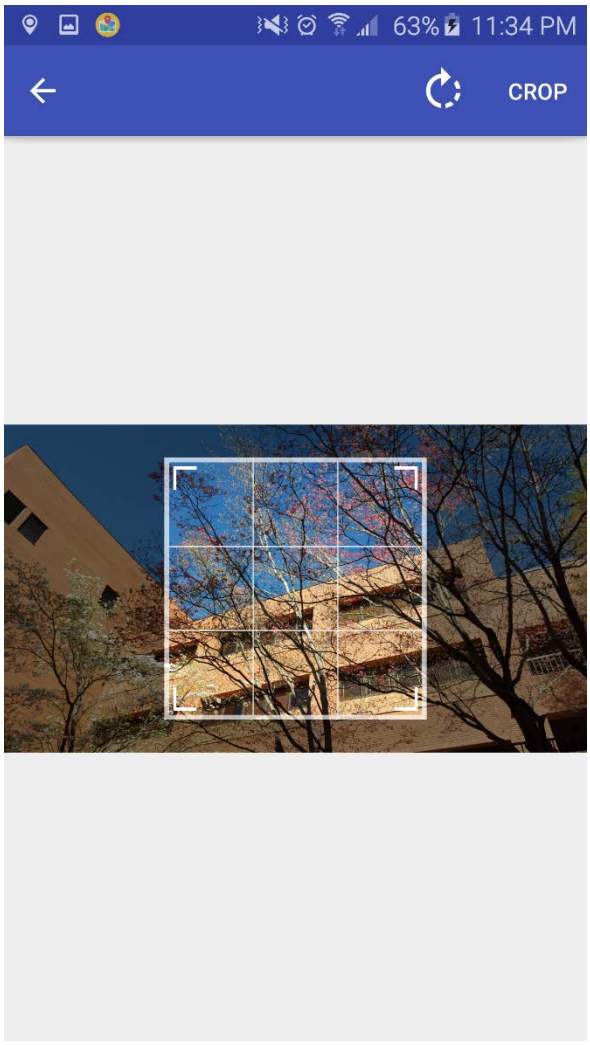


2. Register

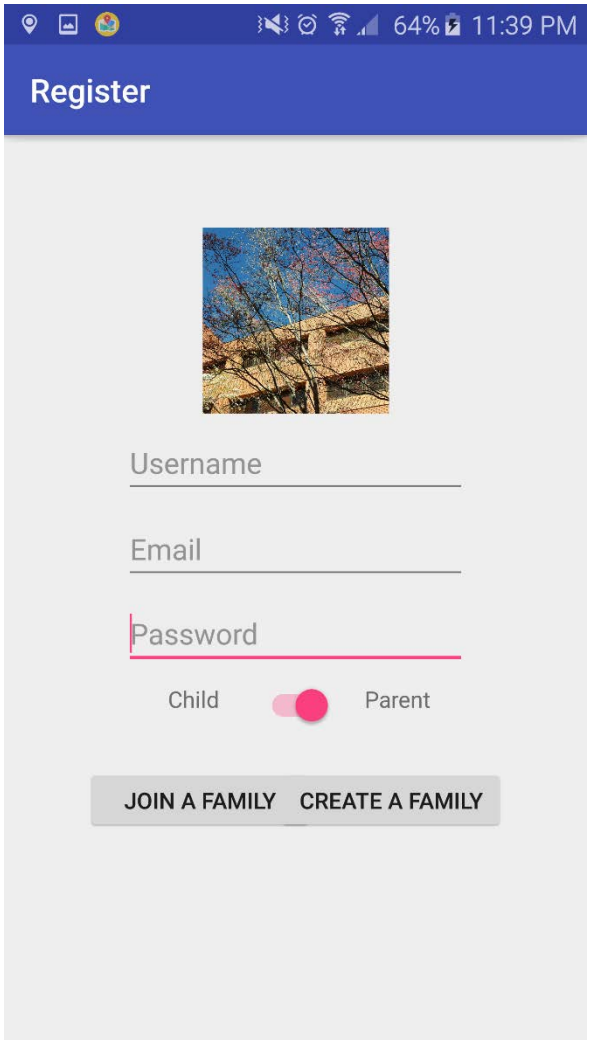
For any new user who doesn't have an account, he/she needs to register to use the app by tap "No account? Click here to register". The user is then directed to the register activity. The user needs to provide a profile photo by either take a new photo by camera or choose an existing picture on the phone. Tap the

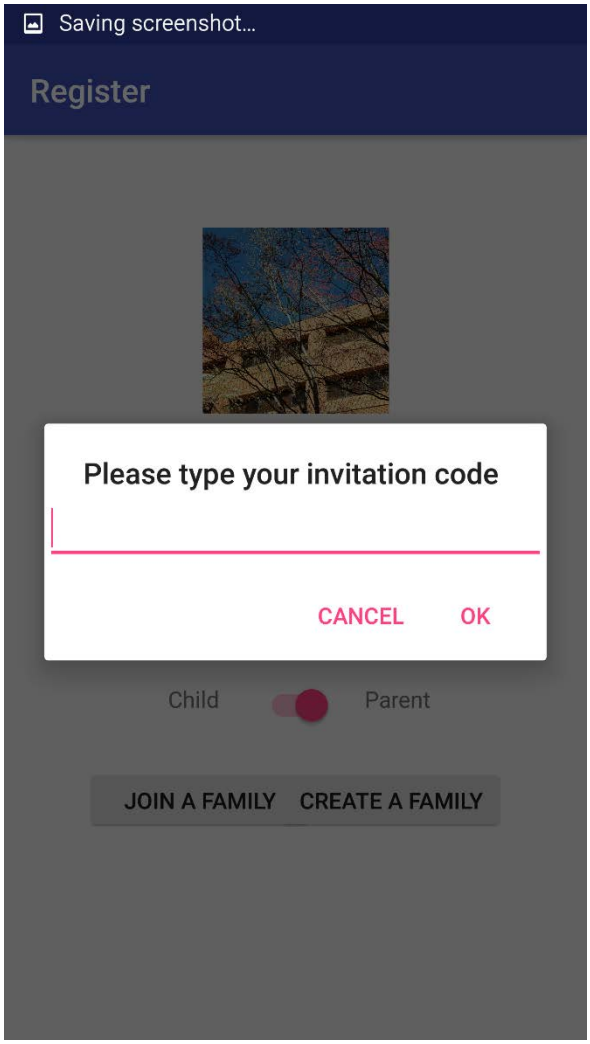
camera icon on the screen to select the source for the profile photo, and either tap “Camera” or other picture viewer such as “Photos”.

When a photo is obtained, drag over the screen to choose the correct size for your profile photo and click “CROP” on the top-right corner to save the image and go back to the register activity. The chosen photo will be stored for any future use, including displaying it on the map.



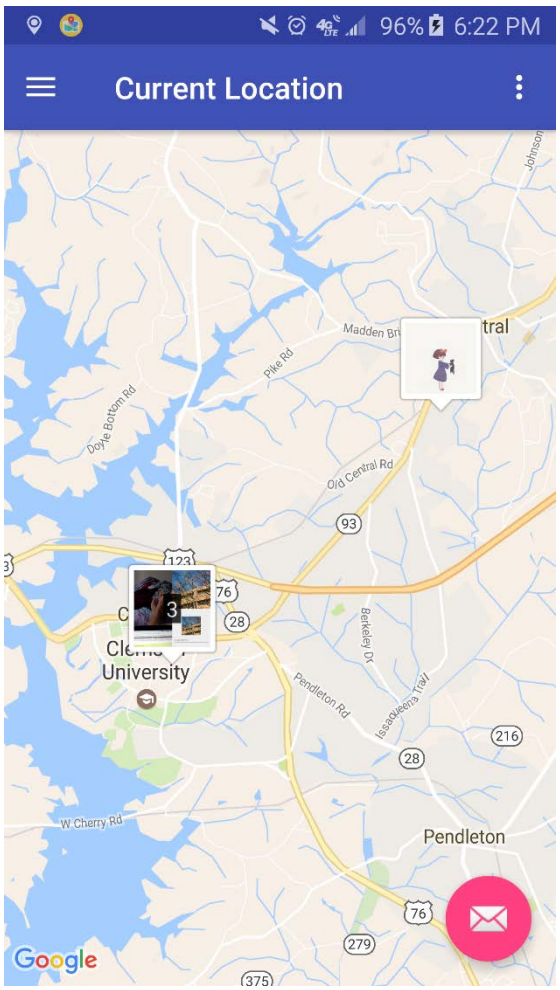
Enter your username, email and password to the text fields and choose to register as child or parent. Then the user needs to choose either “Join a Family” or “Create a Family” to complete registration. If he/she chooses “Join a Family”, a window is shown asking for the invitation code. When the correct invitation code is provided, the user will be directed to the map activity. If the user chooses “Create a Family”, he/she will be directed to the map activity directly and an invitation code is generated automatically for this new family group.

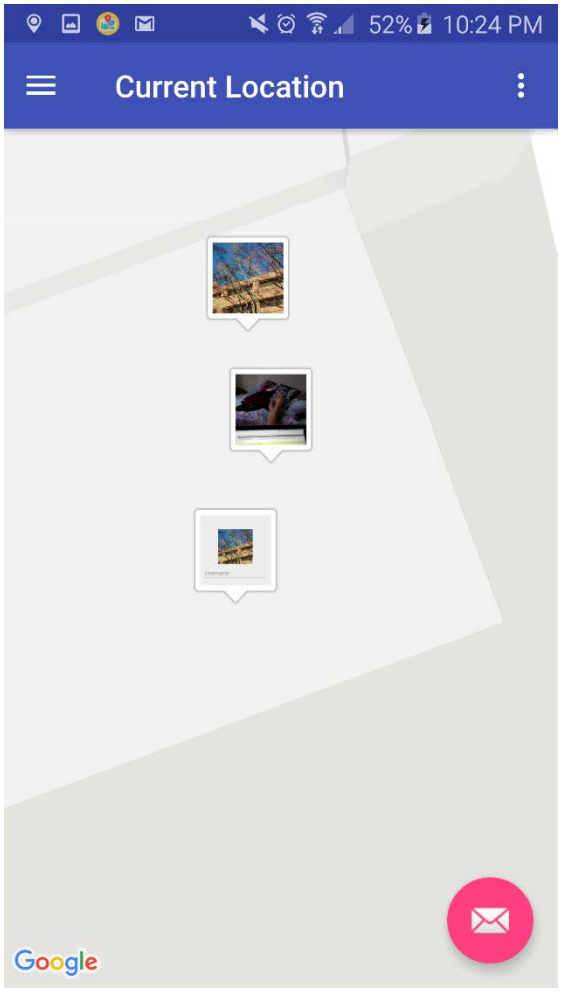

64% 11:39 PM
Register
Username
Email
Password
Child
Parent
JOIN A FAMILY
CREATE A FAMILY


Saving screenshot...
Register
Please type your invitation code
CANCEL
OK
Child
Parent
JOIN A FAMILY
CREATE A FAMILY

Location Map

The location map activity displays all registered users' current location on the map. Each user has a unique profile photo setting as the marker on the map. When the markers get close to each other during zooming out, they group together as a cluster. The cluster marker is composed with its user's profile photos. The number of users inside one cluster is displayed on the marker. While zooming in to the map, the users' markers become far away and they separate into isolated ones eventually.



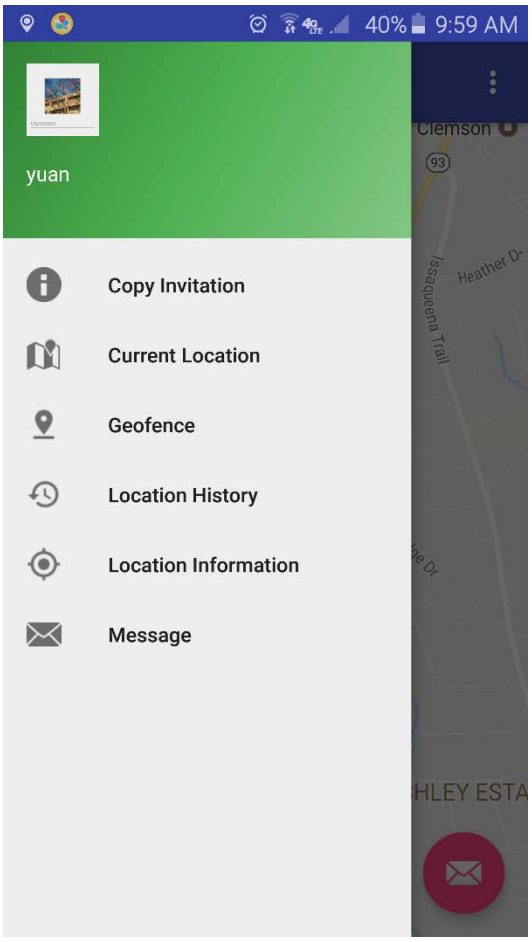


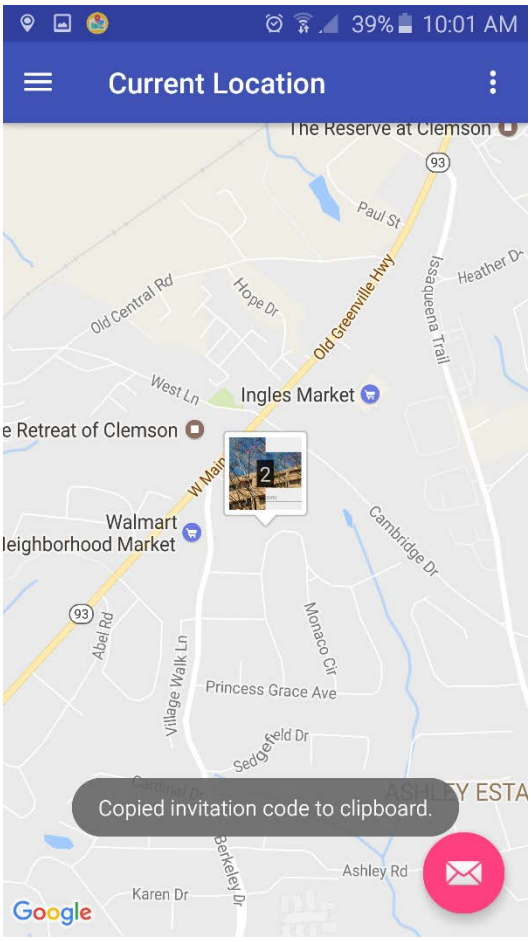
Currently, the map is updated every 10 seconds. Each active user sends his/her current location information to the external database every 10 seconds as well.

Tap the top-left corner of the app to open a drawer window, which displays user information and navigation to other functional activities. The user's profile photo, username, emails are displayed on top of the drawer.

Tap "Copy Invitation" to copy the invitation code of current family group to clip board, which can be sent to other new users by text messages, emails, etc. Tap "Current Location" to display the current location map. Tap "Geofence" to go the geofence activity which allows the user to set up and delete a geofence.

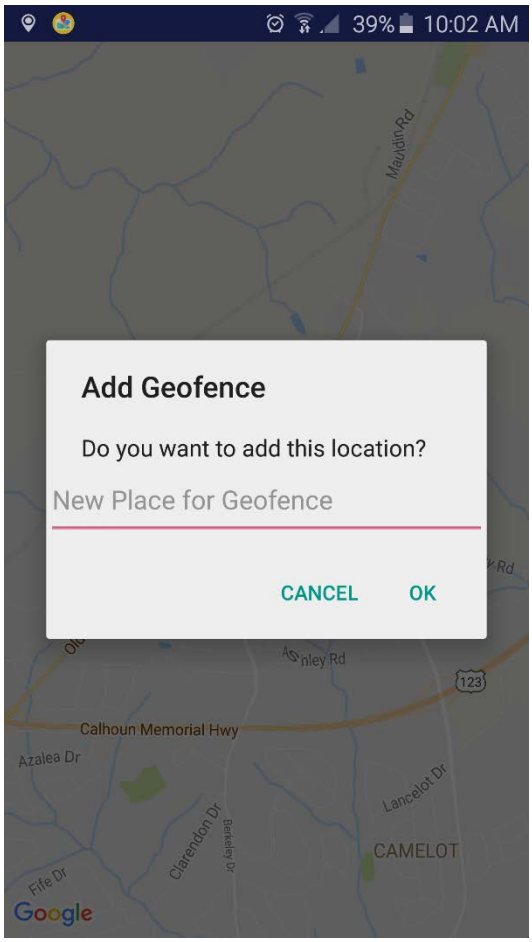
When the user enter or exit the geofence, all users in the family group will receive push notification from GCM. By tapping “Location History”, the user will be directed to the location history activity, which displays the location history for the current user. By tapping “Location Information”, the user will be directed to the location information activity. Tapping “Message” will go to the message system which allows users to send messages to each other directly within the app.



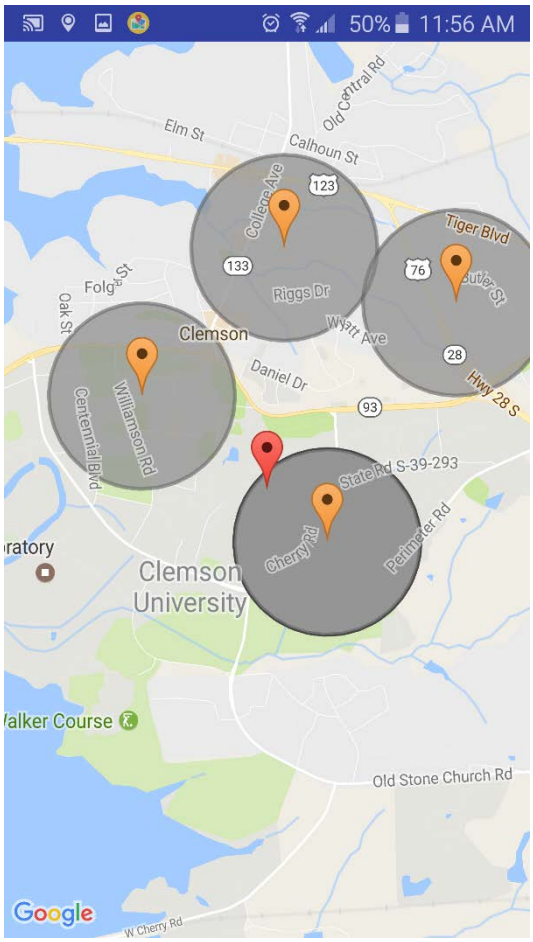


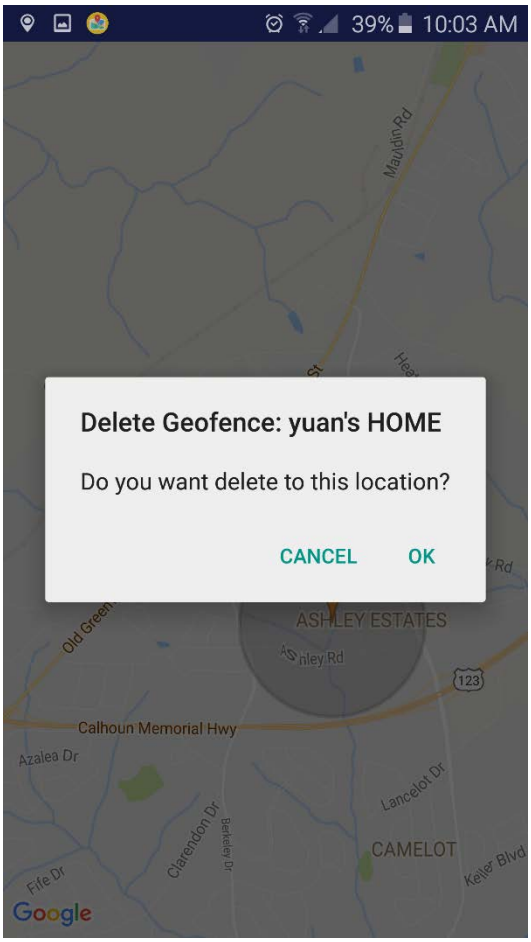
Geofence

Geofencing combines awareness of the user's current location with awareness of the user's proximity to locations that may be of interest. To mark a location of interest, the user specifies its latitude and longitude. To adjust the proximity for the location, the user adds a radius. The latitude, longitude, and radius define a geofence, creating a circular area, or fence, around the location of interest. The red marker specifies the current location, which is updated regularly. Tap on the map to set up the geofence. Each geofence has a name. The orange marker is the geofence marker. The gray circle is the geofence defined at the orange marker.

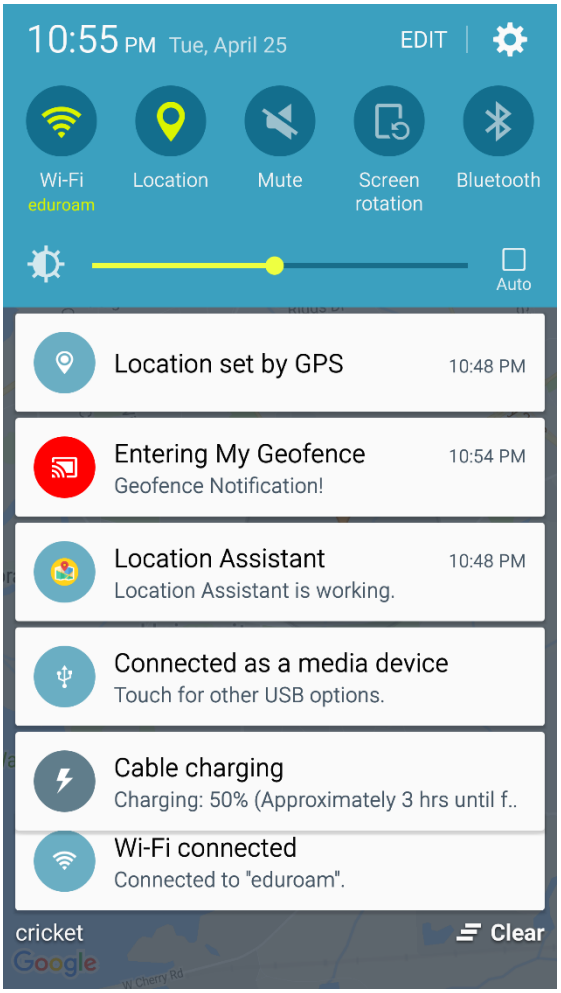


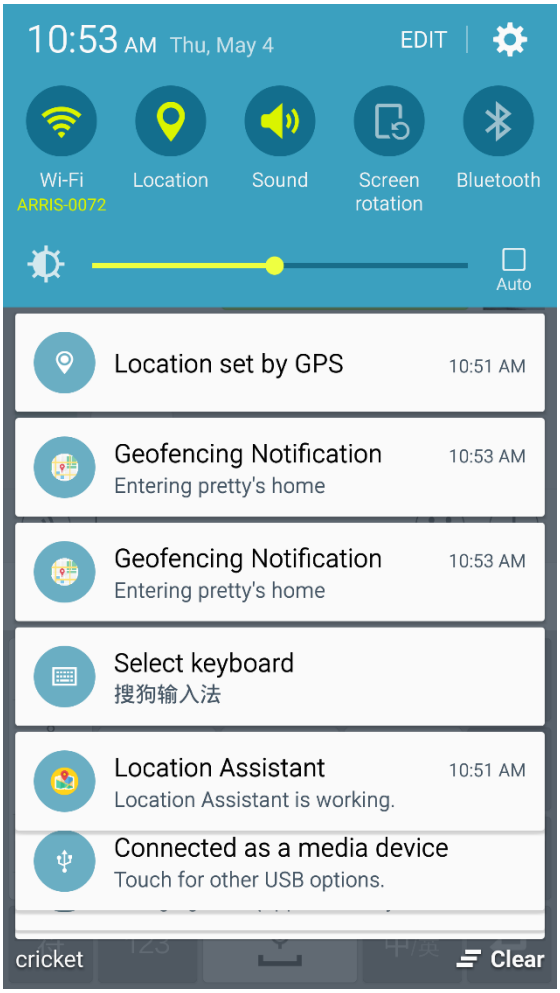
Multiple geofences can be add for the current user, for example, home, school, etc. Each geofence works separately. Tapping on the geofence marker will display the selected marker's name and allow the user to delete the selected geofence marker.





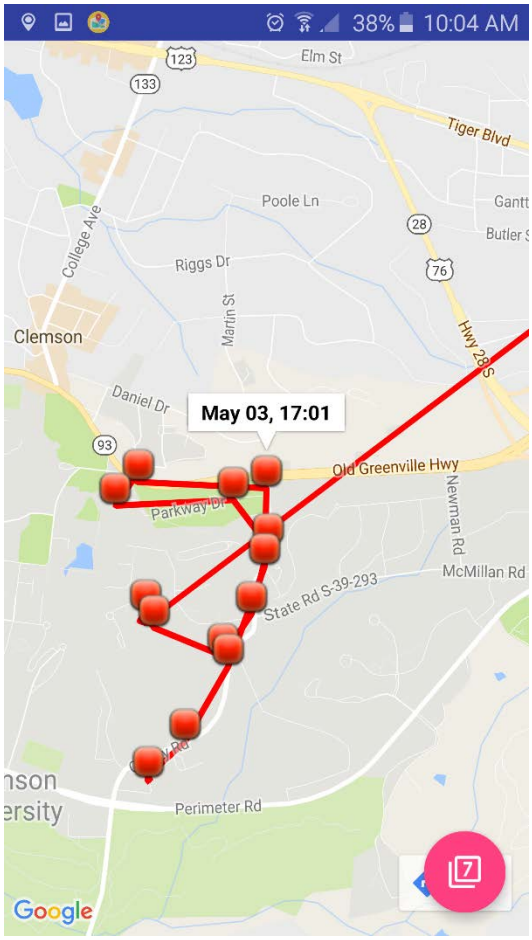
When the user enters or exits the geofence, the app detects the status change and send out notifications. For the current user, its notification is received as android notification and is displayed in the notification tray. All other users will receive the same notification from Google the Cloud Messaging service. The notification is displayed in the notification tray as well.

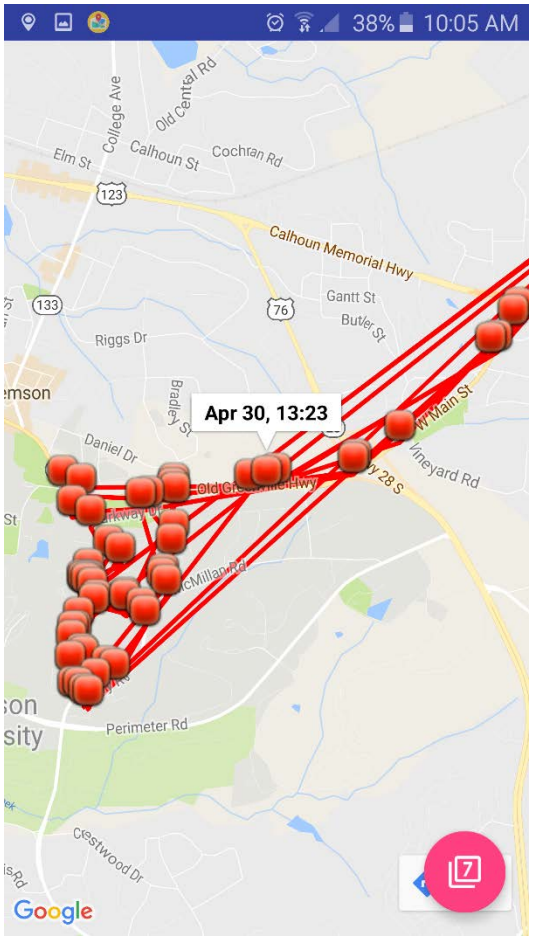




Location History

The location history activity displays the selected user's activity within last 24 hours and 7 days. Select the user from the main activity by tapping the user's profile marker. And then tap the user name to view the user's location history. The user's movement is displayed as a polyline. And any significant position change for that user is shown with a marker. Tap on one single mark shows the timestamp. Tapping on the "7" button in the corner changes the time span to 7 days, which displays the location history for the last 7 days.

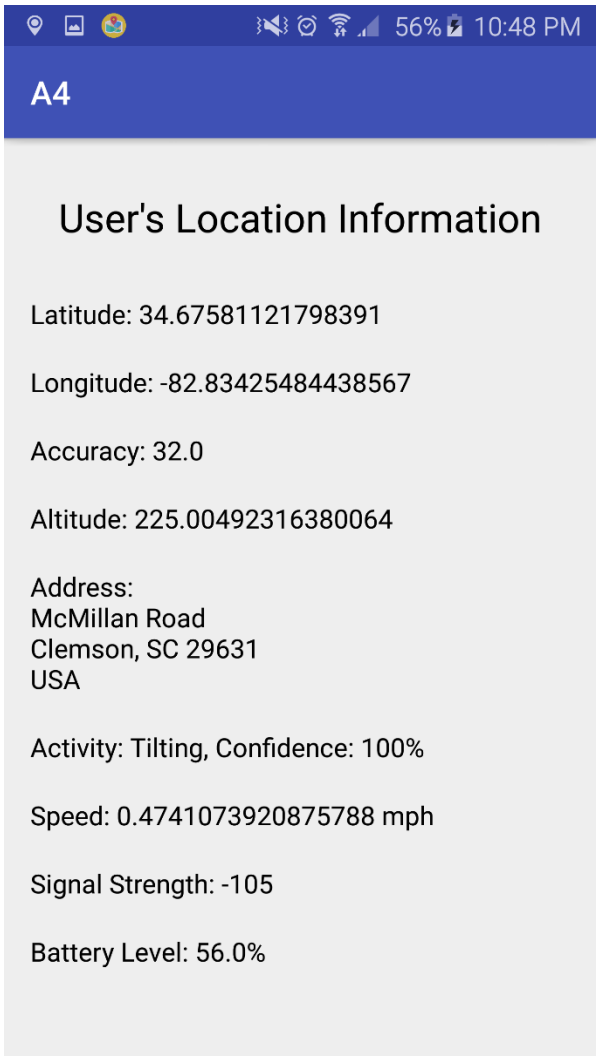




Location Information

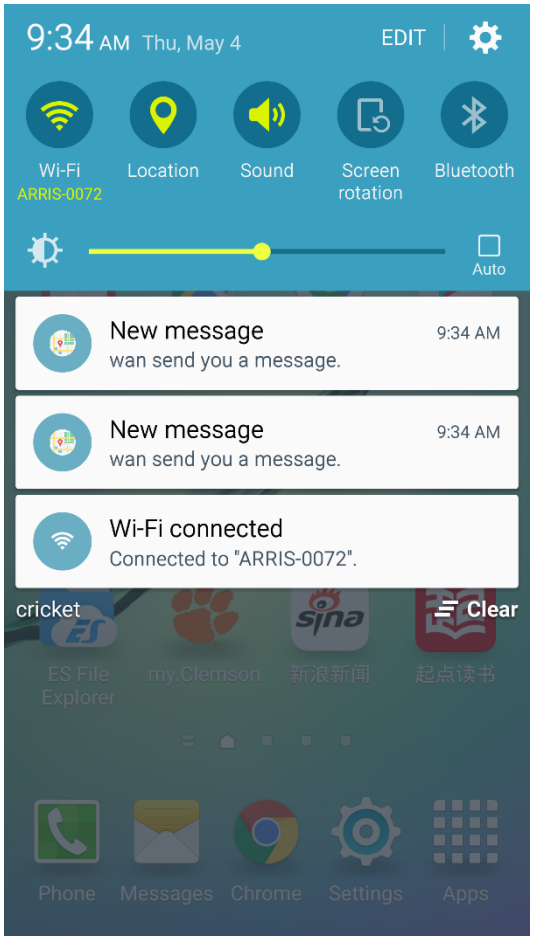
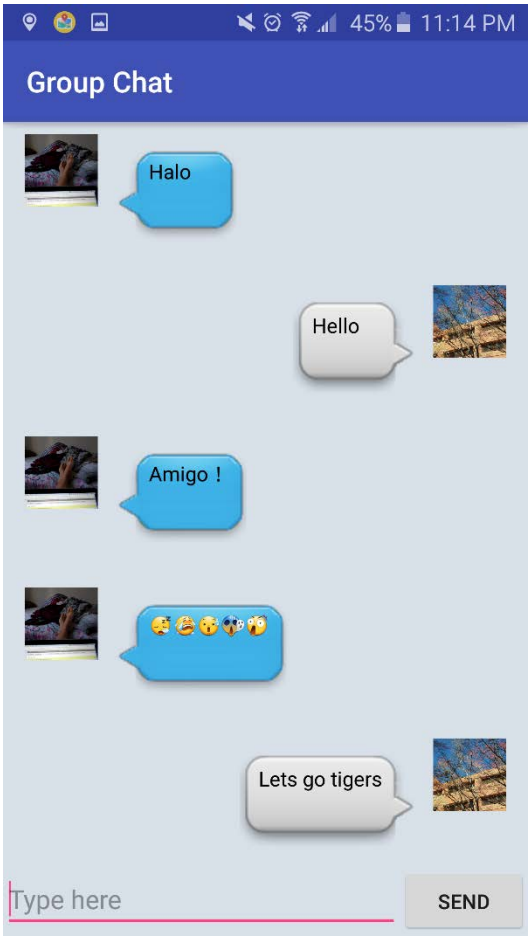
The location information activity displays user's real-time location information, which includes latitude, longitude, accuracy, altitude, the address of current location, detected activity, speed, cellphone's signal strength, and battery level.

The detected activity shows user's current activity with high confidence. Those activities include "Still", "Tilting", "On foot", "Walking", "Running", and "On vehicle", etc.



Group Chat

The group chat activity displays the group chat between the attended users.

When any user in the group sends a message to group chat system. There is a push notification generated from GCM and displayed in the notification tray. Tapping on the notification brings the current user to the group chat activity.

Each user is identified with his/her profile photo. The current user is displayed on the right of the screen. All other users are shown on the left side of the screen.