

ITMD 555 –Android Application Development

Final Project –Emergency Plus

BY

Sanjyoti Patil
CWID: A20332642

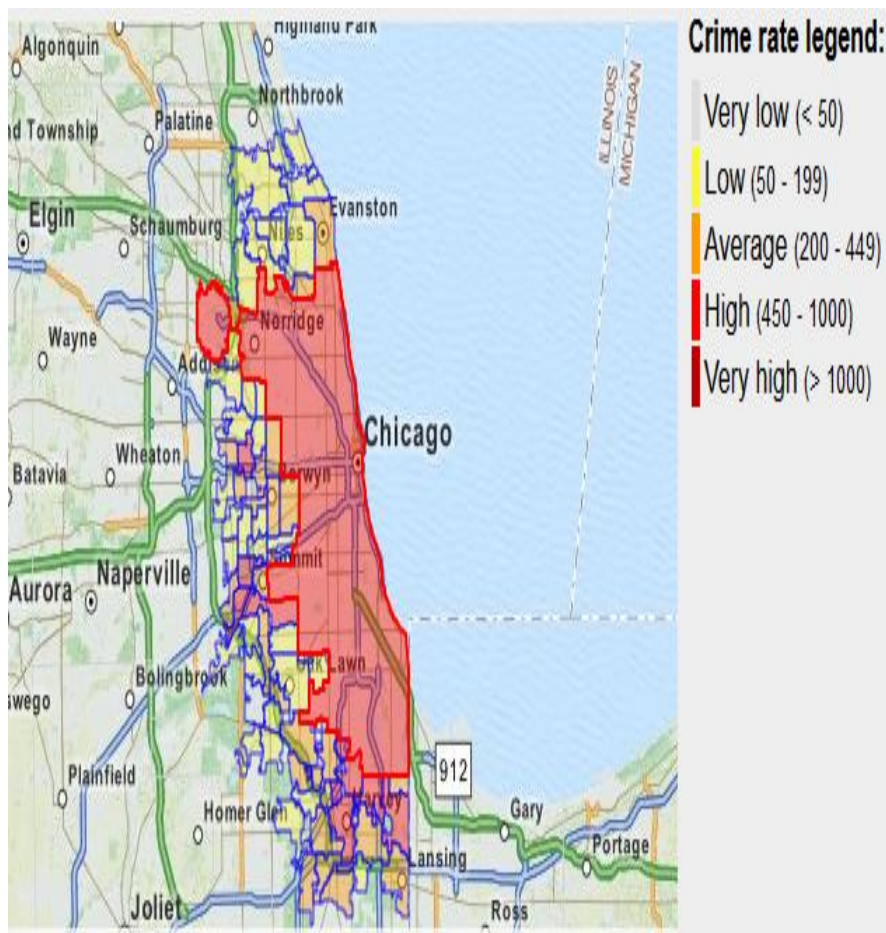
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Section A.

Objective of project

The following map shows the crime rate legend in the city of Chicago and its neighbourhood areas.



Based on our analysis of the map, it was inferred that,

- **Crime rates in Chicago and other cities are at their maximum these days**
- **It is important to stay connected in order to feel safe at times of emergency.**

Emergency Plus helps the user to stay connected at times of panic and helps them reach out to their near and dear ones without hassle.

Hence our motive, ***EmergencyPlus - Safer way to stay connected.***

Section B.

Features of EmergencyPlus:

These are some of the features that are built in the EmergencyPlus App.

- Deliver personal safety and security.
- Transform the mobile device to smart personal emergency phones.
- Place emergency calls at times of need.
- Transmit real time GPS location via SMS.
- Help user deal with the panic situation without stress with easier hardware controls.

Prototype created in proto.io: [EmergencyPlus - Prototype](#)

About EmergencyPlus:

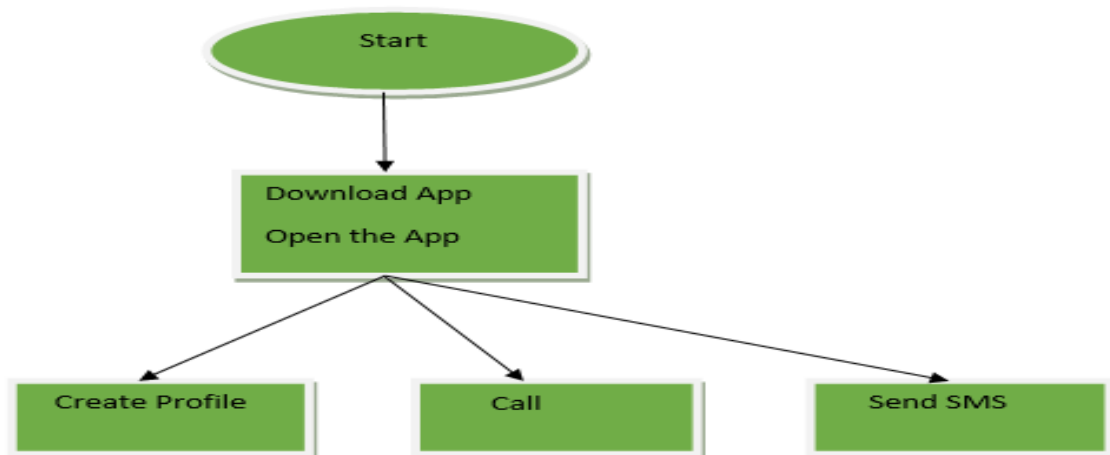
- In order to use this app's features, the user is expected to create a profile on the app. This includes the registration which requires the First and Last name of the user, his/her phone number and their emergency contact number.
- On saving these details, the user would be able to use all the features of the app.
- The Make emergency call feature which on clicked (Make Emergency call image), provides the user an option to place a call to the registered contact at one click.
- The Send Emergency SMS feature helps the user in sending his/her location to the registered contact via SMS.
- The App also holds some easier hardware controls for each feature in order to handle the panic situation without stress.
- These hardware controls include
 - Tap "Volume Up" button on the phone TWICE – for placing the call to the emergency contact directly after opening the app.
 - Tap "Volume Down" button ONCE – for sending the Location via SMS to the registered contact directly after opening the app.
 - These controls are provided keeping in mind adverse situations where the user may not be able to look through the menu options manually and go the desired feature.
- These instructions are explained in a pop up screen when the user opens the app on the smart phone.

Section C.

Technical Overview of the App:

Flow Chart for Project

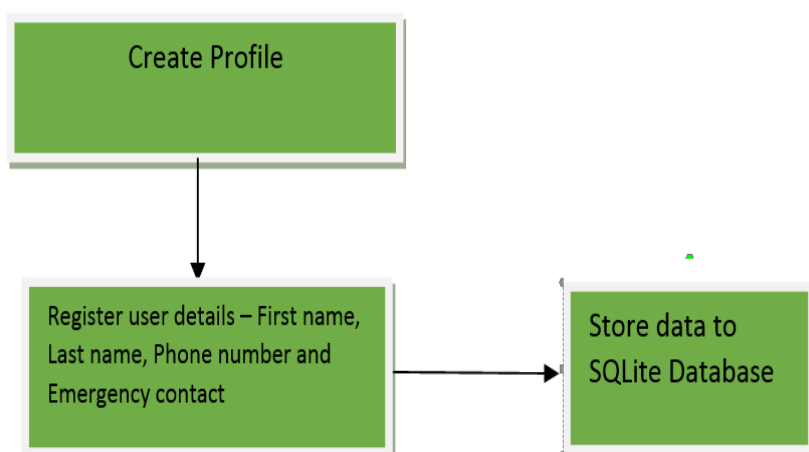
1. Main Flow



2. Splash Instruction Screen:

- On opening the app, there is a Splash screen implemented to provide the user the various instructions needed to use the Application. This helps as a manual which helps the user in understanding the purpose and features of the app.

3. Create Profile

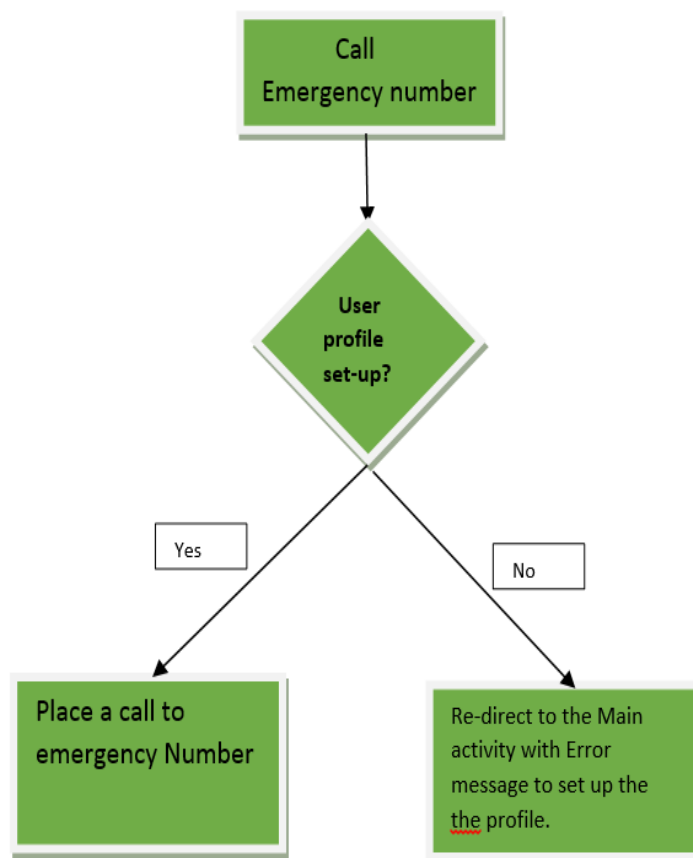


- During the first time, user is required to register in his profile which stores his details to a SQLite database.
- All the other functionality of the app needs this profile to be set up in order to be functioning. Hence this would be the first step the user does after downloading the app.

Edit Profile (After one-time registration)

- Once registered, there is only an option for editing his/her details.
- Hence, the database has no more than one record for the profile.

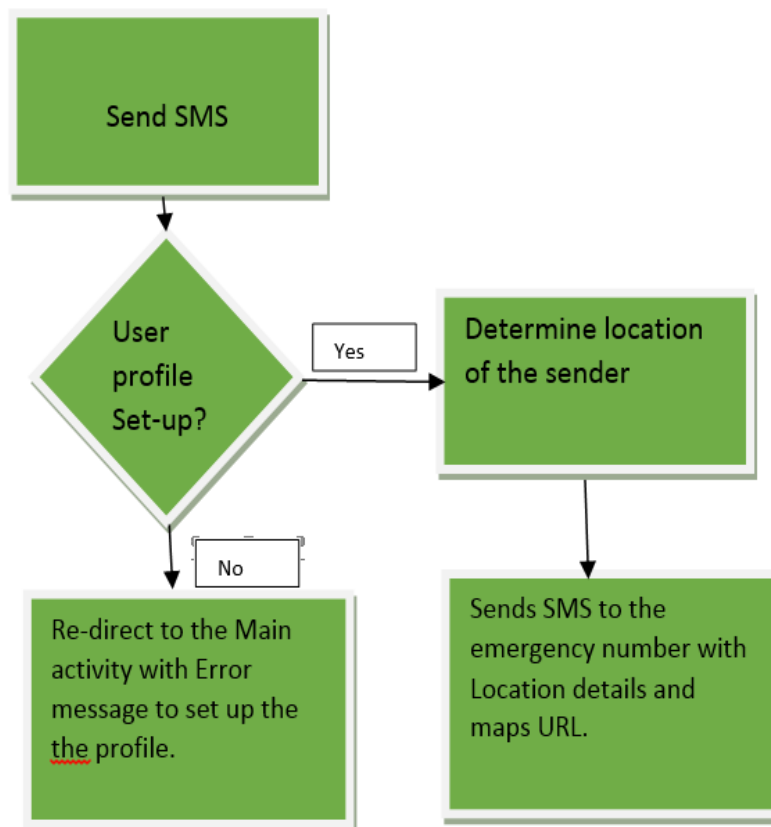
4. Emergency Call



- To place emergency call:
 - Click call image on home screen.
 - Place call to registered emergency contact.
 - In case of failure, dial a number and place call.

- The app uses the ACTION_CALL intent to place the call directly via Android. It gets the registered emergency contact from the SQLite database and dials through the carrier network.

5. Emergency SMS

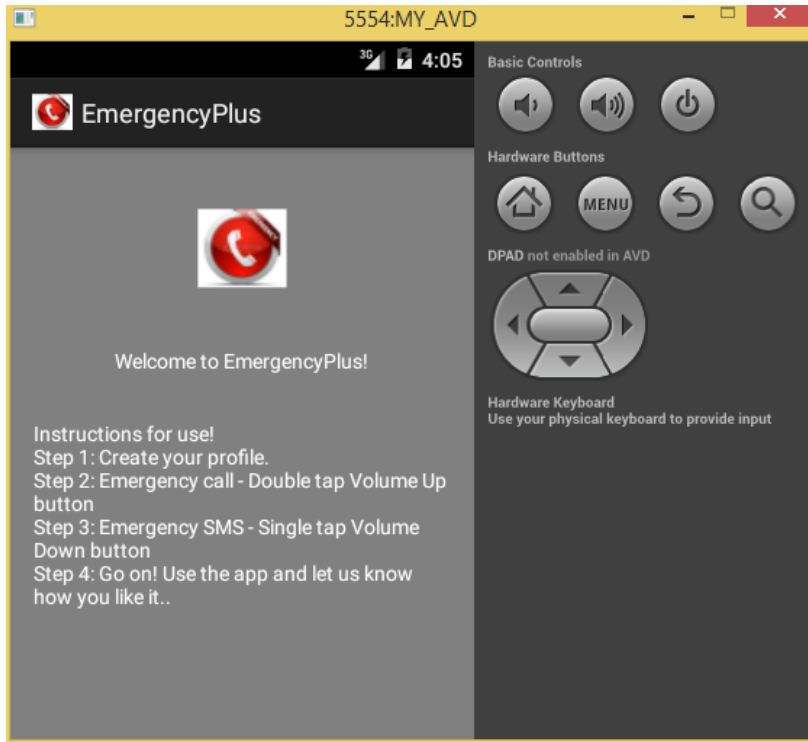


- To place emergency call:
 - Click SMS image on home screen.
 - Send Emergency SMS to registered emergency contact.
 - Text message with latest location update(LatLong data and MAPS URL for easier access to the location). This maps url when clicked upon opens the default maps app or browser google maps in the recipient's smart phone.
 - This location update is got by using the Android Location Manager via the GPS interface.
 - The app uses the SmsManager to send the SMS via Android.

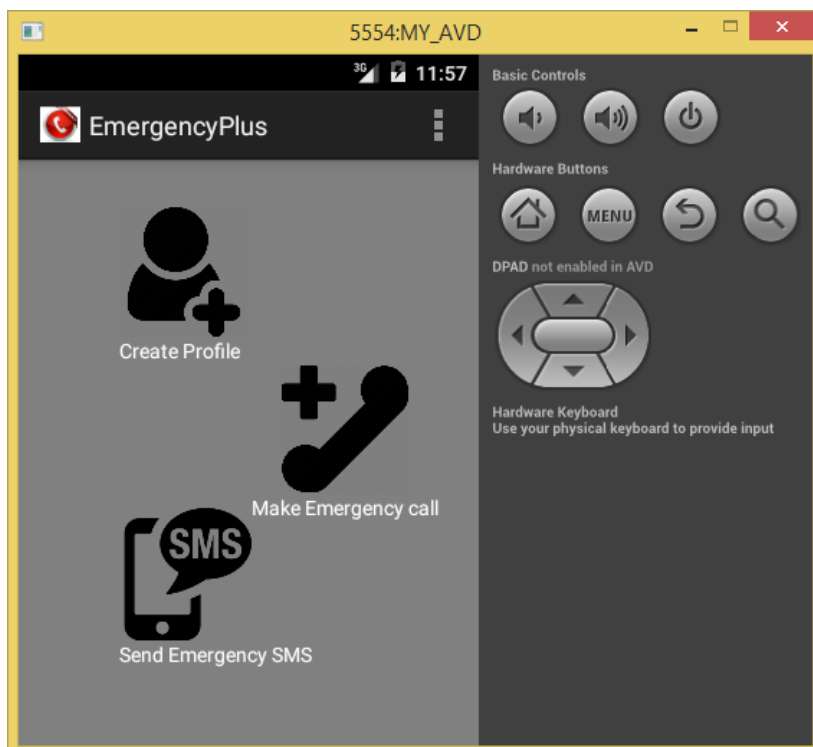
Section D:

Snapshots/ App Layout

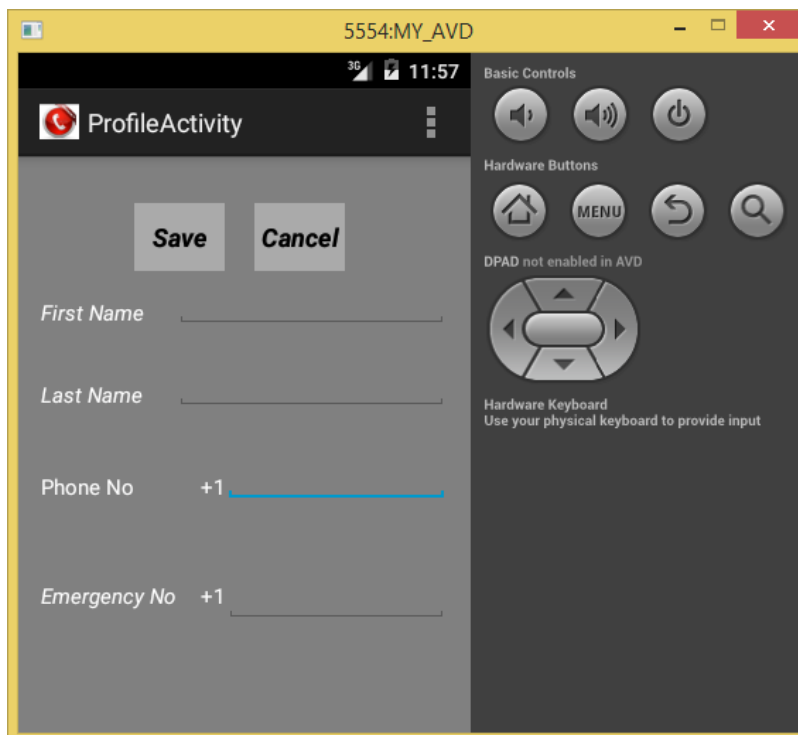
1. Splash Screen



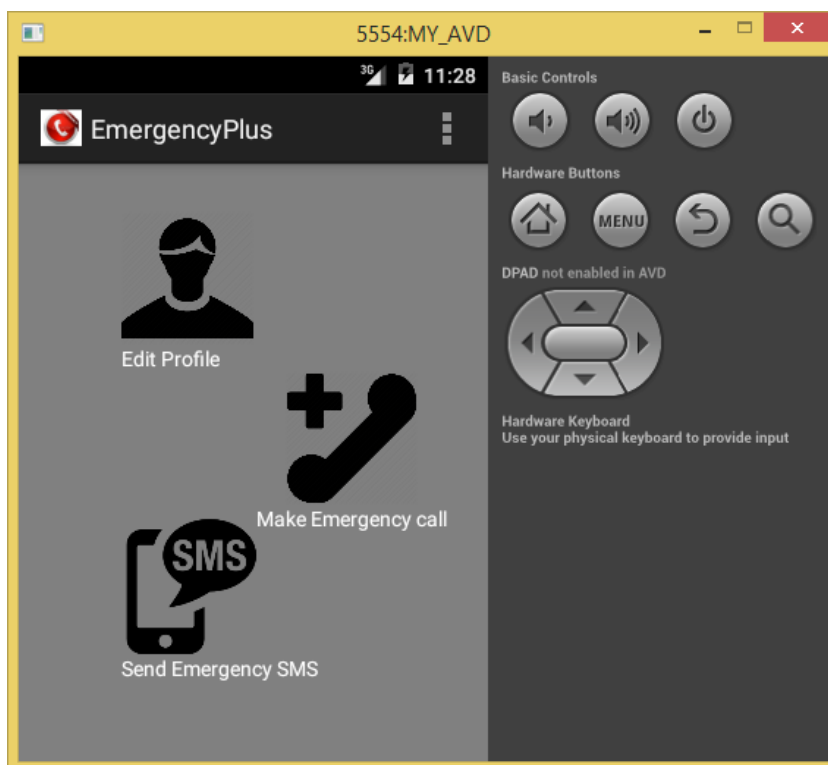
2. Home Page (Before Profile creation)



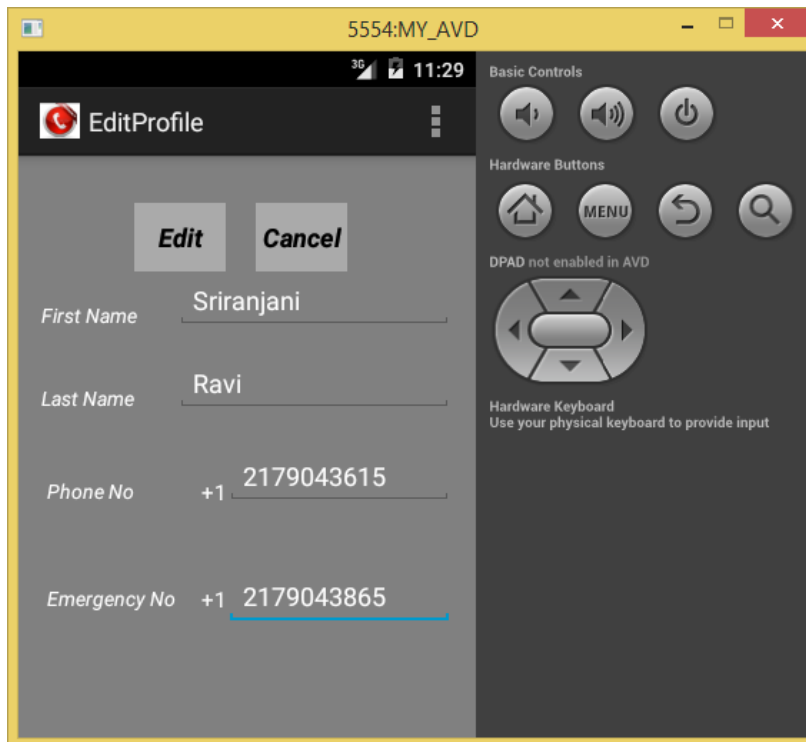
3. Create Profile Layout:



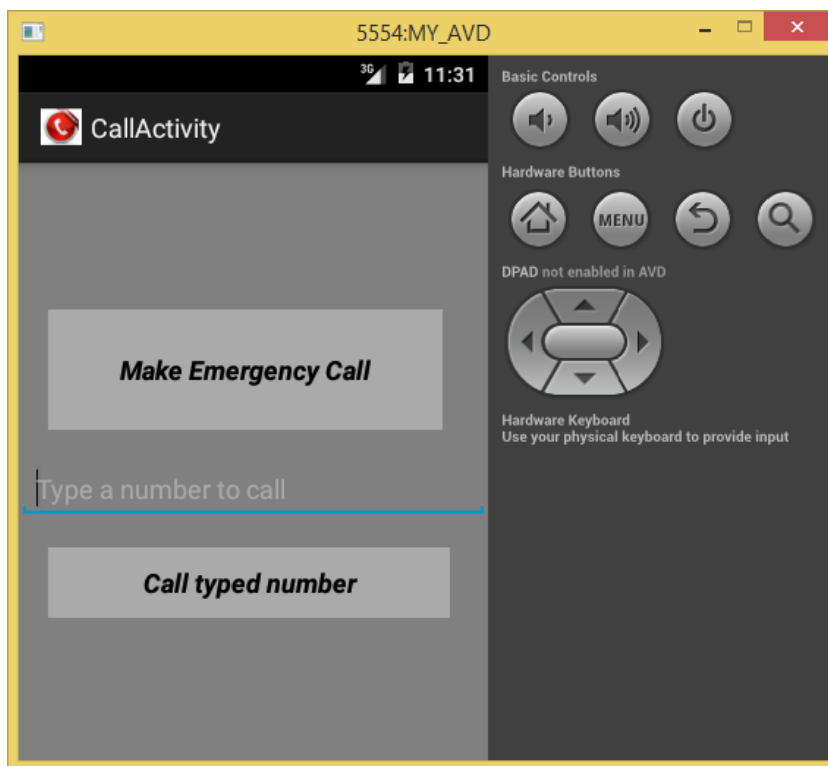
4. Home Page (After Profile creation)



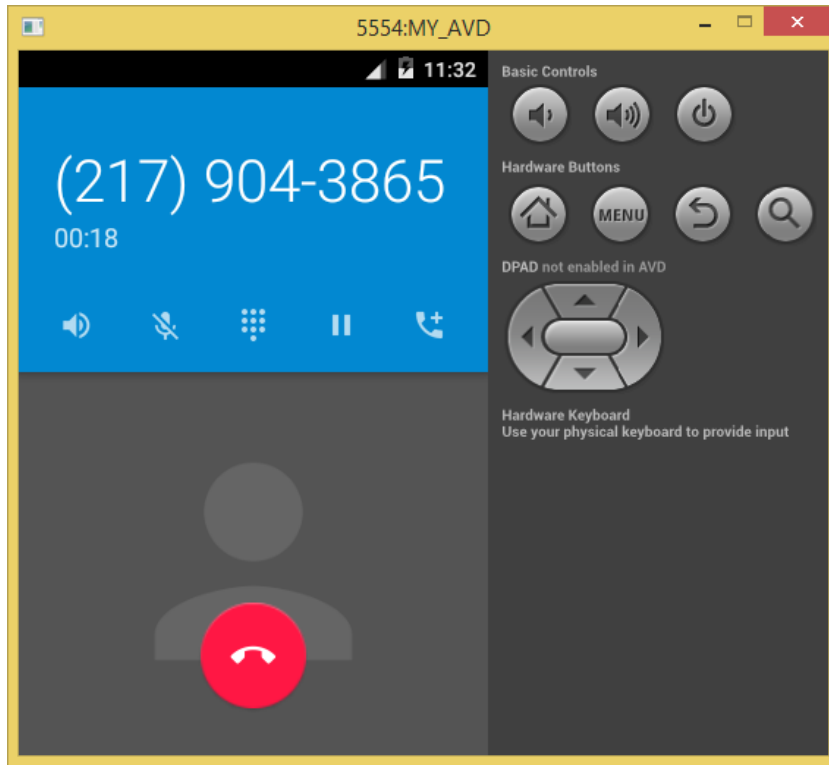
5. Edit Profile



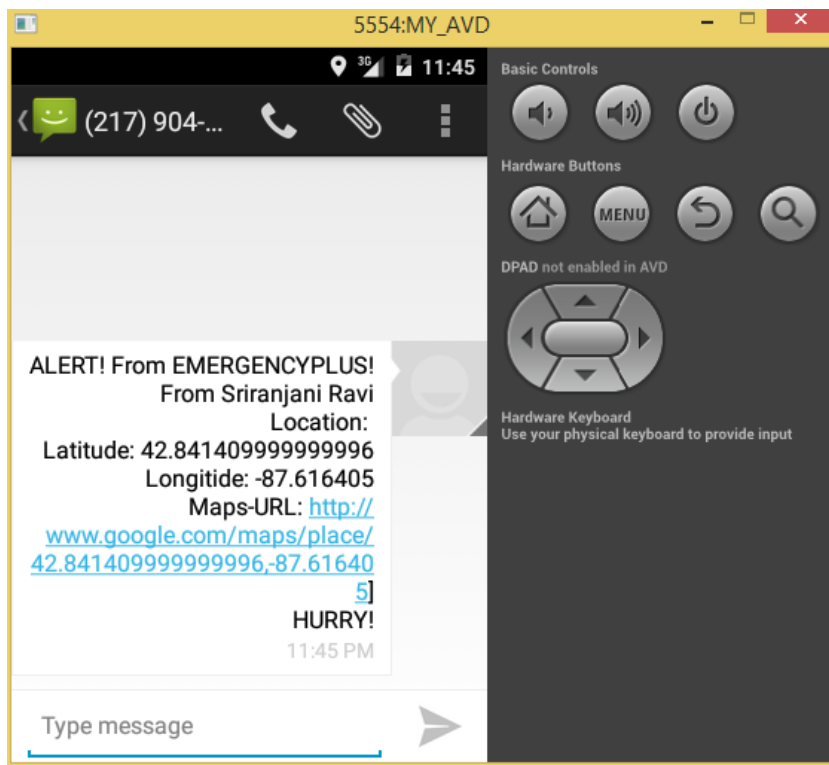
6. Emergency Call



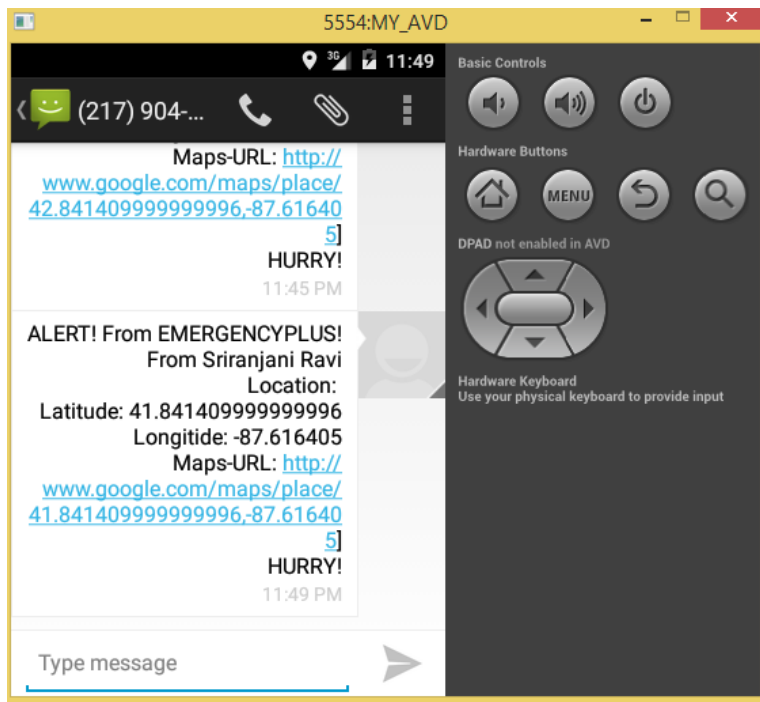
7. Call Placed



8. Emergency SMS



- **Any updated Location(In case of changed location)**



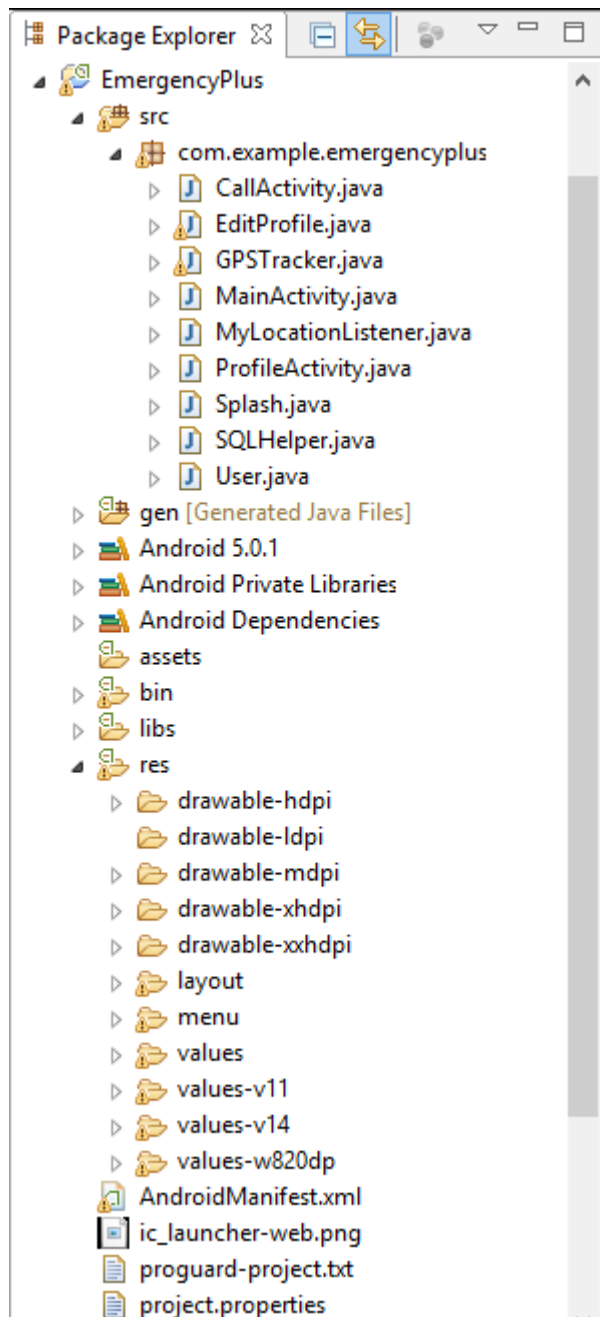
Section E.

Future Enhancement

- Shortcut implementation to open the app via hardware controls instead of from the application manager.
This will reduce the hassle even more where a simple tap of a button would help in connecting the user without even actually looking into the screen.
- Add an additional feature for sending continuous location updates in 10 minute intervals.
This would help in tracking the victim further by staying connected with their location on a continuous basis.

Section F.

File Structure



Source Code:



EmergencyPlus.zip