

CS-5551: Advance Software Engineering

Iteration 2 Report (PG: 7)

18th Feb 2015

Project Goal:

The project goal is to develop a mobile application for getting immediate help when in danger and a crime management system for the users of this app. This system is intended to help people on time and providing them information about the high crime rate area. Moreover, it encourages people to file a reporting of suspicious behavior or crime.

Objective:

We are going to create a mobile app that will do the following:

- Get help immediately when you feel threatened.
- Reporting the crime.
- View the crime rate in different areas.

UML Class Diagram:

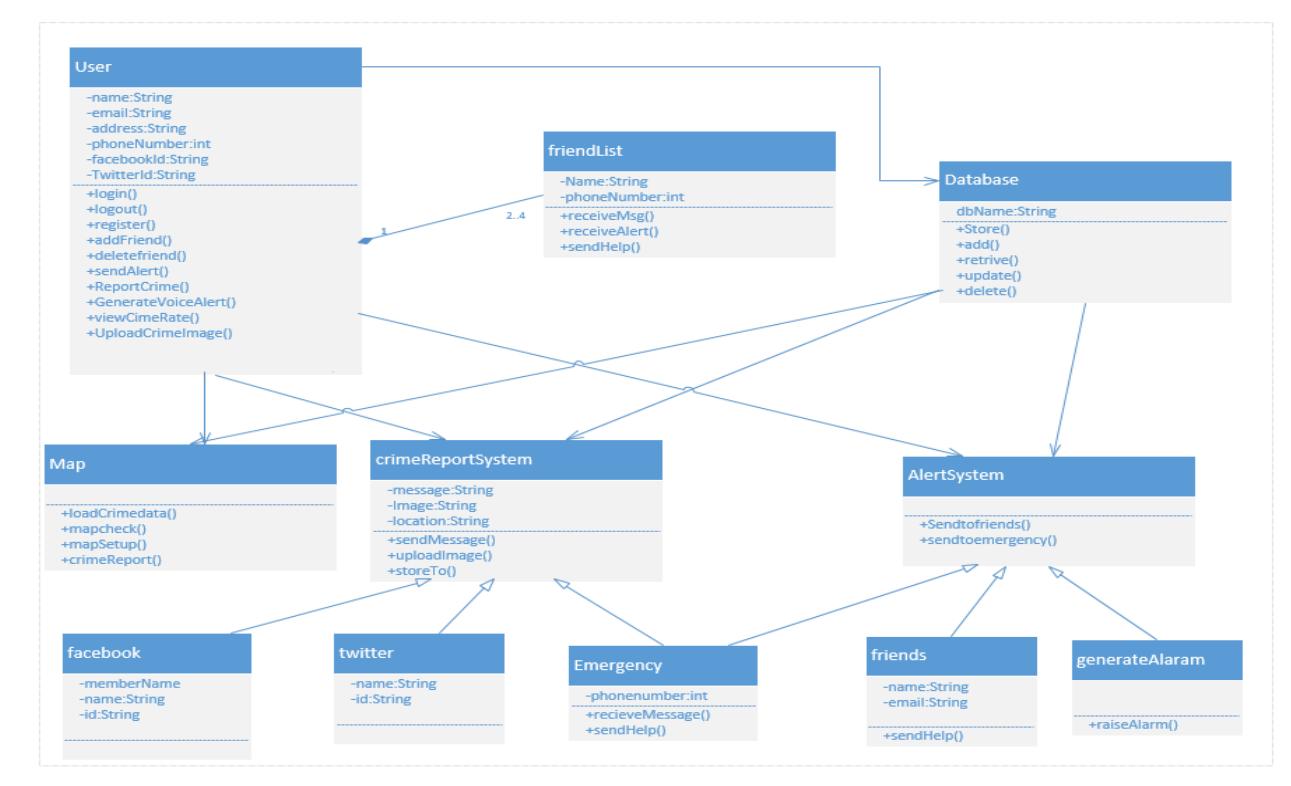


Figure: Class Diagram of entire system

UML Activity Diagram:

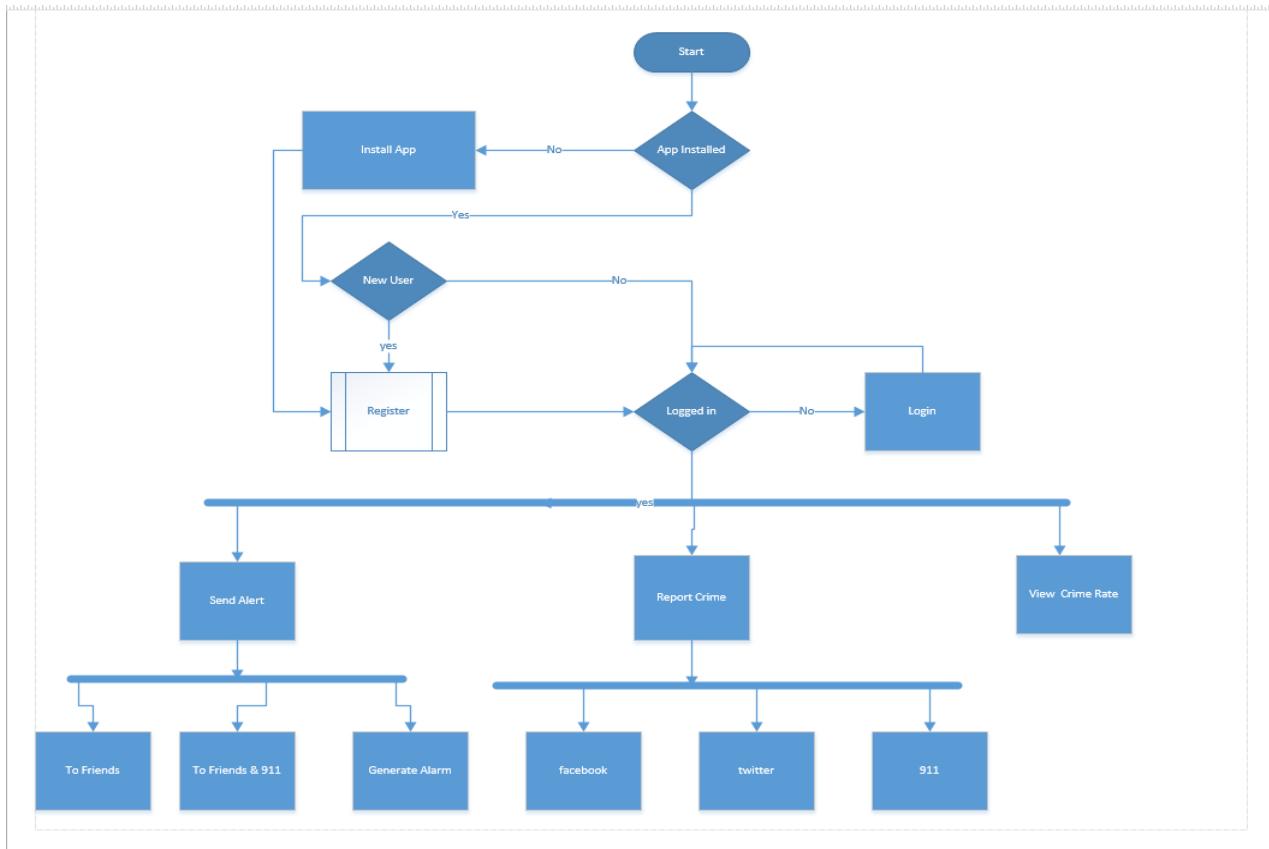


Figure: Activity diagram for the functionalities of the Application.

System Specification:

Existing Services:

- **Geo Location Sharing**

This API is used to share geo-location. This is also used to mark particular place based on latitude, longitude or name etc. This API is supported by most of the browsers and mobile devices.

https://maps.googleapis.com/maps/api/js?v=3.exp&signed_in=true

- **KCMO Crime Data**

With this API we can get crime related data like location, date of crime, type of crime etc. for Kansas City Missouri area.

<https://data.kcmo.org/resource/yu5f-iqbp.json>

- **Twitter API**
This API is used to share content on twitter .
https://twitter.com/intent/tweet?screen_name=twitterapi

New Services to build (SMS Manager)

Service to send SMS to registered friends on alert call

- **Operational Description:**
On clicking alert button SMS is to be sent to registered friends and 911 emergency.
Default message and numbers list is sent to the service.
- **Input/output for service**
Input: Phone numbers of friends, Message content to be sent
Output: SMS delivery response.
- **Constraints/exceptions**
Service should always be running.
- **Priorities**
Degree of importance: High priority

Service to upload image and data to the server

- **Operational Description:**
On clicking any option (Report to 911, Share on Twitter, Share on Facebook) the image gets uploaded to the server.
- On user registration the user information will be stored in the server.
- **Input/output for service**
Input: Image and data
Output: Image and data
- **Constraints/exceptions**
Service should always be running.
- **Priorities**
Degree of importance: High priority

Stories: Use case specification template:

Use Case Name	Register to the app
Primary Actor	User
Preconditions	User must have downloaded app
Guarantee (Post Conditions)	It allows user to register in to the app successfully

Main Success Scenario	<ol style="list-style-type: none"> 1. Enter user details like name, phone number, id, twitter, face book and password 2. System sends confirmation message 3. User enters confirmation number 4. User registers maximum 4 friends and minimum 1 5. System sends notification to friends 6. Registration completes
Extensions	<ol style="list-style-type: none"> 1. If any of the inputs given by user is invalid, system asks user to re-enter. 2. If user didn't get confirmation, user can ask the system again 3. If the user enters wrong confirmation number then system asks him to re-enter

Table1: Use case template

Use Case Name	Sending Alert
Primary Actor	Alert system
Preconditions	User must be valid registered user to the app
Guarantee (Post Conditions)	Sends alert message to friends and emergency successfully
Main Success Scenario	<ol style="list-style-type: none"> 1. User decides which alert he wants to send 2. User can choose either Red, blue and green buttons 3. When user chooses red button, system sends alert message to friends and emergency 4. When user selects green button, then system sends alert message to registered friends 5. When user selects blue button, then system raises an alarm
Extensions	None
Special Requirements	None

Table2: Use case template 2

Use Case Name	Reporting a Crime
Primary Actor	User
Preconditions	User must be valid registered user to the app
Guarantee (Post Conditions)	User reports crime to the system successfully
Main Success Scenario	<ol style="list-style-type: none"> 1. User decides how he needs to report a crime 2. User uploads image to face book, twitter or emergency
Extensions	None
Special Requirements	None

Table3: Use case template 3

Use Case Name	View crime area on Google maps
Primary Actor	User
Preconditions	User must be valid registered user to the app
Guarantee (Post Conditions)	User is allowed to view crime rate
Main Success Scenario	1. User can view crime rate and area in Google maps
Extensions	None
Special Requirements	None

Table4: Use case template 4

2) Sprint 1 scrum do:

#13 As system i should be able to get the current location of the user when red or green button is pressed or when posting the crime 

when the user is in danger he press red button to send message and when the user wants to report crime he clicks on green button. In both the cases, system tracks and gets the gps location.

[Done](#) [Tasks](#) | [0 Comments](#) 8

#2 As a system i should be able to take input details from the user and validate them 

when user login to the app, system validates his/her login details with the data stored in database and allows user to move to next screen if the input is valid else displays an error message

[Done](#) [Tasks](#) | [0 Comments](#) 8

#19 As a system I should display optional information screen 

This optional information screen takes input as user facebook id and twitter id. This screen is optional and user can skip if he/she doesn't want to provide the details.

[Done](#) [Tasks](#) | [0 Comments](#)

#18 As a system I should display Registration screen 

This is first page displayed for the new user after installing the app. User should input all his/her details into this page. Once the user registers successfully, he is ready to move further with the app.

[Done](#) [Tasks](#) | [0 Comments](#)

#17 As a system I should create sqlite db tables 

Backend data is stored in the SQ lite database and so far we have created 2 tables to store the login details.

[Done](#) [Tasks](#) | [0 Comments](#)

#16 Authenticates the user when submit 

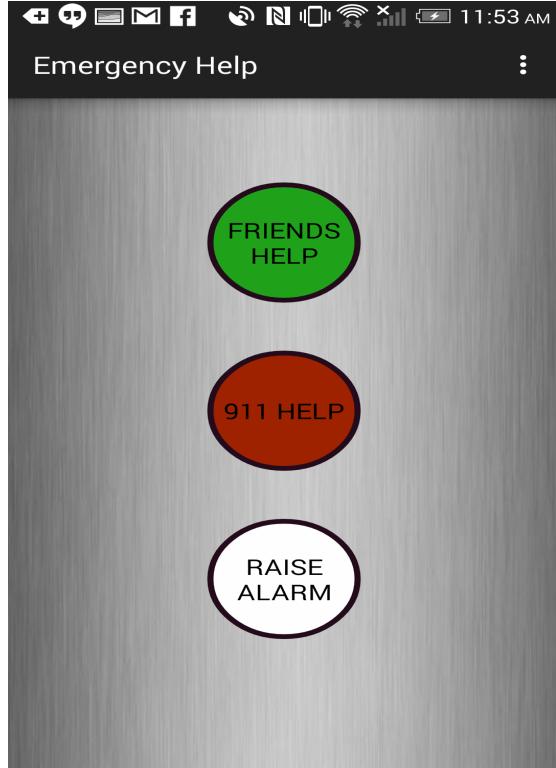
Once the user registers with the app, his/her details are stored in database. When user logs into the app next time, his login credentials are validated with the data base.

[Done](#) [Tasks](#) | [0 Comments](#)

#15 As a system i should be able to display login screen once the user registers in to the app, it allows him/her to input login details. user should give his username(mobile number) and password which are mandatory fields. Done Tasks 0 Comments				
#4 user give maximum of 4 friends phone numbers As a user i should be able to input maximum of 4 phone numbers. so when the user is in emergency, message is sent to this registered phone numbers. As a system i should send message confirmation message to the phone numbers after successful registration. Done Tasks 0 Comments				
#6 As a user i should be able to send message to the registered friends when i pressed green button once the user registers 4 of his friends into the app, a confirmation message is sent to the registered friends when user clicks on green button. This tells the friends that user has registered them to friend list into his app. Done Tasks 0 Comments				
#7 As a user i should be able to send message to the registered friends and the emergency number when i press red button when the user of the app is in danger, he/she sends a help message to the his registered friends and the nearest emergency number on click of red button. Done Tasks 0 Comments				
#1 As a system i should be able to get user login details and validate them display login screen and get user login details .In case of wrong details entered system asks to re enter the password. System displays forgot password and an email is sent to the registered email account. Done Tasks 0 Comments gannavarapu				

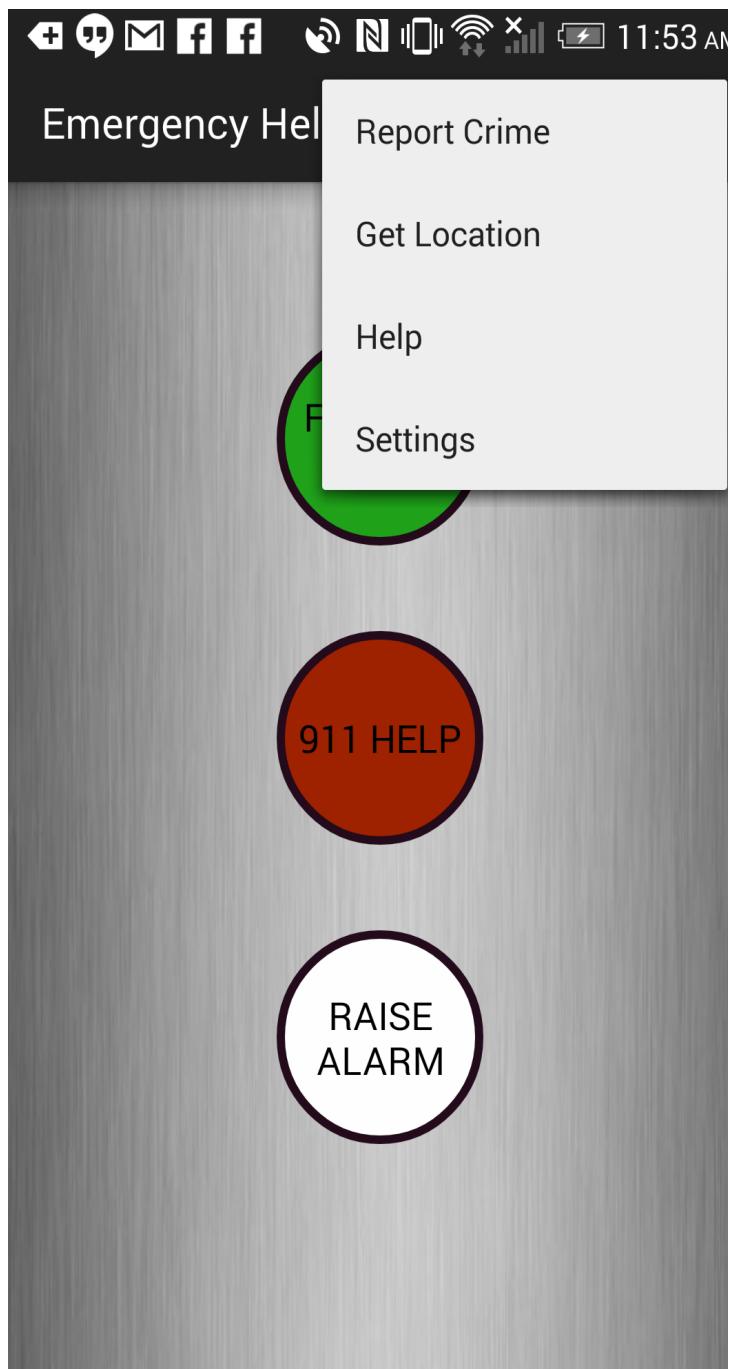
Sprint 2: Implementation:

1) Screenshots:



Screenshot 1:Help Page

- At the HELP page, User provided with 3 buttons.
- If user clicks the green button then a help notification is send to the registered friends with GPS location.
- If user clicks the red button then a help notification is send to the registered friends and 911 with GPS location.
- If user clicks the white button then a high-pitched alarm is raised.



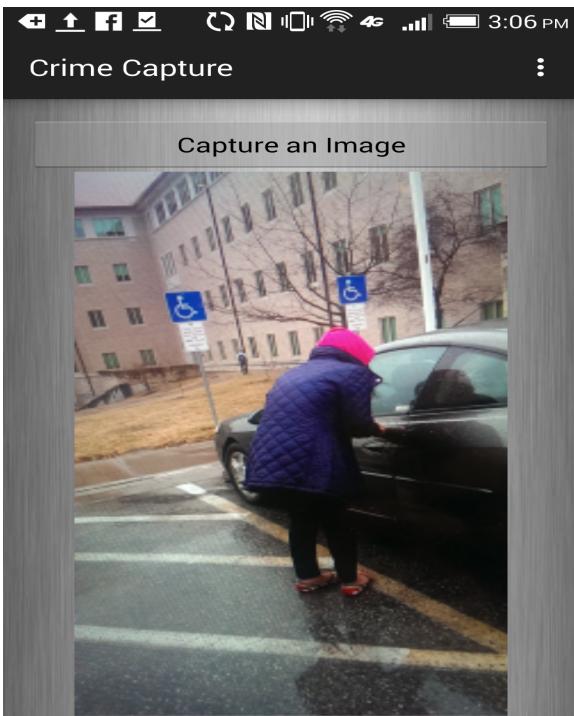
Screenshot 2:Help Page (Other Options)

- Other then help options, User is provided with 2 tab buttons.(Report Crime & Get Location)
- If user clicks “Report Crime” a reporting page opens.
- If user clicks “Get Location” then a location page gets open.
- User is also provided with help tab that opens “Help” page with gives overview of the app.

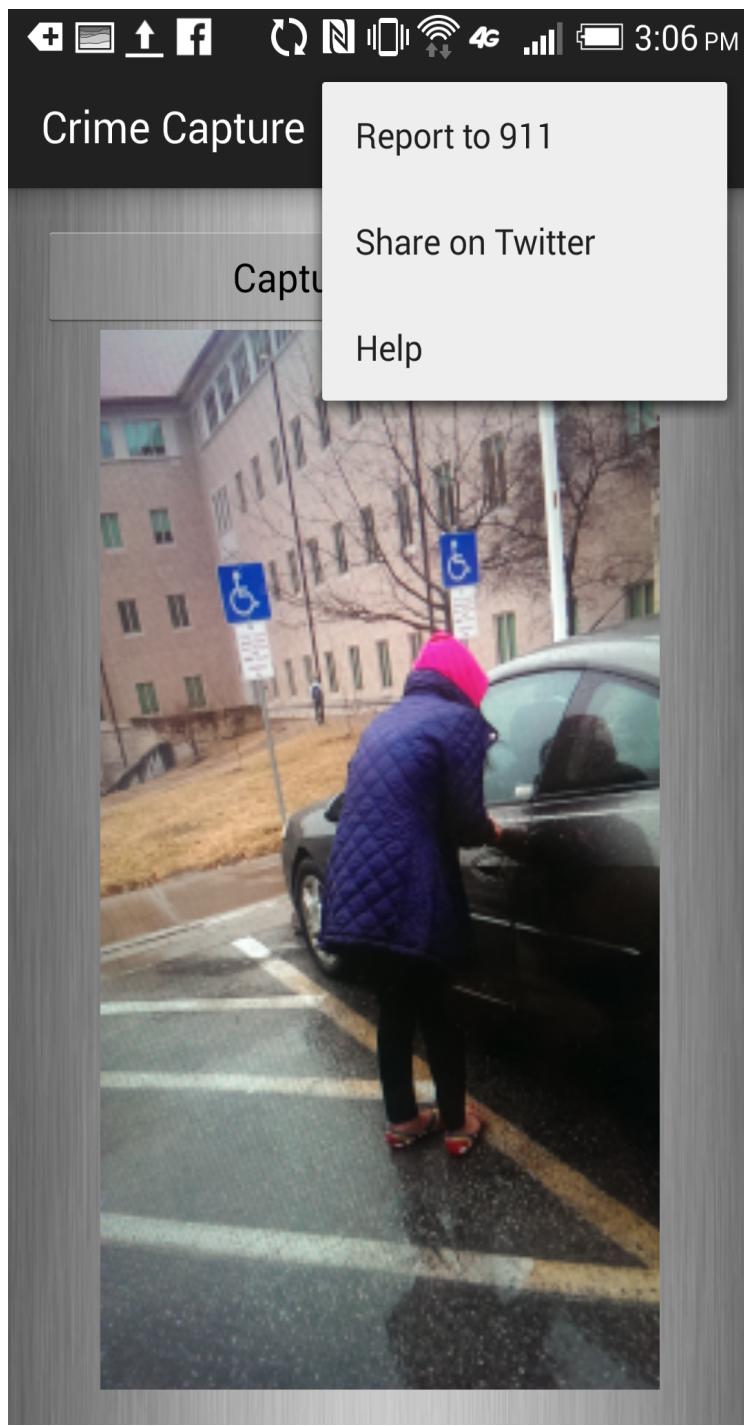


Screenshot 3: Crime Capture Page

- On clicking the “Capture an Image” button the camera will open to click the image and will get back the image to the app screen.



Screenshot 4: Capturing car theft image



Screenshot 5: Crime Capture Page(Action bar options)

- The user now can upload the image on Twitter by selecting “Share on Twitter” option or User can report the event to 911 by selecting “Report to 911” option.



Screenshot 6: Twitter Page

- When user selects “Share on Twitter” option then Twitter page opens where user can also enter the Tweet content and then on hitting the Tweet button, the image and the tweet content will be posted on the users twitter account.



Screenshot 7: Output at Twitter



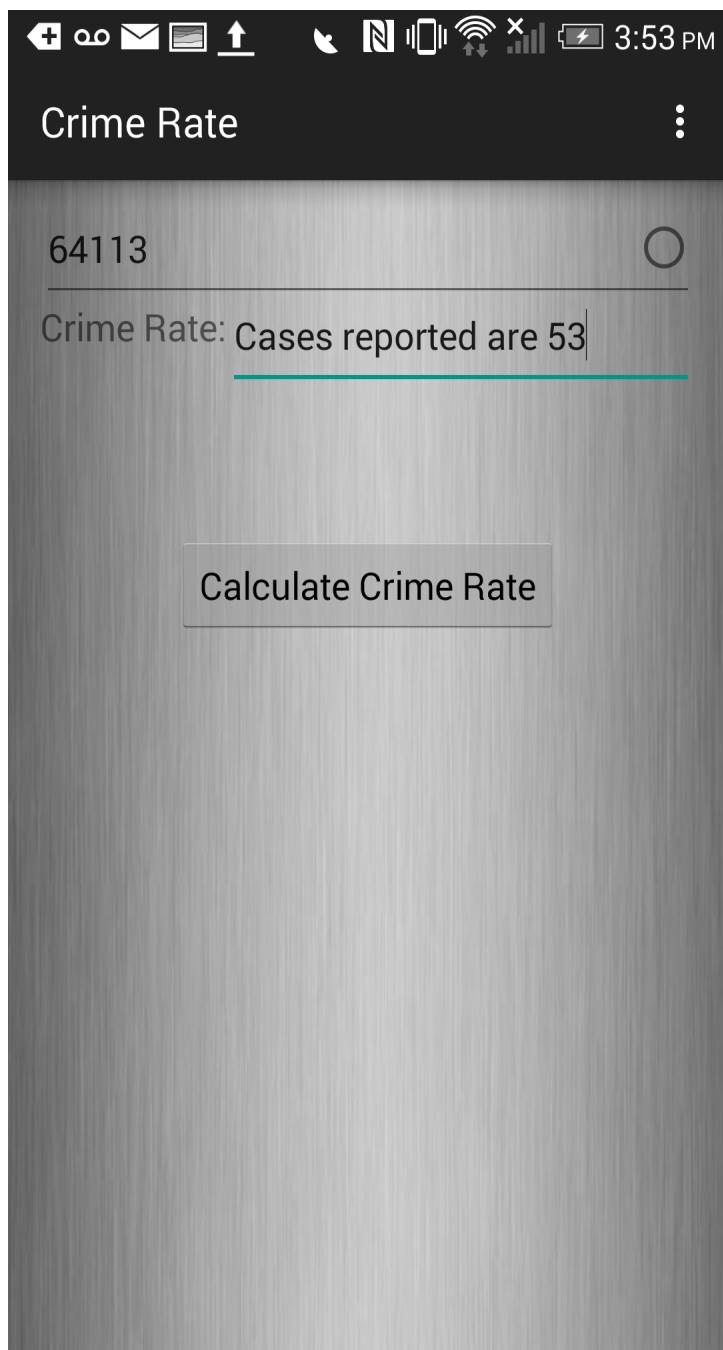
Screenshot 7: 911 Reporting Page

- When user select the “Report to 911” option.
- User needs “Select a crime type” from the drop down list.
- If chooses others from drop down list then user need s to specify the details.
- User can also mention the location of the crime.
- User can get current location directly by clicking on the Radio button.
- On clicking on “Report “Button a notification will be send to 911.



Screenshot 8: 911 Reporting Page

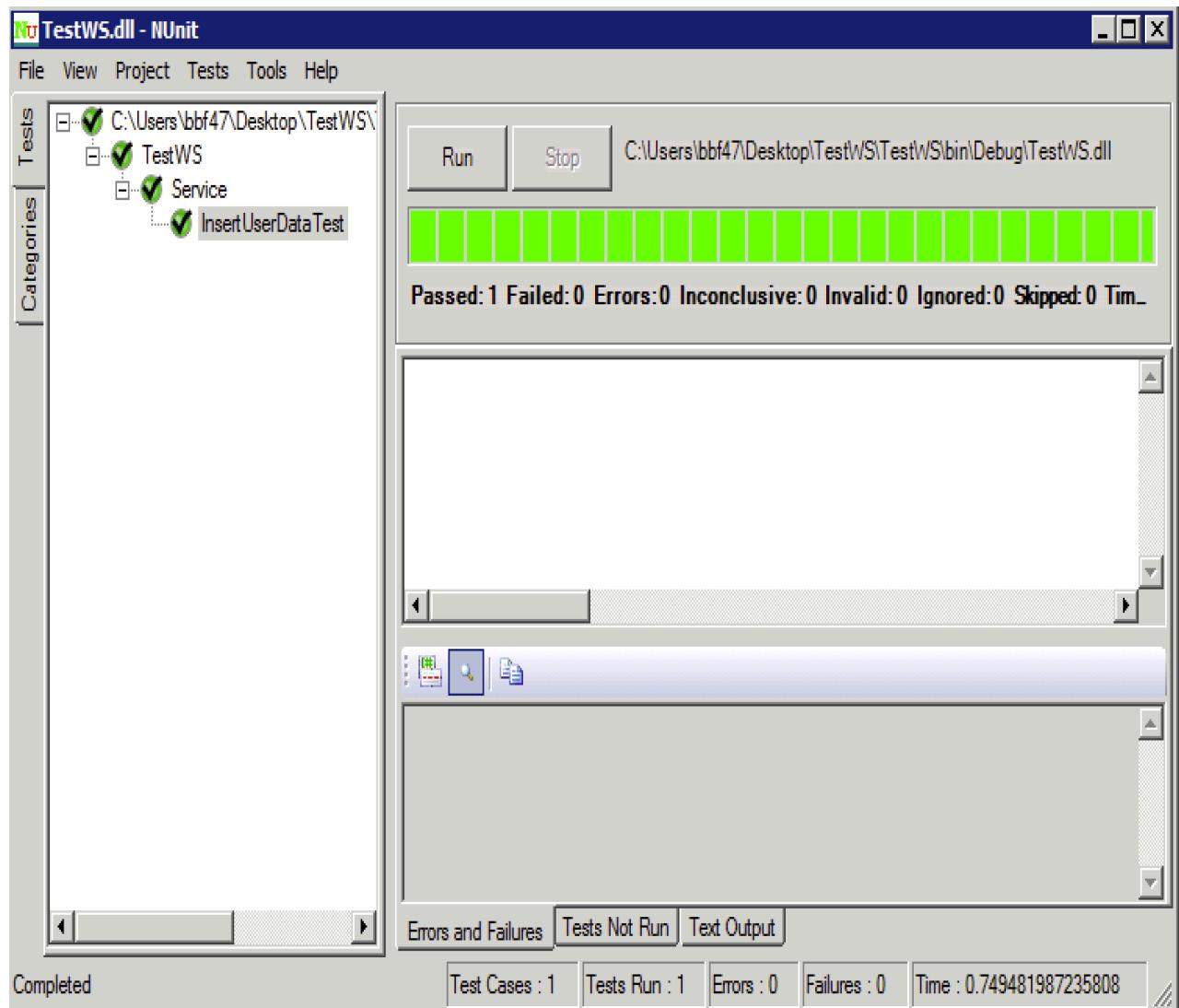
- Drop down view to select the crime type.



Screenshot 7: 911 Crime Rate Page

- In this page, user can get the crime rate of the desired location.
- If user clicks the radio button, there current location will be provided by the system and then user can hit “ Calculate Crime Rate” button to get the crime rate of the current location.
- If user enters the location manually and then hit “ Calculate Crime Rate” button t get the crime rate of the given location.

2) Nunit Testing for created service:
(Service to upload image and data to the server)



3) Deployment:

ScrumDo Link: <https://www.scrumdo.com/projects/project/group-6/iteration/120040>

IBM Bluemix link: Emerhelp.mybluemix.net

4) Sprint 2 scrum do:

#12 As a user i should be able to view crime rate in the area of my interest



A user is able to view the crime rate of the current location or any other location provided by user. The system directly provides the user the current location and the crime rate. For any other location user needs to enter the location manually.

Todo Tasks | 0 Comments

8

#9 As a user i should be able to report crime to the Twitter and upload an image related to the incident.



When the user clicks an crime image then the user is able to post it on twitter with the tweet content.

Todo Tasks | 0 Comments

13

#25 As a user i should be able to send message to the registered friends and the emergency number when i press red button through the service created.



Todo Tasks | 0 Comments

8

#24 As a user i should be able to send message to the registered friends when i pressed green button through the service created.



Todo Tasks | 0 Comments

8

#23 As a system I should be able to test the created services.



Test the services by Nunit testing.

Todo Tasks | 0 Comments

5

#22 As a User I should be able to report crime to 911.



When user click on report to 911 then user must be able to upload image, get location , select crime type to report it to 911.

Todo Tasks | 0 Comments

13

#21 As a user I should be able to capture the crime image and get it back to the app.



Todo Tasks | 0 Comments

8

#20 As a system i should be able to store the image that is uploaded by user.



when the user clicks an image that image should be stored in the server and can be fetched directly from the server in future.

Todo Tasks | 0 Comments

13

#14 As a system i should be able to store the data that is uploaded by user



when the user enters the registration details that details should be stored in the server and can be fetched directly from the server in future.

Todo Tasks | 0 Comments

8

5) Worked done by team members:

User Story Number	User Story	Hours Worked	Team Member	Status
9	As a user I should be able to report crime to the Twitter and upload an image related to the incident..	10 hours	Pooja	Done
12	As a user I should be able to view crime rate in the area of my interest.	12 hours	Babitha	Done
14	As a system I should be able to store the data that is uploaded by user.	8 hours	Balaji, Sathya	Done
20	As a system I should be able to store the image that is uploaded by user.	8 hours	Balaji, Sathya	Done
21	As a user I should be able to capture the crime image and get it back to the app.	4 hours	Pooja	Done
22	As a User I should be able to report crime to 911.	4 hours	Pooja	Done
23	As a system I should be able to test the created services.	2 hours	Babitha	Done
24	As a user I should be able to send message to the registered friends when I pressed green button through the service created.	5 hours	Balaji, Sathya	Done
25	As a user I should be able to send message to the registered friends and the emergency number when I press red button through the service created.	5 hours	Balaji, Sathya	Done

6) Database Used :

SQLite:

SQLite is a relational database management system. In contrast to other database management systems, SQLite is not implemented as a separate process but it is part of the using program. android.database.sqlite contains the SQLite database management classes that an application would use to manage its own private database. In our project we have used SQLite to store data related to user registration and users friends' mobile numbers.

Table Details:

- **Table Name:** userInfo

Columns: mobilenum, password, firstname, lastname, emailid, address1, address2, city, state country.

Description: Stores all user related information.

- **Table Name:** frnsMobile

Columns: usermobile, mobilenum1, mobilenum2, mobilenum3, mobilenum4

Description: Stores mobiles numbers of user's friends.

MS SQL Server:

Microsoft SQL Server is a relational database management system developed by Microsoft. As a database, it is a software product whose primary function is to store and retrieve data as requested by other software applications, be it those on the same computer or those running on another computer across a network (including the Internet).

Table Details:

- **Table Name:** userInfo

Columns: mobilenum, password, firstname, lastname, emailid, address1, address2, city, state country.

Description: Stores all user related information.

7) Github link for the source code:

<https://github.com/babithareddy/ProjectPhase>

8) Sprint 3 Planning:

The screenshot shows a ScrumDo Kanban board for Sprint 3, which runs from Feb. 2, 2015, to Feb. 9, 2015. The board has four columns: Todo (blue), Doing (orange), Reviewing (yellow), and Done (green). There are three tasks in the Todo column, each with a yellow '13' badge indicating they have 13 sub-tasks.

Todo	Doing	Reviewing	Done
#3 As a system i should be able to send user confirmation message to the email registered after the registration with a unique code and validate. 0 Comments - Tasks			
#10 As a user i should be able to report crime on facebook. 0 Comments - Tasks			
#5 As a user i should be able to ask system to send confirmation message again to the registered phone number or change the registered phone number 0 Comments - Tasks			

Bibliography:

- <https://www.crimereports.com/>
- <http://www.slideshare.net/shinyvaibhav/online-crime-management-system-34994738>
- <http://spotcrime.com/mo/kansas+city>
- <http://www.fcc.gov/text-to-911>
- http://www.phonearena.com/news/Android-How-to-share-your-location-and-GPS-coordinates_id36706
- <http://www.pocketmeta.com/share-gps-coordinates-iphone-android-4240/>
- <http://www.way2know.com/projects/e-crime-file-management-system>
- <https://data.kemo.org/>
- <https://play.google.com/store/apps/details?id=com.CrimeStoppersHouston.android>
- <https://itunes.apple.com/us/app/crimereports/id343636598?mt=8>
- <http://www.sungardps.com/solutions/onesolution/public-safety-justice/rms/>