Governors State University
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Fall 2015

Android Attack Protection Application

Jahnavi Keerthipati
Governors State University

Vikas Reddy Tammanagari
Governors State University

Harinath Reddy Vangeti
Governors State University

Abstract

Developed an android attack protection application. It is designed for people who are under attack. They would press a button on their phone and it will gather their current location and start recording a 5 second video with audio. This application will then automatically send the location and video straight to the person selected.

Table of Contents

1 Project Description

1.1 Competitive Information

This application can be used for the people mostly whenever they get trapped or feel unsafe. This application can be mostly useful for the women   when they are in danger.

1.2 Future Enhancements

This project can also sign up using Google id or Facebook id without getting much involved providing user information.

2. Technical Description

The purpose of this application   is to provide:

- Details of the user who is using or installing the   application.

- Activating the application.

- Provide contacts in the phone automatically or create   a new contact

- Provide contacts of the people using email.

- Sending a message for help

- User can indicate a message in the word activation which is sent to the person or police,

- Record 5 sec video and send location to the contact that has been selected.

Scope: This application   can be used on any Android   based   Application. Android attack protection application   will be a useful to identify people based on a location. This project mainly consists of four modules namely user, Email contacts, word   activation and   information help.

2.1 Project/Application Architecture

| Setup | **Set up your development environment** | Install the Android SDK, Android Development Tools, and Android platforms. |
| | **Set up AVDs and devices for testing** | Create Android Virtual Devices and connect hardware devices that will be used for testing. |

| Development | **Create your application** | Create an Android project with your source code, resource files, and Android manifest file. |

Debugging and Testing	**Build and run your application**	Build and run your application in debug mode.
	Debug your application	Debug your application using the Android debugging and logging tools
	Test your application	Test your application using the Android testing and instrumentation framework.

| Publishing | **Prepare your application for release** | Configure, build, and test your application in release mode. |
| | **Release your application** | Publicize, sell, and distribute your application to users. |

2.2   Project/Application Information flows
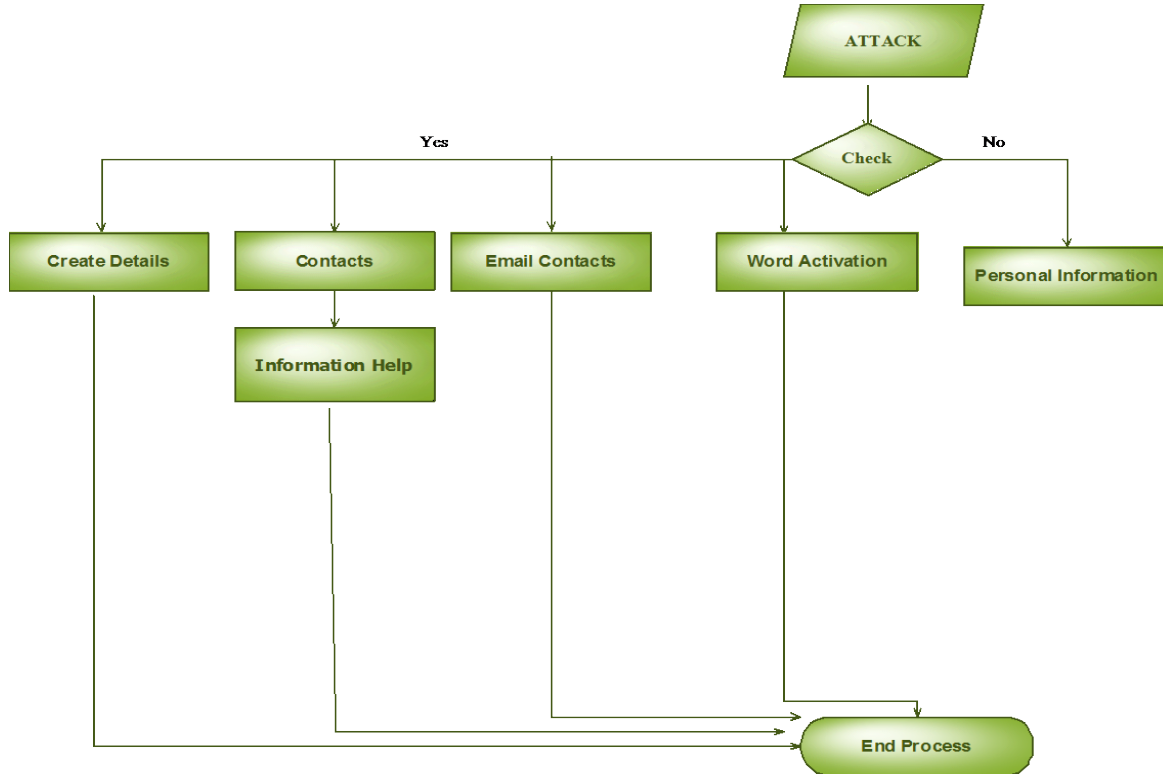
2.3   Capabilities

Software Requirements:

- Coding Language   :   Java 1.6
- Tool Kit   :   Android 2.2
- IDE   :   Eclipse
- Operating system   :   Windows XP

Hardware Requirements:

- System   :   Pentium IV 2.4 GHz.

- Hard Disk   :   40 GB.

- Floppy Drive :   1.44 Mb.

- Ram   :   512 Mb

3. Project Requirements

3.1 Identification of Requirements

➢ **<ATPA-ATP-1.0 USER- "R001>**

   User has to install the application from the app store in order to use it.

   Implementation: Mandatory

➢ **<ATPA-ATP-1.0 USER- "R002>**

   User has to provide all the necessary   information in the login page.

   Implementation: Mandatory

➢ **<ATPA-ATP-1.0 USER- "R003>**

   User then has to activate the application.

   Implementation: Mandatory

➢ **<ATPA-ATP-1.0 USER- "R004>**

   User can add contacts from the phone or from email

   Implementation: Mandatory

➢ **<ATPA-ATP-1.0 USER- "R005>**

   User can add new contact

   Implementation: Implementation

➢ **<ATPA-ATP-1.0 USER- "R006>**

   **User can select a contact and insert message it will then automatically record 5 sec video ,
   send message and location to the contact.**

   Implementation: Mandatory

➢ **<ATPA-ATP-1.0 USER "R007>**

   User can go to information desk if user need any help.

   Implementation: Optional

➢ **<ATPA-ATP-1.0 USER "R008>**

   User can change the user details like   name, pin, address, email

   Implementation: Mandatory

➢ **<ATPA-ATP-1.0 USER "R009>**

   User can deactivate the application whenever the user feels to delete it.

   Implementation: Mandatory

3.2 Operations, Administration, Maintenance and Provisioning (OAM&P)

A default   user has to be created before starting the use of this application. User can   have the privilege to add new contacts or delete contacts, change personal information.

3.3 Security

Application can be accessed when it is deployed in to the app store. All   the functionality of the application can be accessed only after login. There are four   different roles named user, contacts, email contacts and information help.

4. Project Design Description

➢ **User Module:**

  a) User can create a new contact.

  b) User can get a contact based on an   email.

  c) User can edit the information provided.

  d) User can activate the application or deactivate the application.

➢ **Email   Module:**

  a) User can create a mailer name.

  b) User can create an   email address.

➢ **Word Activation Module:**

  a) User can enter a word which is displayed to the person when the user sends a message.
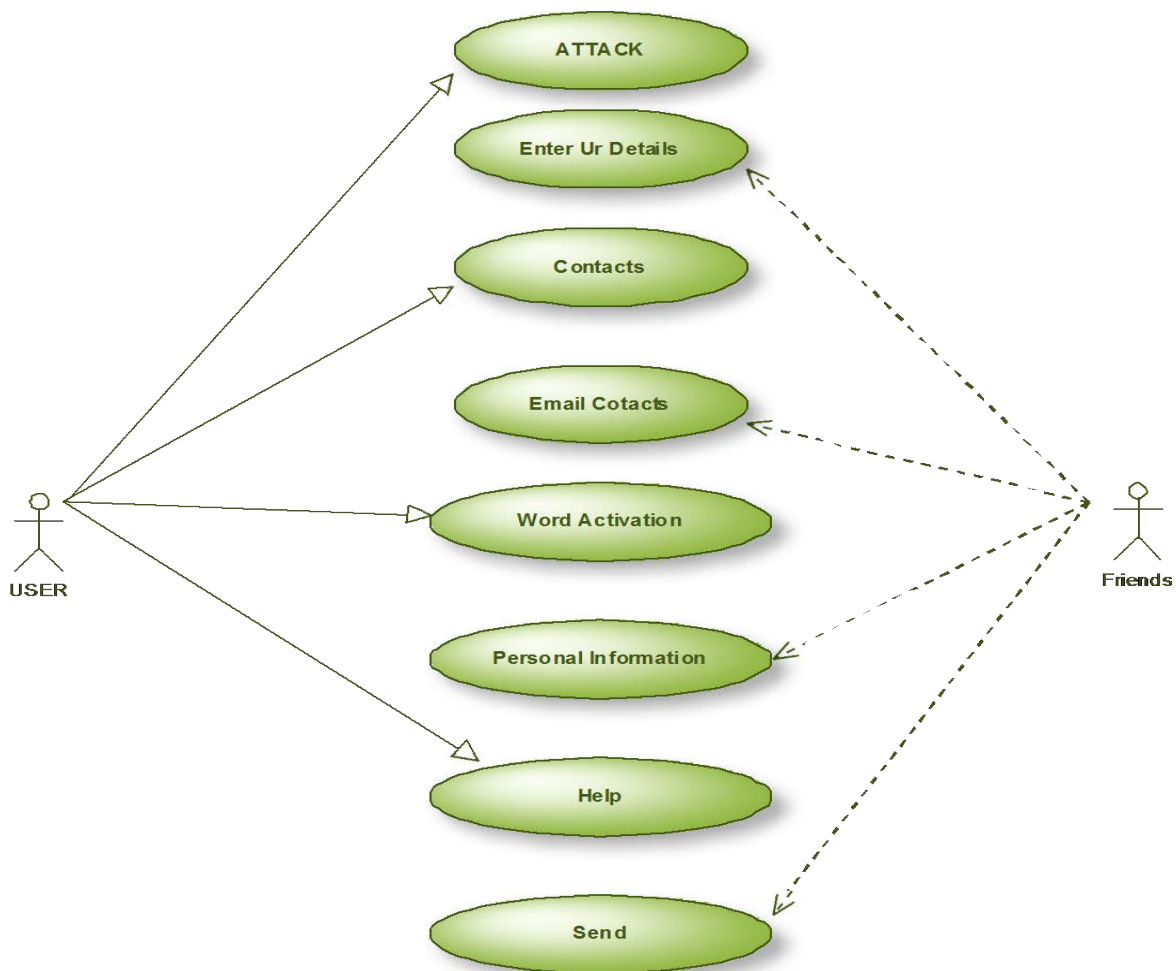
  b) User can change the word.

➢ **Information help Module:**

  a) If the user wants to activate the application, user has to press the panic button.

  b) If the user wants to deactivate, user has to press deactivate button.

  c) User can add as many contacts as user wants. If user wants to delete contact user has to press   contact name continuously.

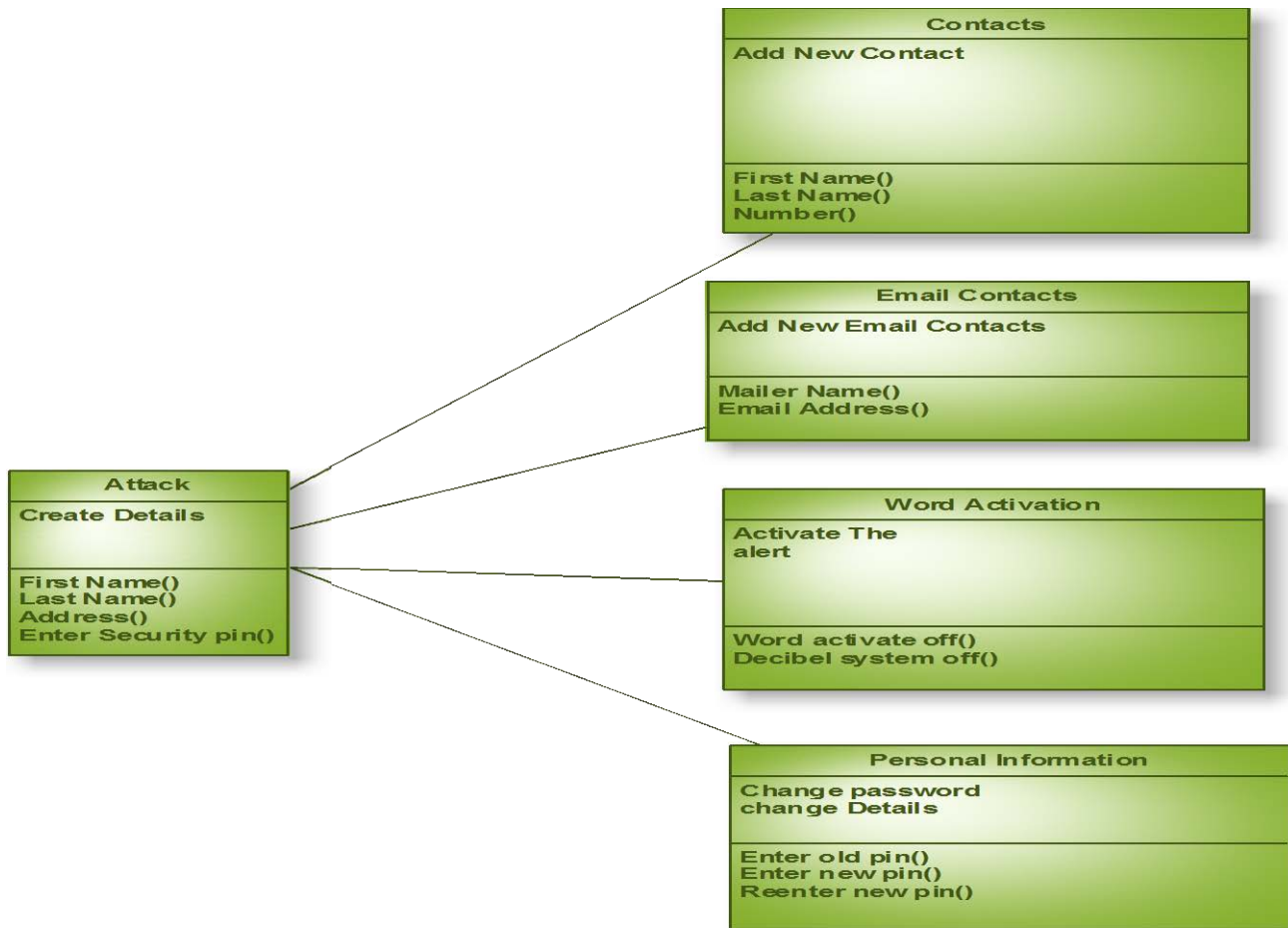 d) User can go to settings, if user wants to change any operation.

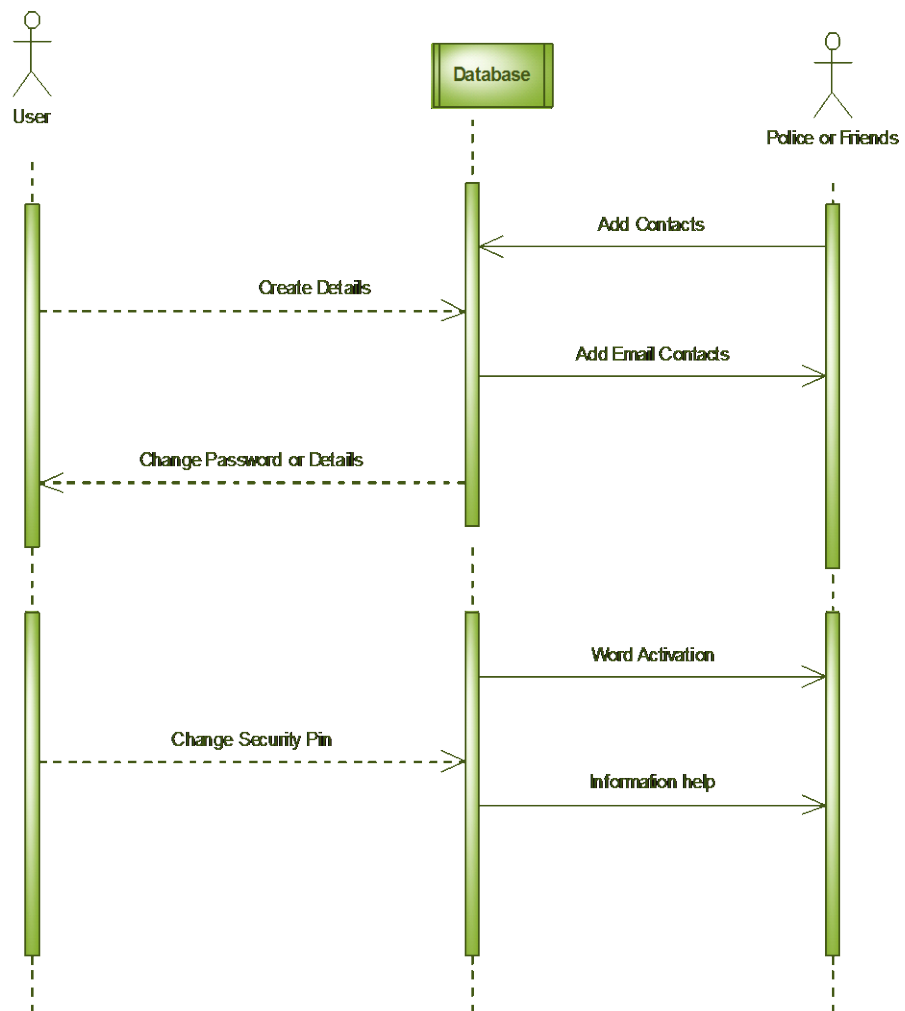## 5. Project Internal/external Interface Impacts and Specification
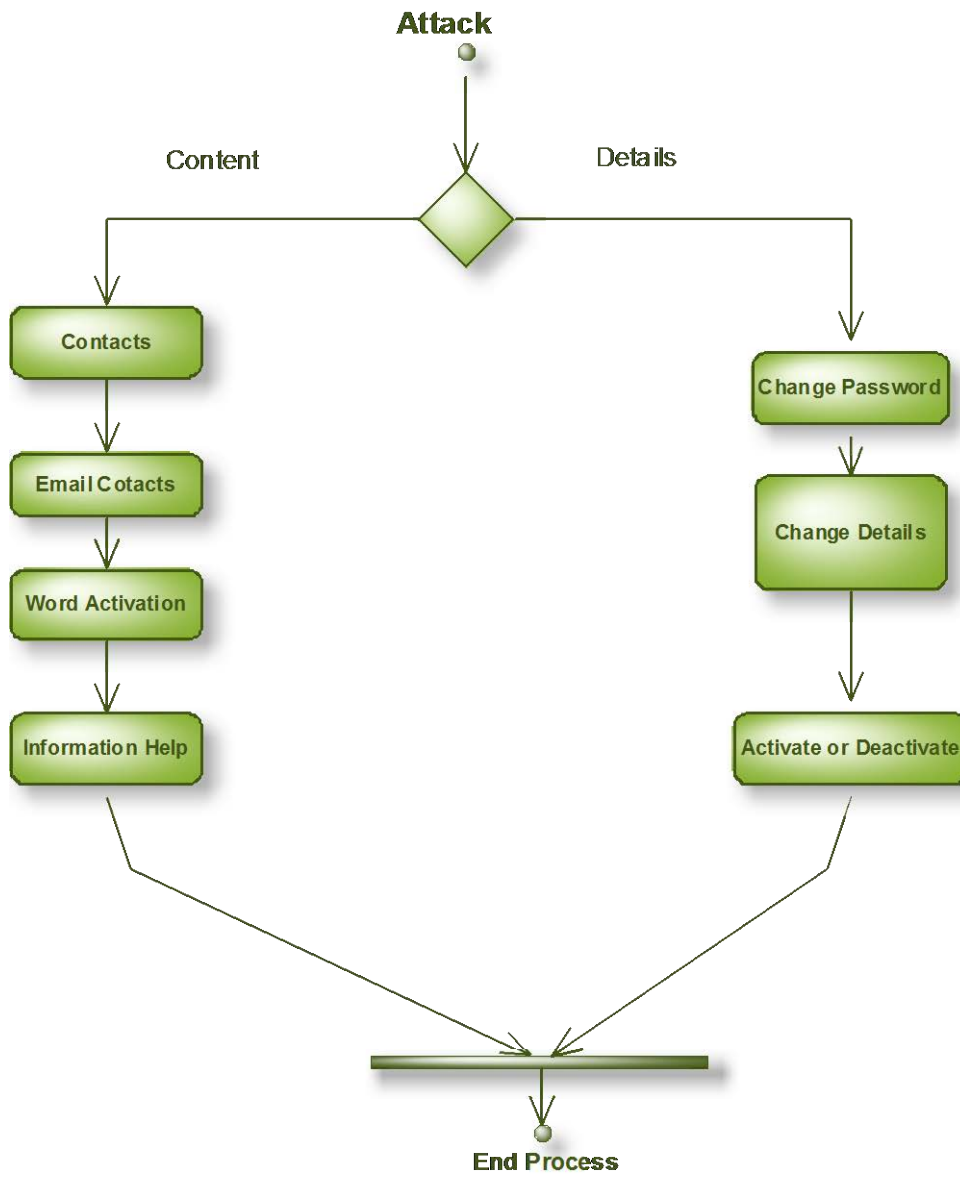
USE CASE DIAGRAM:

CLASS DIAGRAM:

Contacts

Add New Contact

First Name()
Last Name()
Number()

Email Contacts

Add New Email Contacts

Mailer Name()
Email Address()

Attack

Create Details

First Name()
Last Name()
Address()
Enter Security pin()

Word Activation

Activate The
alert

Word activate off()
Decibel system off()

Personal Information

Change password
change Details

Enter old pin()
Enter new pin()
Reenter new pin()

SEQUENCE DIAGRAM

ACTIVITY DIAGRAM

Attack

Content

Details

Contacts

Email Cotacts

Word Activation

Information Help

Change Password

Change Details

Activate or Deactivate

End Process

6. <u>Testing</u>

6.1 Unit testing

In order to assure that the tool achieves its objectives, the proponents conducted the testing per functionalities. The test scripts assure that the tool that will be implemented is parallel to its desired outcome. **Unit testing** is a <u>software testing</u> method by which individual units of <u>source code</u>, sets of one or more computer program modules together with associated control data, usage procedures, and operating procedures are tested to determine if they are fit for use. Intuitively, one can view a unit as the smallest testable part of an application. In <u>procedural programming</u>, a unit could be an entire module, but it is more commonly an individual function or procedure.

6.2 Functionality testing

Functionality testing is performed to verify that a software application performs and functions correctly according to design specifications. During functionality testing we check the core application functions, text input, menu functions.

6.3 Testing Screens
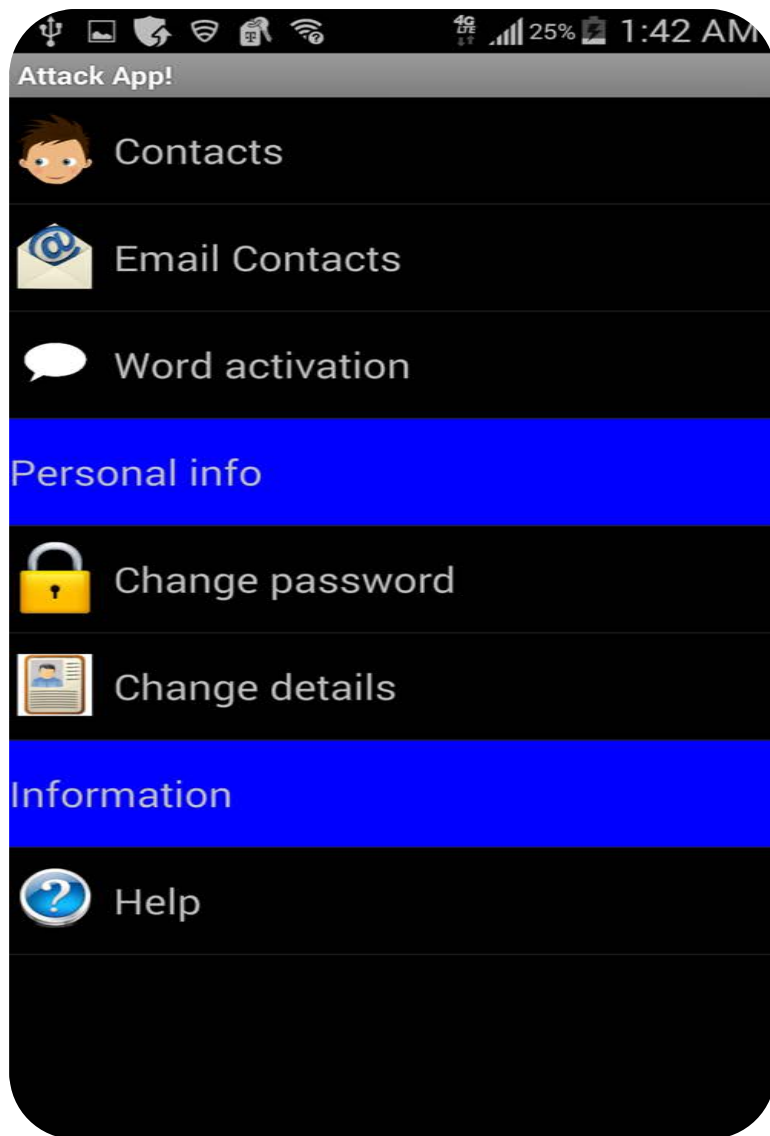
Screen showing application installed on mobile.
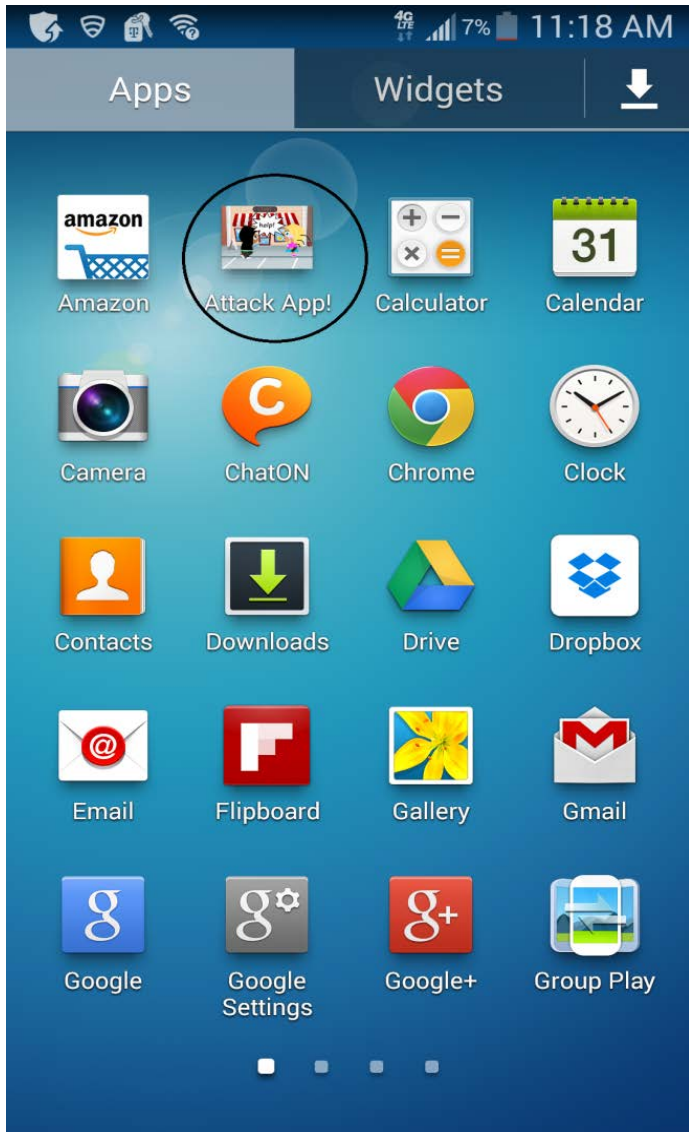
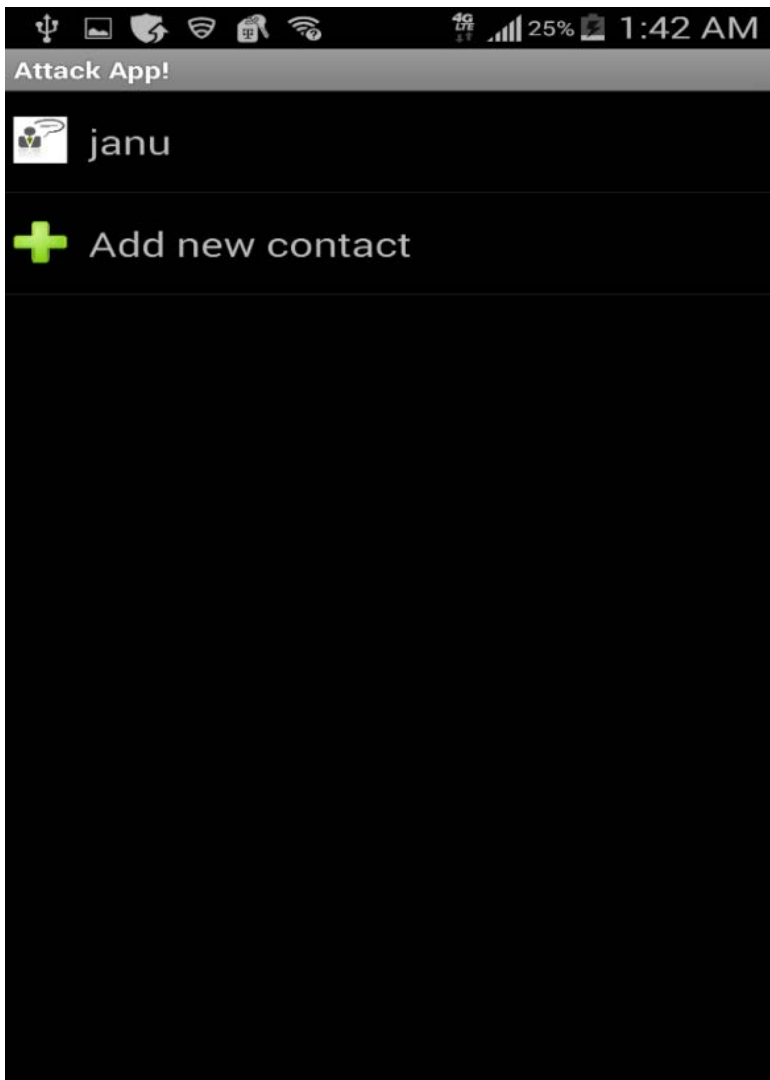**Screen showing the activation (panic button) button.**

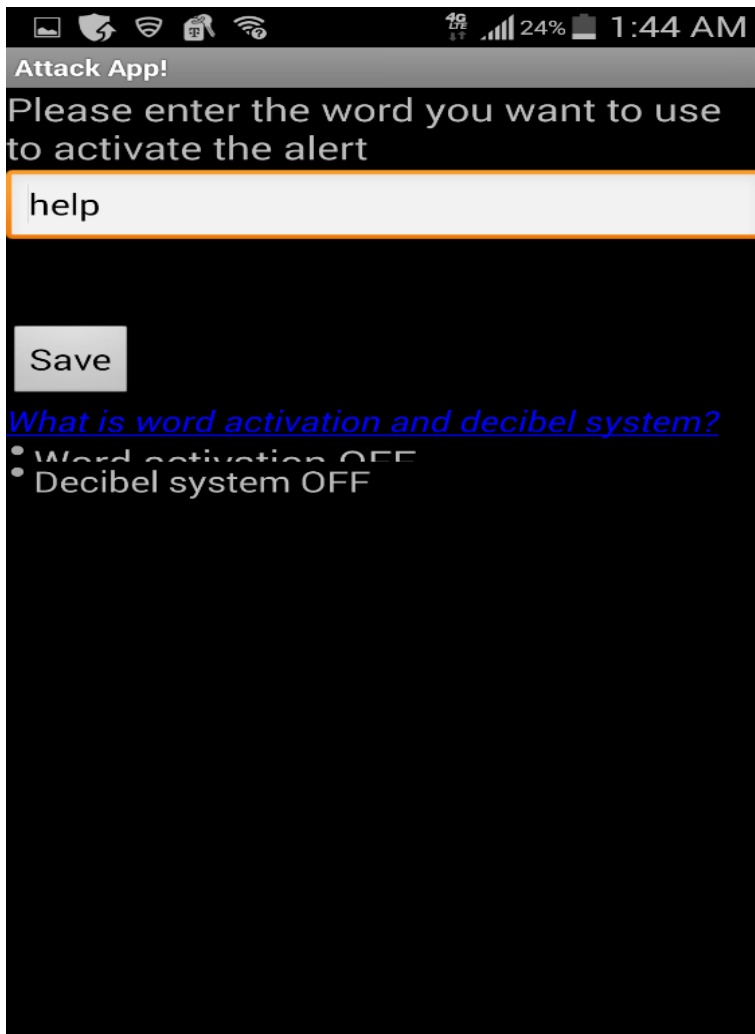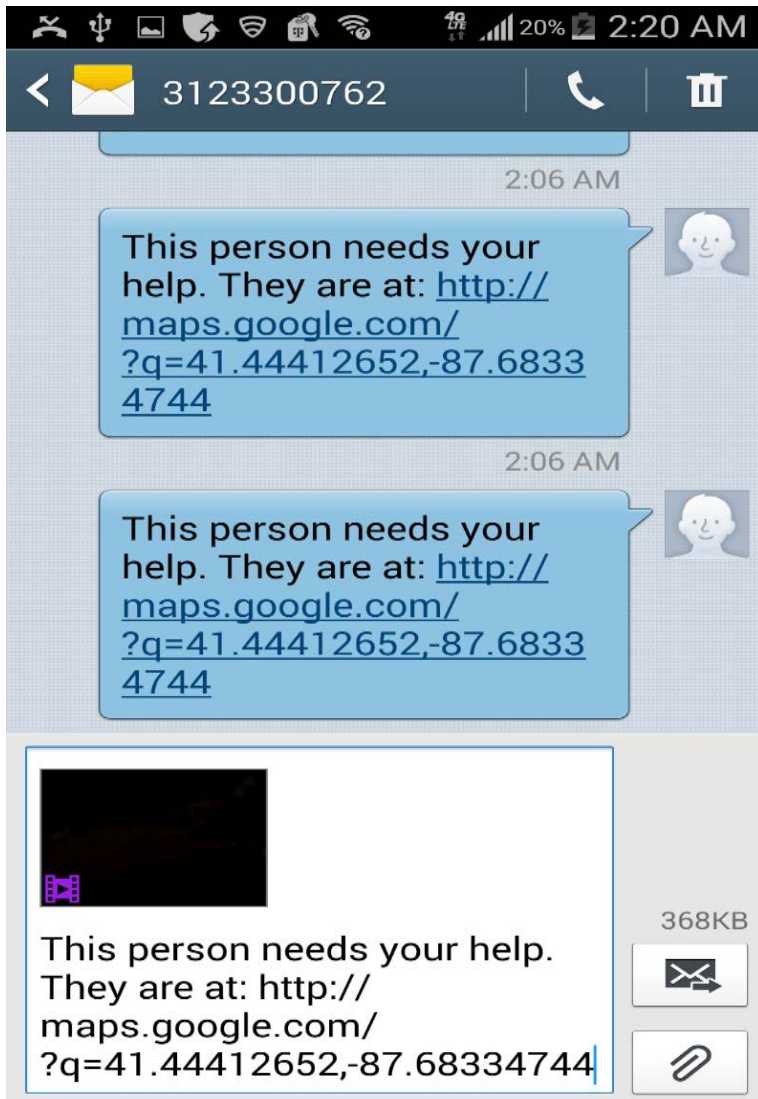**Screen showing settings page in the application.**

Screen for adding a contact in the application.

Screen showing word activation which is displayed over the receiver.

Screen showing message over the sender.

Screen showing the deactivate button with the video recording at the back in the application.

7. <u>Conclusion</u>

This is my first attempt in developing a mobile application which gave me a basic understanding of development and challenges of mobile application development. This application is built for   android handheld devices. It   is an application that uses services of camera, SMS, email, contacts, GPS. It   sends video to   a   current   location to selected list in the application. This application, created mainly for proof of proper user-mobile interaction. The application has been implemented and tested on real devices.

8. <u>References</u>

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http://developer.android.com/tools/devices/emulator.html

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