

GPS BASED FEMININE RESCUE SYSTEM

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Abstract

Security for ladies has become a serious issue because the number of crimes over women and girls increasing day-by-day. This paper describes about women safety and their security by using electronic device to both detect the problem & alert Authorities .This project suggests a new perspective to use technology to protect women. we use an android based smart phone with an integrated feature that alert and supply location based Information. This Document describe GPS and GSM based “Women Security System“ that gives the mixture of GPS devices as- well-as provide alerts and message with an emergency button Trigger. Whenever somebody is in Trouble They Only have to press Volume Key Button After that a message alert is sent to Register Contact list and the Number registered first and give a message.

Keywords: Women security, Smartphone, Registered contacts, Database, GPS (Global Positioning System), GSM (Global System for Mobile).

Introduction

Women are accomplished at mobilizing diverse groups for frequent causes. They often work across racial, sacred, opinionated, and intellectual divides to encourage tranquillity. We are conscious of importance of women's security, but we must recognize that they ought to be secured. A Woman is not much powerful when compared to men physically, in a crisis situation and needs a helping hand to relieve them. The best way to minimize chances in becoming a victim of violent crime (robbery, sexual assault, rape, domestic violence) is to identify and call on resources to help you out of unsafe situations. Whether you are in instant trouble or got separated from friends during night and do not know how to get home, having these apps on your phone can diminish your risk and convey assistance once you require it[1][2].

In the light of recent outrage in Delhi which shook the state and woke us to the security issues for our daughters, public are gearing upbeat in several ways to fight back. A swarm of latest apps are developed to supply security systems to women on their phones.

Here, we introduce an android app that ensures the security of girls . It reduces the danger and helps us in need by identifying the situation of one that is in peril .

The key features of our app that creates it different from other apps designed till now are as follows:

- Initially, we have to enter the four contact numbers of police, family members and friends in to the application say and click on “save” button.
- While travelling, run the application and whenever need arises, click “start” button.
- As soon as “start” button pressed, it firsts make a call to the first saved registered contact number and also sends the message containing location URL of the victim to all the contact numbers.
- Unique feature of this app is message with location URL is sent continuously to the registered contact numbers for every five minutes until “stop” button is clicked. So, continuous location tracking of victim is possible with this application[3].

Android is the most widely used mobile OS motorised by Linux kernel. This is the primary complimentary platform which is strong and is predicted to realize much popularity. It was developed by Google team and allows writing managed code within the Java language[9]. The current system is developed on the basis of android platform. Android utilizes a custom virtual machine that was designed to optimize memory and hardware resources during a smart phone.

Android doesn't differentiate between the phone's core applications and third-party applications. Any application that's built will certainly have equal access to a phone's capabilities providing users with a broad spectrum of applications and services

a. Existing Systems

As a neighborhood of literature survey, we investigated some applications that provide an equivalent or similar services for android and other platforms. The aim is to ascertain how these applications work and to ascertain how they will be improved.

Today the cases of atrocities on women are growing. In these sorts of cases, a sensible phone plays a crucial role for safety of girls[4]. Now android is budding on some apps for ladies security purpose. These apps are as follows

Fightback

This app is developed by Mahindra faction. In earlier days, this app wasn't complimentary, customer need to catch up on this app. But after Delhi gang rape incident, this app is on hand at no cost. This app sends a message to your friend or contacts that "user is in trouble" through E-mail, SMS and GPRS. This app works on those mobiles that support Android Java Programming.

a. Secureme beta: This app is developed by Think MPI Consulting Private Limited. It helps us to boost alert and that we can get help just in case of life threatening emergencies. After installing the app, initially we've to offer a personal identification number for security purpose then after emergency contacts must be registered within the app. By pressing a faucet on secure button, it notifies the contacts with location co-ordinates.

b. Vanitha alert: This app is developed by ABC Mobile Learning Communication click on "HELP" button on our mobile's home screen in an emergency situation can deliver a distress text message to the registered mobile number ,E-mail id, face book id seeking help and indicating the user's location[5].

c. Raksha – women safety alert: This app is launched by BJP on May 15, 2014. By clicking on this app, it sends location of the user to the contacts registered and therefore the user also can get the small print of the situation of the contacts. A distress call just by pressing one key sends out a loud buzzer to our near and dear ones. We can add multiple contacts to the present app and when there's no data connection, this app alerts the contacts by sending SMS[6][7].

d. Glympse – share gps location: This is the recent application developed on January 28, 2015. This app may be a fast, free and an easy thanks to share our location using GPS tracking in real time with friends and family. This app doesn't need any check in and don't need any contacts to manage.

e. Guardly: This app is developed basically for women safety intention, to put a phone call by your name, instantaneous location, and emergency hit to your selected friends. In this app you have to give your details in profile sheet e.g. birth date, tallness, weight, eye-colour, blood type , hair-colour, etc. This app is additionally utilized in I-Phone, I-Pad, BlackBerry, Windows Phone etc. [8]

f. Street safe: - This application is developed on worldwide Women's day. It will call community to help woman in any situation and has four features for crisis which would be started by just clicking on the button. These features are as – First, it automatically updates on your Face book account together with your recent location. Second, SMS are going to be sent to chosen associates together with your locality. Third, an alarm is started with large volume on your mobile. Fourth, call is to be found to your chosen emergency number.

Proposed system

To develop a system for android users for keeping track through several applications. This application uses GPS for identifying the situation of the person in trouble and therefore the system are often divided into two modules:

1. First module can be the victim's phone i.e the root device which uses 3G/2G data connection for tracking the location of the victim through GPS.

2. Second module can be the mobile phone of registered contacts either police or friends or family members which receives the message containing URL of location of victim that is sent from the root device.

Block diagram:

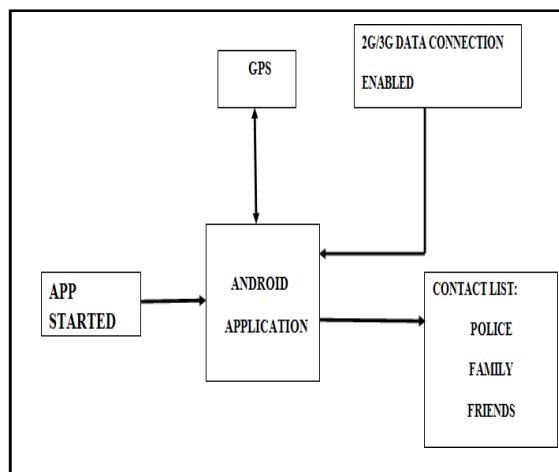
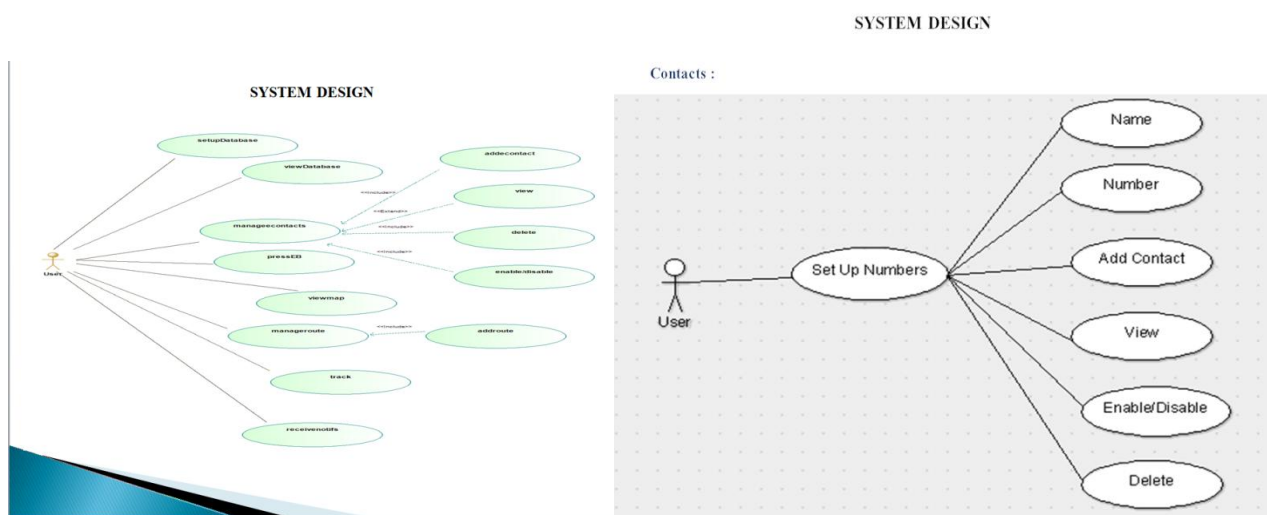
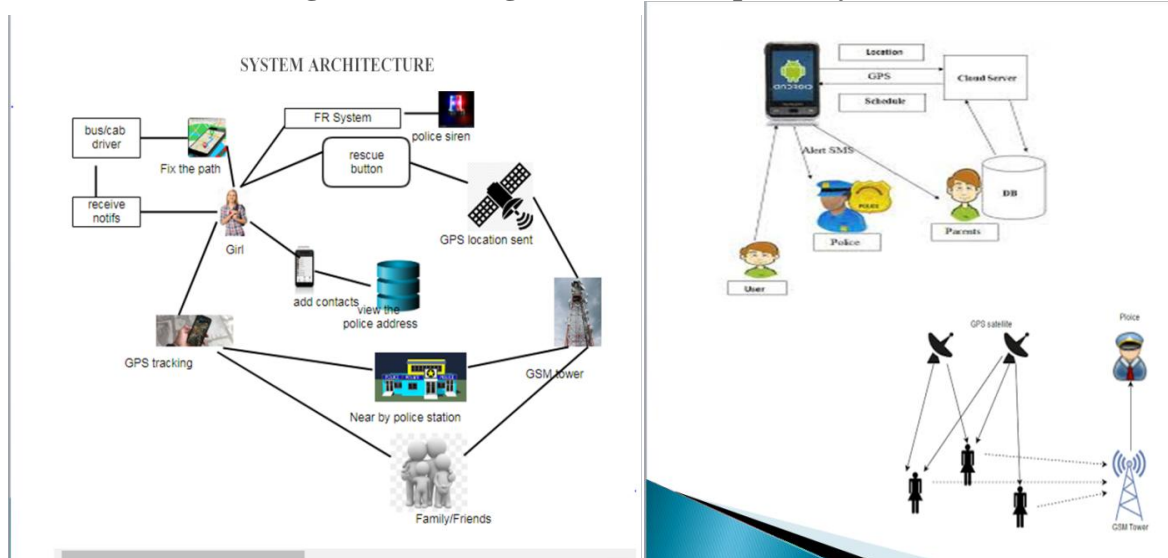
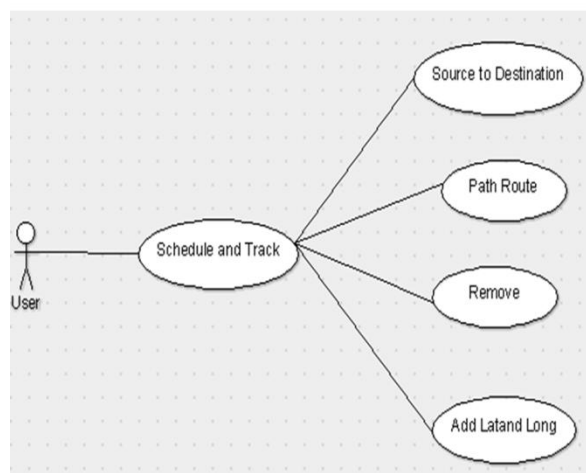


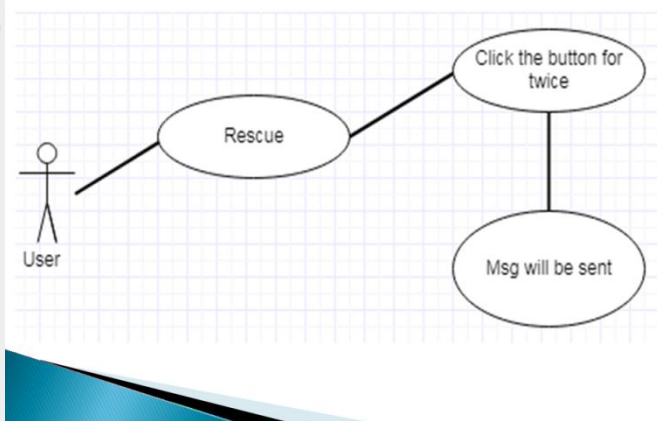
Fig. 1. Block Diagram for the Proposed System



Schedule and Track



Rescue



DATABASE

Table:

Field	type	NULL	Key	Default	Extra
Id	INT(20)	NOT	PRIMARY	NULL	Auto-increment
Name	VARCHAR(20)	NOT		NULL	
Address	VARCHAR(25)	NOT		NULL	
contact	INT(15)	NOT		NULL	

SAMPLE DATABASE

Id	Name	address	contact
1	Vasu	Parthasaradhi Nagar, kadiri, Andhra Pradesh 515671 Lat&long:14.4122026,77.7159628	7675942360
2	Deva	College Circle Main Rd, ODC, Andhra Pradesh 515134 Lat&long:14.1546458,77.7956209	7675942359
3	Shiva	Bangalore Rd,MF Mukkidipeta, Hindupur, Andhra Pradesh 515201 Lat&long:13.8326517,77.4934144	7659915733
4	Snehith	Narapala, Andhra Pradesh 515425 Lat&long:4.7136705,77.801844	9502783588

“Fig 1” shows the block diagram of the system. Initially, when we click on the app, it first checks whether the location settings, data connection settings in the application are on or not. Then, it tracks the location of the victim via GPS and sends these location co-ordinates in the form of URL through message to the registered contacts. Here, registered contacts means the contact details that are saved in the Abhaya application during its initialization. Now, at the received device, by clicking on the URL in the message, it spots the exact location of the victim. Also, as the message containing victim’s location is sent for every five minutes from the root device, the victim can be tracked wherever she goes and can be rescued safely and quickly.

Evaluation results & uniqueness

The total evaluation can be done in three major steps which are described individually. Evaluation describes the whole working of the application in three major steps.

The first major step is to enter the contact details in the application created. Those contacts can be our relatives, friends and chief cop of the particular city the person we live in. When the application is installed in the smart phone for the first time the above contact details should be provided. The application will save the given information.

These condo major step is to send the GPS information (GPS information can be in the form of the Co-ordinates or the URL which leads to the location of the person any stock map application in the likes of third party application like Google, Nokia etc) to the registered contacts at danger times or when the person is needed to be rescued. This step is followed only when the rescue button is pressed in application. The whole process of this step is done only when the device is

connected to the proper mobile network and location service in the device is switched on (GPS)
The third major step comprises of work done in sending the message containing location URL continuously to the registered contacts. Here, we have set the time interval as 5minutes, so for every five minutes of time-lapse, SMS is sent to the registered contacts. Therefore the exact location of the person can be tracked by the application continuously which is the primary aim of the proposed system and the person can be rescued

Uniqueness

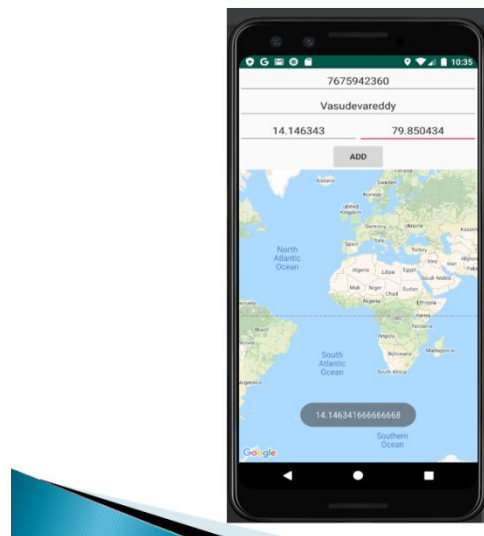
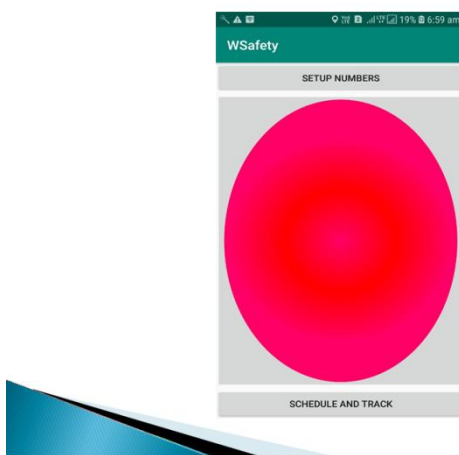
In the existing systems, we have mentioned many Android applications having similar feature to my application. In all those applications, victim's location is sent only once to the registered contacts in different forms like SMS, EMAIL etc. But in practical situations, the victim may not be kept at one place standing, she may be moving around. So, in all those applications, we can know only one location immediately after the start of the application, but practically after sometime she may not be present at that place. The unique feature of my application is location is sent continuously for every five minutes till "STOP" button in the application is pressed. So, even if the woman is made to move around in the city, because of this feature of continuous location tracking, she can be rescued quickly and safely. Also, one of the contacts will be receiving a call, sometimes there may be chance for people not seeing the SMS, but after receiving the call they get alert and can look at the SMS and can identify that their near ones is in danger quickly.

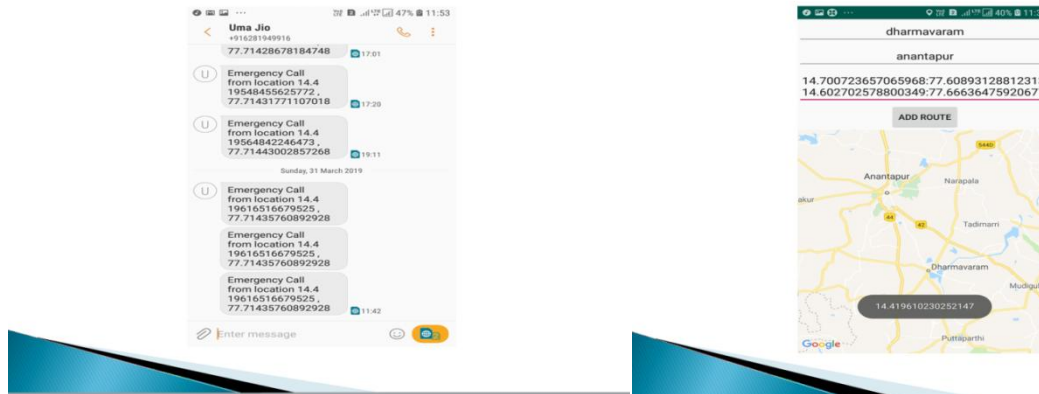
Results

The following figures are the screen shots of FR system application initially from the starting of it. Fig 2 represents screen shot of the application immediately after opening the FR system app on the root device (device on which the application is installed).

It contains four contact numbers to be filled of which first phone number receives call and SMS, the other three phone numbers receive only SMS.

Expecting Result:





Conclusion

In this paper, we have described Abhaya, an Android Application for the safety of women. This application helps in live tracking of the location of the victim through GPS along with one of the registered contacts receives a call from the root device. The merit of this application is even when the location of the root device is changing rapidly; we can identify the exact location. As a future scope, this application can be integrated with the law enforcement database, which includes all the phone numbers of regional cops. Some use cases such as rescuing victim, when the mobile network is not available, after initial alert or switch off condition. Further, it can be developed for IOS and Windows mobile platforms. Thus, this application can help the women in a big way from unsafe conditions.

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