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An Android Based Women Safety App

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Abstract: ***In the modern's world, it will be unsafe to travel alone for a person at night especially for women. To provide safety for women a good way to reduce the chances of becoming a victim of violent crime is to identify and call on resources to help you out unsafe situations.***
Having a safety app on your phone can reduce the reason for the risk situation and add assistance when we need to use it. Unlike the other applications available, which work only at the time of Emergency or Danger, this app can be used as a safety or precaution measure. So that, "Protection is better than cure". The main purpose of this app is to provide a safe platform through Android phone as today all person is taking Smart Phones to travel here and there. The user also gets to know the current user address using GPS location tracker. The fetched information is sent to the emergency contact of the user. This paper presents women security an Android Application for the Safety of Women and this app can be activated this app by a shaking the mobile, whenever need arises. This app identifies the location of place through GPS and sends a message comprising this location URL to the registered contacts and also send messages to near by mobile which are having this app.

I. INTRODUCTION

In today's fast moving world, Women Security is an issue of growing concern. We have read about many unfortunate incidents happening with women and the rate is increasing. Women these days are working women and the globalization has made us aware of gender equality. Earlier the women were restricted only to the household chores. With the changing scenario, women are competing with men in all fields.

We can see women going to great success levels in all fields, may it be corporate, scientific, education, business or any other field. Safety of women matters a lot whether at home, outside the home or working place. Last few crimes against women especially the case in Delhi was very dread and fearful. Because of such crimes, women safety has become a major topic. According to the statistics, it is found that every two out of three women have suffered trauma in the last year. According to the survey of women, it is found that women are losing their confidence because of such incidents. By the survey of Delhi government's Women and Child Development Department, around 80% of the women in national capital have fear regarding their safety. Women are harassed not only in the night or evening but also in the day time at their home, working places, or other places like street, club, etc. It is found through the survey that the reason of safety concern is the lack of gender-friendly environment and improper functional infrastructure such as consumption of alcohol and drugs in open area, lack of adequate lighting, safe public toilets, sidewalks, lack of effective police service, lack of properly working helpline numbers, etc. A huge percentage of women have no faith that police can curb such harassment cases. There is an urgent need to understand and solve this problem of women safety so that they can also grow equally like men in their own country.

II. EXISTING SYSTEM

There is a variety of applications for women protection when they are in dangerous situation. The disadvantages of using these applications are they only send the alert messages to the saved contacts. Because of previous systems there is less possibilities of overcome the dangerous situations of women. Previous applications also have gps tracking system for to track the women location but it has not specific range. Existing system don't have the feature that is it don't sends the alert message to nearby cell phones.

III. PROPOSED SYSTEM

The proposed system will be implemented with the help of android application. Which will alert the nearby people who having this application by sending alert messages to them and alert sound in the guardian mobile on shaking of victim mobile. Also sends messages and alert sound to the saved contacts in the application and police station. Which also show the location of the victim with the help of GPS tracker system. Which also make sound in guardian mobile when his/her mobile in silent mode.In this app we can also add as many contacts as we can.

A. *What's New in the System to Be Developed ?*

In new application we are providing a user friendly interface where the user could send the message alert more efficiently and smartly. The user couldn't have to remember all the important contact numbers of siblings, relatives or friends. The new system is also interactive to the users and provides the facility to know their nearby police station , hospitals and their own location.

IV. FEATURES OF SOS APP

In this section, the key features of the SOS App are listed below, which provides an overview of the system as well as explains why it is different from others.

A. *Sign in is mandatory*

1) The first time users have to register to the app by entering the basic details of the user like Name, Phone no, Emailid, etc in the Signup Page.
2) A one-time verification code will be send to the user's email-account. Then, the user will have to enter the verification code in order to complete the registration process. Then, a message will be send to the user's mobile number for completing the registration successfully. The user now can access the main features of the app.
3) User will be able to manage their Emergency Contacts using the Add Emergency Contacts option.

B. *At Emergency Situations*

1) There is an Alarm Button. On pressing the alarm button, a police siren (a shrill and loud noise) will be activated which will get the attention of nearby.
2) There is an Emergency Call Button. On pressing that button an emergency number will be autodialed.
3) There is a Panic Button. On pressing that button once, an alert message will be send to the emergency contacts along with his/her current location. In case, the user does not have an internet connection then only alert message will be send.
4) On pressing that button, there will be two modes available, like offline mode and online mode.
a) The user can use the offline mode in case if the user does not have an internet connection. On pressing this mode, it provides information about nearby police stations according to the fixed area-wise.
b) The user can use the online mode in case, if the user has an internet connection. On pressing this mode, it provides information about nearby police stations according to the user's current location.

V. METHODOLOGIES

A. *Design and Implementation Steps*

The Application is built to run on devices having Android KitKat (API 29) and above and during testing all parameters and functions were tested successfully. Some dummy data were built and tested and it was found that the app is working properly. For the login purpose, the application only accepts valid password as login credential and it was found working properly .
The front ends of the project are designed using XML (Extensible Markup Language).

1) activity_registration.xml: User Register himself by providing Name, Email,password, Emergency number.
2) activity_second.xml: User Login by valid email id and password.
3) activity_mylocation.xml: A page where user can fetch the location.
4) activity_safety_tips.xml: A page with safety tips and log out button.

B. *Algorithm and Code*

Step 1: Go to Launch Page.
Step 2: Login providing valid email address and password. If not registered user, then "NEW USER? SIGNUP".
Step 2.1: In case is not a registered user then register by entering name, valid email address, password, emergency contact number. Then after registering click on "ALREADY REGISTER? LOGIN"
Step 3: From the login page by entering valid email and password go to the functionality page.
Step 3.1: After login we have to ADD THE CONTACTS and at the emergency situations we have to send the SMS to the saved contacts we have to enable the GPS also.
Step 3.2: Then "CLICK ON THE SEND SMS " button present right below the message "Done Great!" to fetch the location.
Step 4: After fetching the information go to the safety tips page which has a set of safety tops written in it.
Step 5: In case you want to logout then click on the "LOG OUT" button present at the right bottom corner of the safety tips page.

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Fig1. Setting up to the device.

Fig2. Create an account

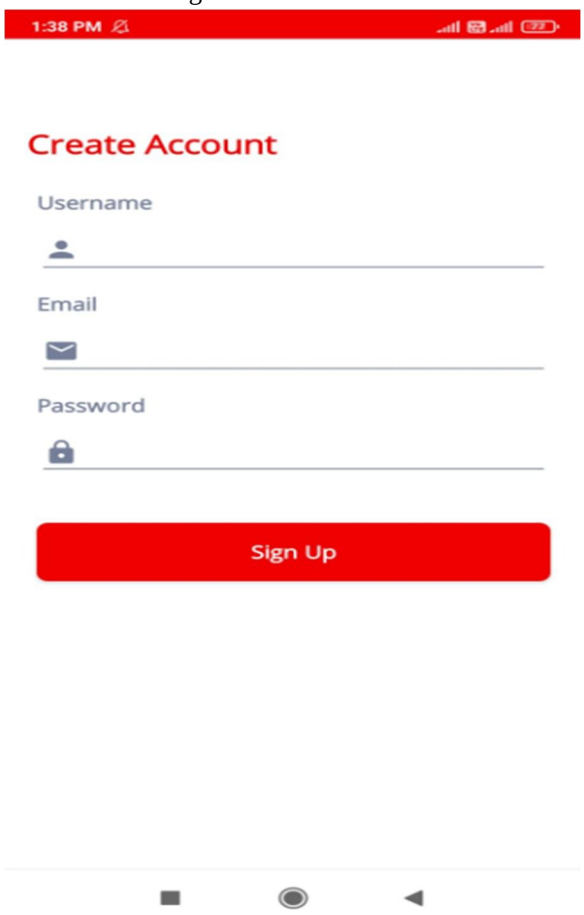

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Fig3. Enable the GPS for tracking the location.

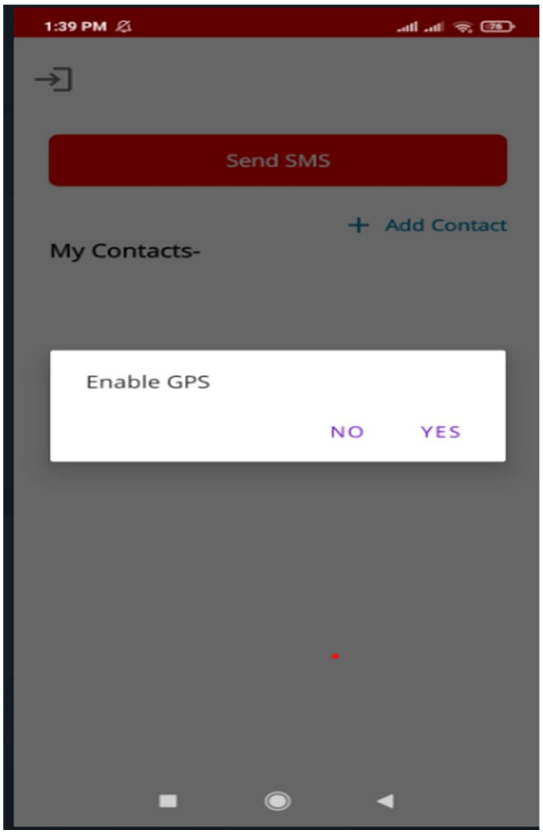

Fig4. ADD the Contacts in the application.

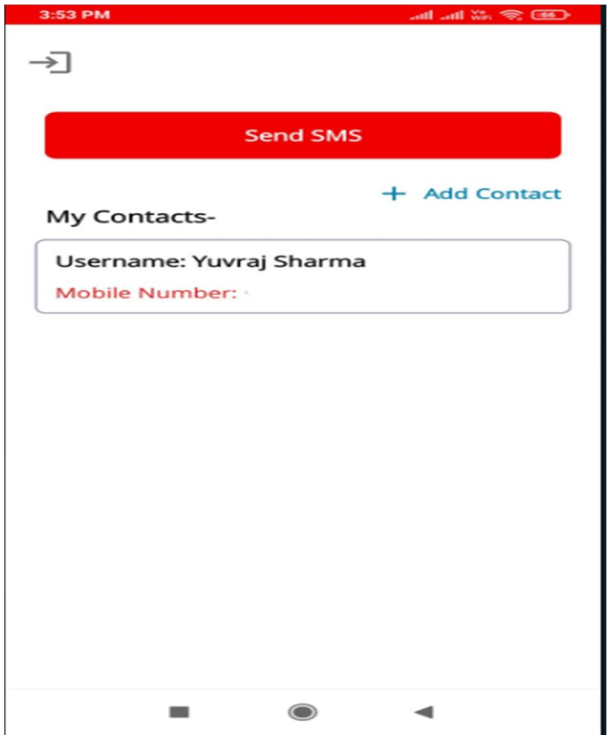

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Fig5. After Click on the Send SMS. Receiver will receive the messages via the SMS.

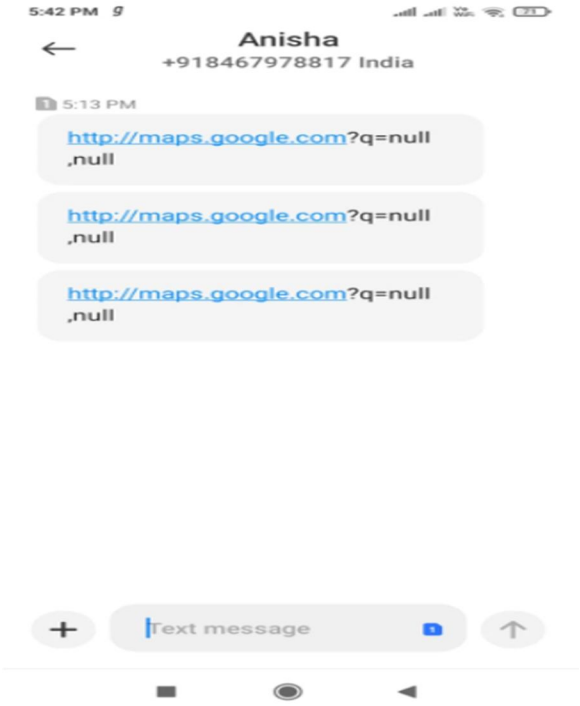


Fig6. After clicking on the link receiver will able to see the location of the victim.

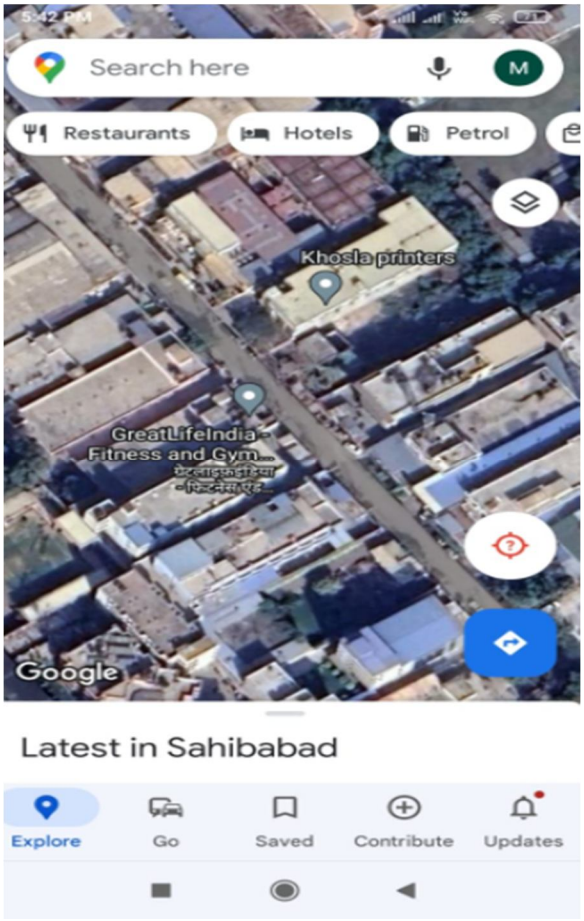


Fig7. Architecture of Women Security App.

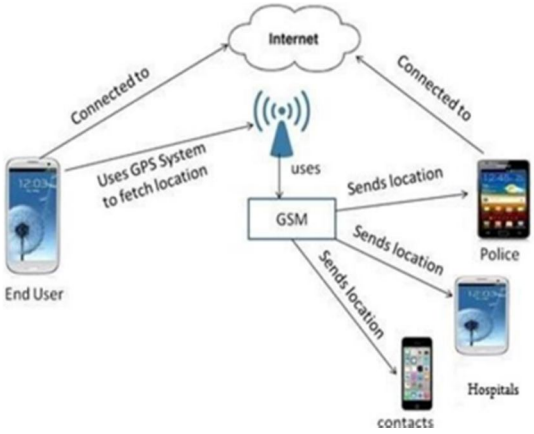
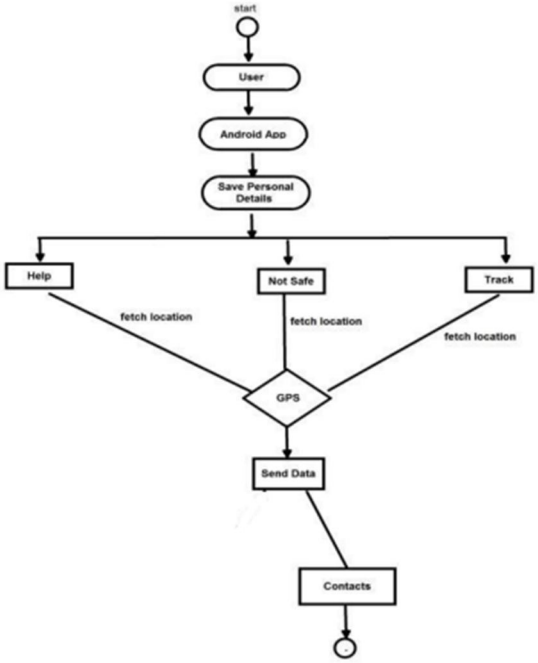


Fig8. Activity Diagram of proposed architecture.



VI. ADVANTAGES

1) This system plays a sound if the guardian cell in silent mode.
2) This system will send message to the all nearby cells which having that application.
3) This system also send message to police station.

VII. RESULT AND ANALYSIS

Comparing to existing computerized system, our system is gives more security and also System gives better user friendly environment for the users. When she shakes the mobile This system will sends message to the all nearby cells which having that application. Plays a sound if the guardian cell in silent mode. This system also send message to police station. Also our system sends alert message to police station. It can be concluded that our SAFE NAARI App provides a safe and secure environment to the women in the society, and allows them to work till late nights. Anyone before doing any crime against the women will be deterred and it help reducing the crime rate against the women. This application will act like a weapon for women that will ensure the safety and security which works on the Smartphone with the android operating system.

VIII. CONCLUSION

Unfortunately, the safety of women is in doubt and security is not concerned. Many headlines still coming across against women indicates that increasing trends of such sexual assault rapes still happening in today's generation. Around 80 percent of women are losing confidence and have fear of the realization of freedom. So we are trying to contribute little efforts towards women which will ensure the safety and respect for women so that she canal so have the right to grow equally like men. This mobile application is very much helpful for anyone. This application will help the user by scanning the QR code which will be nothing but she can attach the vehicle detail send through GPS the current address will be fetched and send it to any contact depending on the user. Here the user can take precautions before coming to the actual danger.

It is to let every women is now safe to travel alone as someone is getting their updated location and also has vehicle information. For the future, we have in mind to extend this app where she can also contact nearby police patrolling vans in case of need. This project that I have made is small scale but has a large development scope and I look further to the day it can be extended and used by all common people so in totality this project is an initiative taken by the youth community to contribute to the betterment of the society in whatever way we can.

IX. ACKNOWLEDGEMENT

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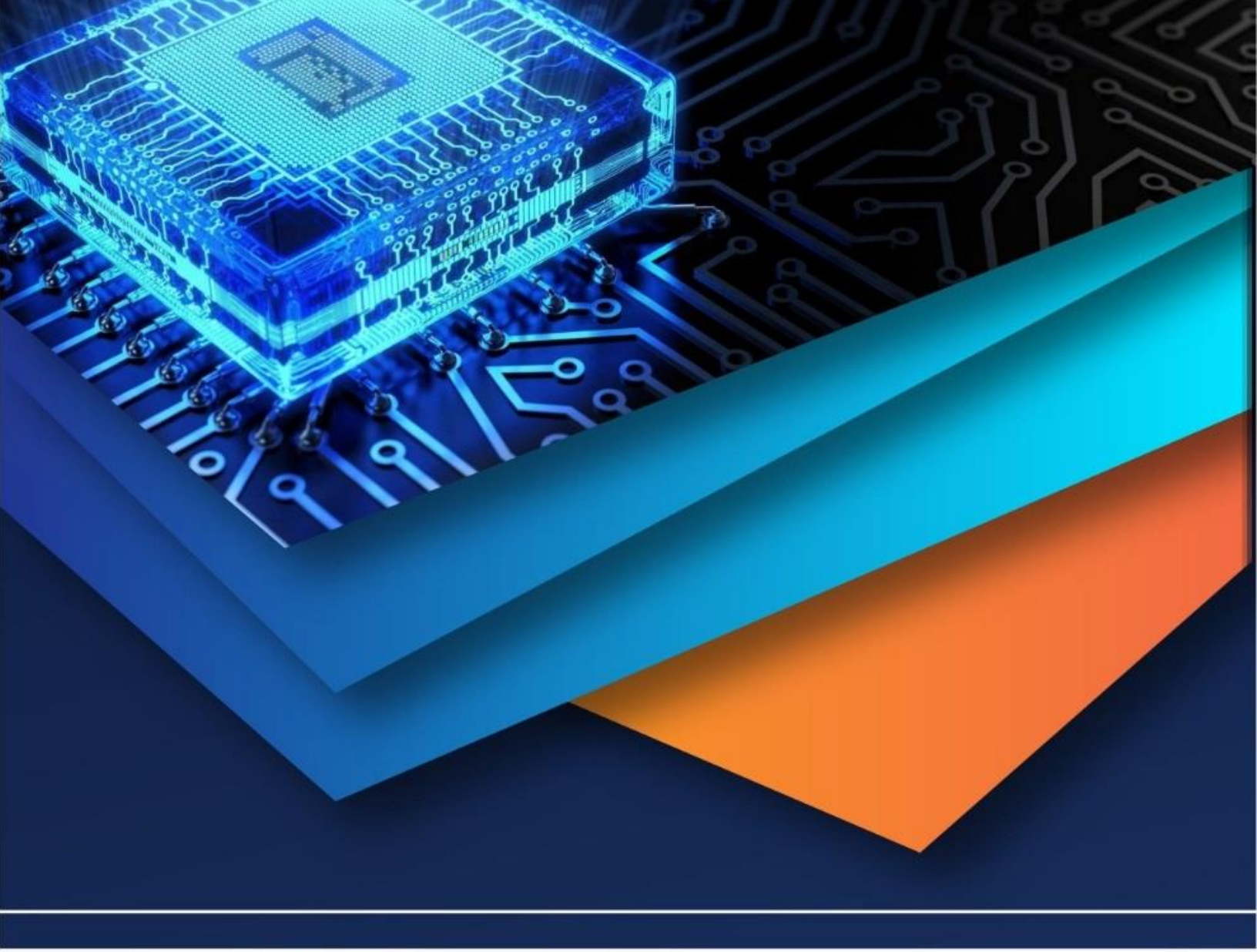

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