ABHAYAPRADHA: SECURITY ALERT SYSTEM FOR WOMEN'S SAFETY

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Abstract: Security for women 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 Android application. This paper suggests a replacement perspective to use technology to guard women. We use an android based smart phone with an integrated feature that alert and supply location based Information. There are many severe problems that arise all of a sudden, that basically cause threat to life. There should be some means to both detect and alert the authorities. The person, who is in trouble-victim, can make use of this application to hunt the assistance from police, friends, trust worthy people-guardian. Whenever an individual is in trouble all that he/she need to do is, to only give shake to their smartphone that has the application deployed in it. Once the shake is given to smartphone a message seeking for help will be sent. When the guardian receives with a track message, the present location of victim is found. Therefore, this application is going to be more efficient and productive in problem detecting and alerting.

Index Terms - **Global Positioning System (GPS), Global System for Mobile Communication (GSM), Women security, Smartphone, Registered contacts.**

I. INTRODUCTION

Even during this era women are feeling insecure to exit of their house due to increasing crimes in our country like harassment, abuse, violence etc., Women security may be a major issue of concern in today's world. Women are subjected to unethical physical harassment. Women safety methods like various mobile apps are tried and implemented, but the necessity of the time is that they have may be a device which will be carried everywhere easily. the company and IT sector are currently in boom. many ladies are working in corporate even in night shifts. there's a sense of insecurity among the working women. Safety is that the favourite power for everybody in today's world. Rape is that the one among the main crime in India practiced against Child and ladies. The rate is growing steadily since previous couple of decades. consistent with latest National Crime Records Bureau (NCRB) 2013 annual report, 33,707 rape cases are reported across only India. the amount of reported rape cases has been steadily increasing over the past decade. Technology is that the best thanks to solve this problem. That's the rationale to develop this project which will act as a rescue application and protect at the time of danger. The motivation behind this project is an effort to specialise in a security system that's designed merely to serve the aim of providing security to women in order that they never feel helpless while facing such social challenges. a complicated system are often built which will detect the situation. The proposed android application is more sort of a safety system just in case of emergency. within 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 most purpose of this project is to supply safety to the women's from the damaging zone. during this project we are providing facility to secure the women's by providing android application. because the women feels insecure at that point she will shake/tap the smartphone. GPS will calculate the latitude and longitude co-ordinates of that area and send those data to the registered contacts number which is already saved in android application. during this paper they describes about safe and secured electronic system for ladies which comprises of an Arduino controller and sensors like temperature LM35, flex sensor, MEMS accelerometer, pulse sensor, sound sensor. A buzzer, LCD, GSM and GPS are utilized in this project. When the lady is in threat, the device senses the body parameters like heartbeat rate, change in temperature, the movement of victim by flex sensor, MEMS accelerometer and therefore the voice of the victim is sensed by sound sensor. When the sensor crosses the edge limit the device gets activated and traces the situation of the victim using the GPS module. By using the GSM module, the victim's location is sent to the registered contact number [1].

II. LITERATURE SURVEY

Using a various tools and technologies, the authors have proposed safety applications for android and other platform users. They suggested a various approach to assist in women's safety

In this paper, they developed an application that comes with all the unique features like real-time location tracking and integrate all the features offered by the prevailing system like GPS tracking, SOS. the app requires an initial registration alongside emergency contacts and therefore the user is asked to update the emergency contacts from time to time. When the user is travelling from one place to a different, the dynamic GPS tracking offered by PubNub's channel is turned on to look at the user's location on a map. Users with an equivalent app can monitor other users with this app through the dynamic GPS Tracking system through the PubNub channel. When the SOS button is pressed then an alert message which contains the name of the user, GPS Location and a help message is shipped via SMS. The user has access to first-aid information and toll free helpline phone numbers. All the knowledge and data is integrated with Firebase [3].

This paper focuses on designing smart device supported IOT uses a low-energy Bluetooth connection to synchronize to an application on the wearer's Smartphone. the appliance lets the wearer inform her situation just in case of a critical situation - to her friends, relations, the police, or a gaggle. The software or application has access to GPS/GSM and Messaging services, which is pre-programmed in such how that whenever it receives emergency signal, it can send help request alongside the situation coordinates to the closest police headquarters, relatives using emergency keys (SOS). This action enables help instantaneously from the Police who is within the near geographical location, who can reach the victim with great accuracy. The app also uses the Smartphone's record the incident and subsequently transmits the wearer's location alongside the sound recording to the police [4].

In this paper, the scope of their system is to develop a sensible device which may help women in some emergency situations. The system may be a smart wearable device which resembles a jacket. The device contains different modules like GPS (Global Positioning System), GSM (Global System for Mobile communication), Camera, Buzzer, Shock Mechanism Circuit. the most objective of the system is to supply a reliable security system for a lady once they are alone or feel unsafe [5].

This paper focuses on designing a wearable smart watch. When a women or child wearing this 'watch me' is exposed to sexual or vulnerable attack, the sensor present in it detects the guts beat rate of an individual which can be high at the instant by the secretion of epinephrine hormone from hpa axis and gets activated, this may not only provide alarm sound to the eye of nearby people, it'll automatically make a call to our registered contact and also through GPS/GSM it'll detect the nearby police headquarters and make a hoop there so it'll be helpful for police to arrive soon at the spot by tracking the GPS, such a system will cause safer and better environment[6].

This paper focuses on a security system that's designed solely to serve the aim of providing security to women in order that they never feel helpless while facing such social challenges. The system consists of varied modules like GSM shield (SIM 900A), Arduino ATMega328 board, GPS (GYGPS6MV2), screaming alarm (APR 9600), a group of pressure sensors for activation and power supply unit. The Delhi Nirbhaya case that triggered the entire nation was the best motivation for this technique. it had been time we girls needed a change [7].

In this paper, they developed a system that helps the ladies and child to hunt help in any critical situation. For that, the system contains GPS to detect location and GSM mechanisms to pass their current location to anybody of the trusted contacts as a google map link and services are provided to trace the locations from that moment onwards to save lots of the person [8].

In this paper, women and child safety may be a vital issue thanks to rising crimes against women lately. This paper proposes to trace the ladies or child from dangerous Situation. The flex sensor band wears by the kid or a lady. If they're in dangerous situation they will bend the flex sensor literally, then it'll send the accurate location to the android phone by the utilization of GPS and GSM. The GPS and GSM module which is already connected to the ARDUINO UNO. It converts the analog signal from the flex sensor to the message as a format of google link to our contacts [10].

The main objective of this paper is to make a wearable IOT device for the safety and shielding of girls, girl children. this is often accomplished by the examination of physiological signs in concurrence with body gestures. The signs are analysed and blood heat is measured by galvanic skin resistance. This work deals with blood heat and stress and skin resistance and relationship between them. By applying the records, activities and persons position is analysed. The device makes an analysis of skin resistance and blood heat to analyse things of the person [9].

III. PROPOSED SYSTEM

The proposed system is particularly for the women safety and overcomes the disadvantages of existing system. This proposed system is 'GSM & GPS Based women Security System'. It consists of GPS device ie. Any Android phone . GPS device must to be placed inside the device (Android Phone). The device will provide the position information such as latitude, longitude of women. The person, who is in trouble-victim, can make use of this application to hunt the assistance from police, friends, trust worthy people-guardian. Whenever a person is in trouble all that he/she got to do is, to just give shake/tap to their smartphone that has the application deployed in it. Once the shake or the smartphone is tapped upon then a text message alongside voice alert message is received by the respective emergency contacts. Further the one that receives the notifications can find and track the situation without the interaction of the victim's application at each and each function.

Features

- This project helps a person to escape from any danger or the critical situation by sending text message to registered contacts
- To able to track the location using GPS [Global Positioning System] through Google maps which will be updated every 2 minutes
- Notification are going to be sent to alert the surrounding people in emergency situations if people are using same application
- It provides a list of hospitals and police stations that are nearest
- voice announcement are often send to guardian phone, if guardian phone is in silent mode
- The application is simpler to use all the woman
- For user there is no need of external hardware or software to use this application

- This application is free for user, which does not affect user's cost
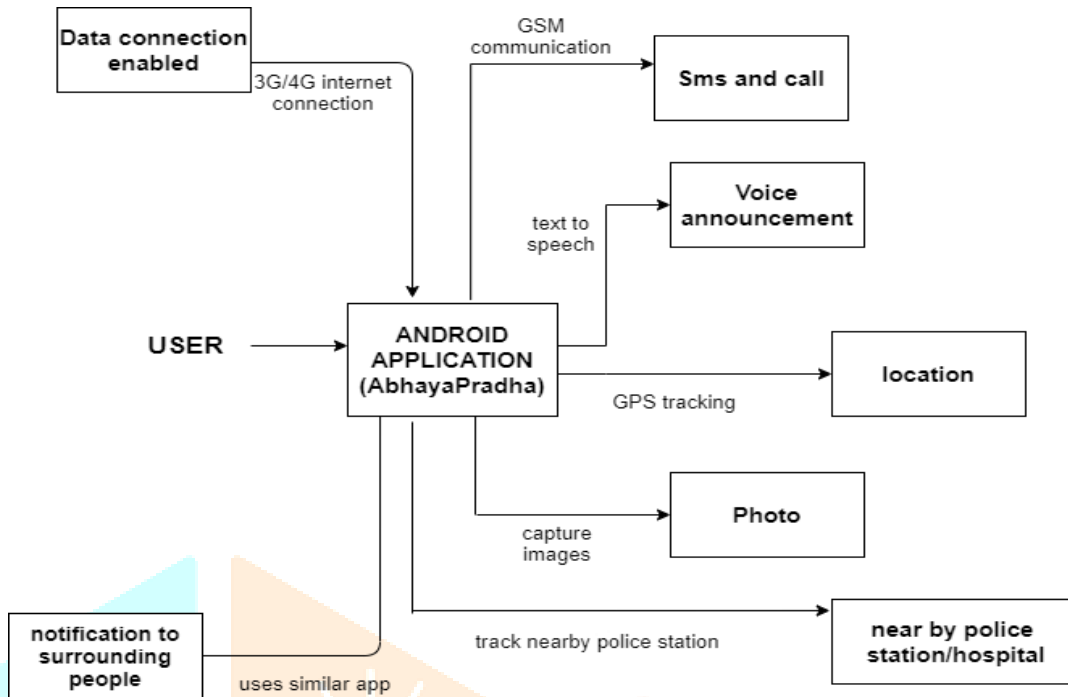

Fig 1: Block diagram of the proposed system

IV. EVALUATION RESULTS AND DISCUSSION

The modules have been implemented and evaluated. Along with the screenshots, the findings are addressed. The first move is to enter the contact information of relatives or parent and to set the threshold value, which is for shake or tap. These particulars will be saved in a database. Fig 2 shows the threshold value i.e 5000 has to be set, which is the standard time period for shake or tap of smartphone and, Fig 3 shows the contacts that was registered by the user. When the user shake or tap given to a smartphone the text message alongside voice alert message is received by the respective registered contacts.
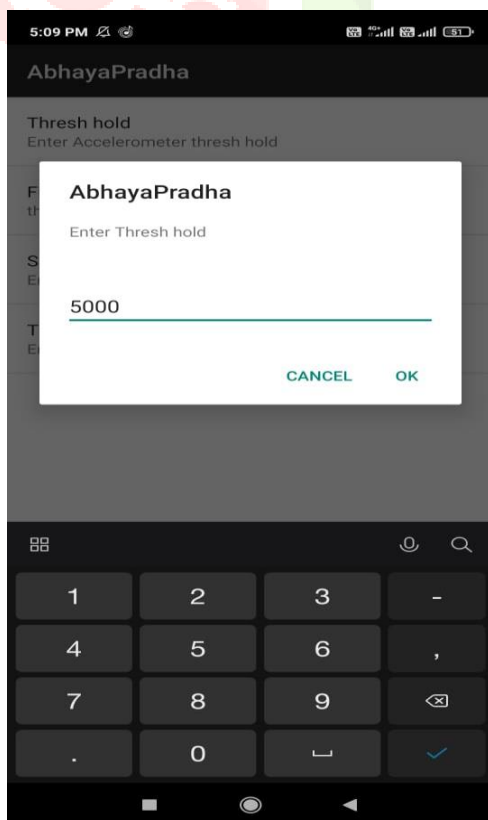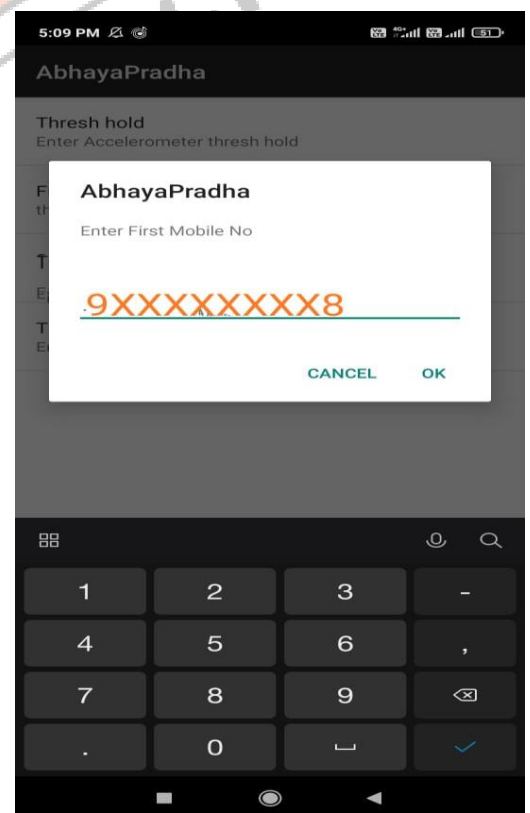

Fig 2 : Threshold value

Fig 3 : Registered Contacts

Fig 4 shows the message seeking help is sent to the registered contacts when the shake was given to smartphone and guardian can request for images,location and automatically the captured image sent to registered contacts , Fig 5 shows that the guardian can do online complaint registration to nearby police station.
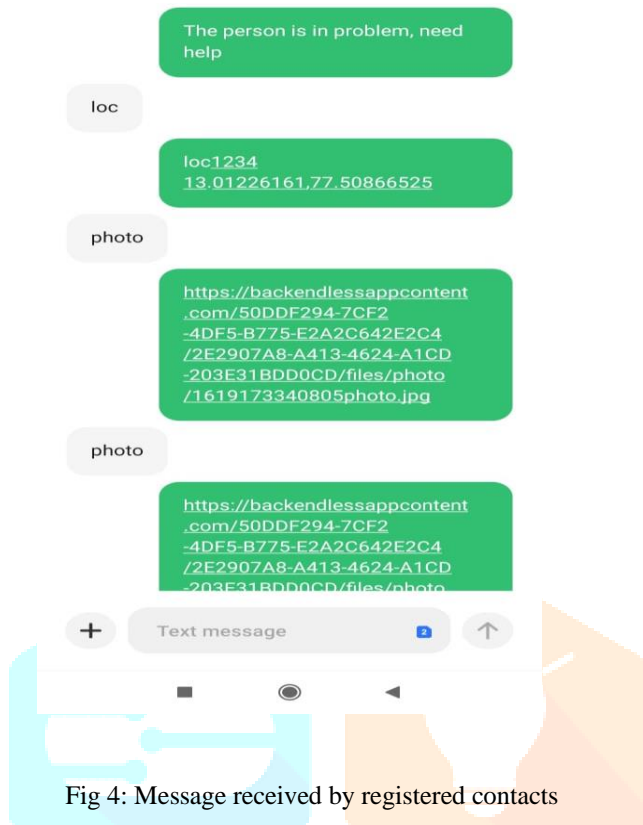

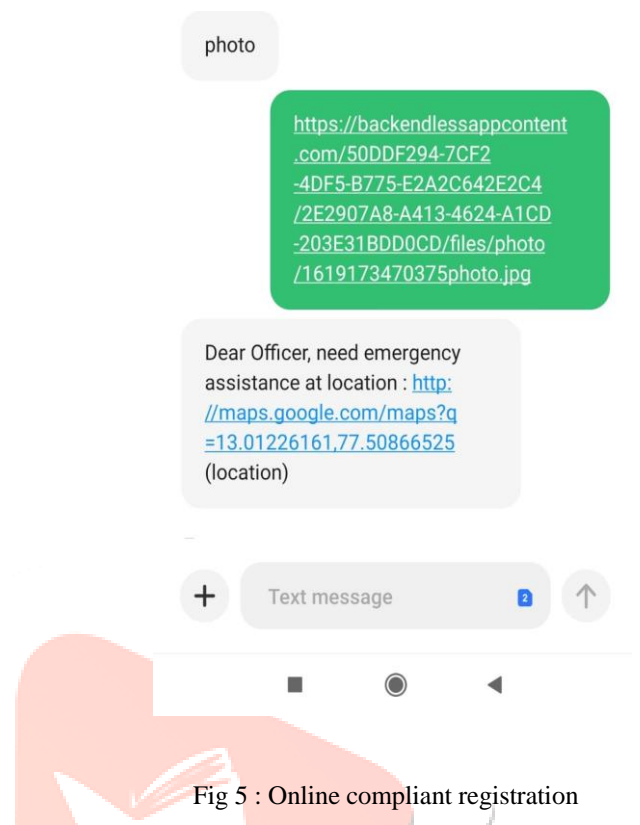Fig 4: Message received by registered contacts

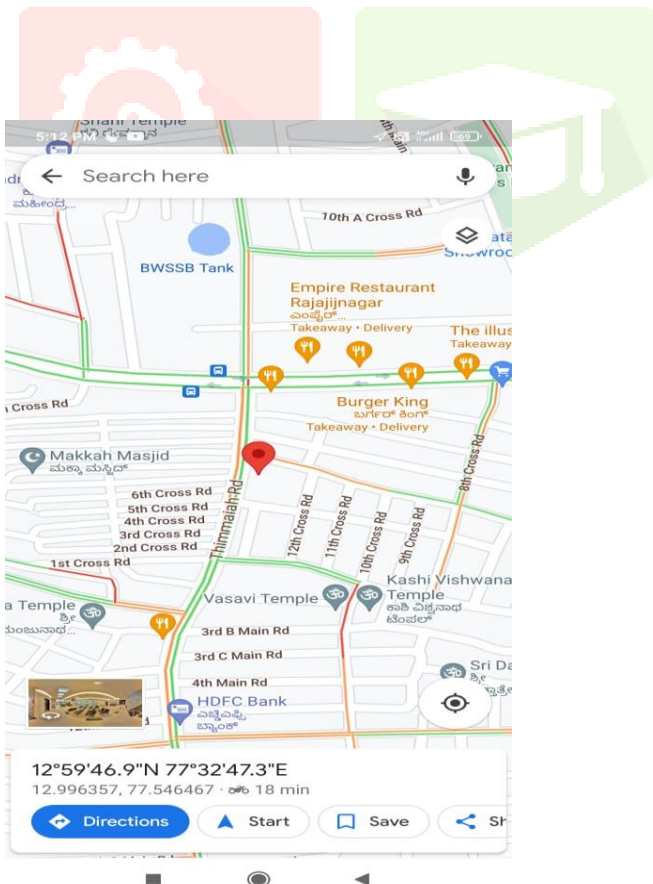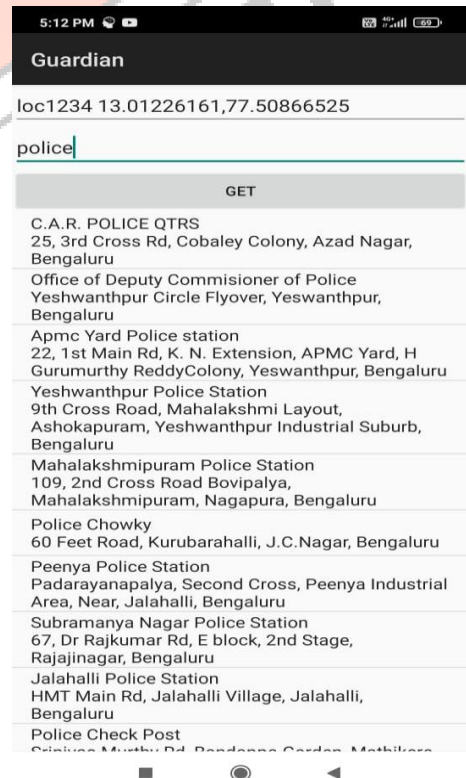Fig 5 : Online compliant registration

Fig 6 : Victim's location

Fig 7 : Nearby Police station

Fig 6 shows the victim's locations through Google Maps and, Fig 7 shows the nearby police station to the victim's location.

V. CONCLUSION

Thus this technique was developed for the welfare of girls and women's. It provides a helping hand to the women at risk or in danger and might provide an additional to women travelling outside regardless of the time. The problem of the women safety is increased rapidly in this environment, so I proposed as an effective Android application to prevent such form of the suspicious or natural disaster, by alerting the authorities using the android mobile phone which helps to stop such form of illegal activates and to trace the concern.

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