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INTELLIGENT PROTECTION IN A DISTRESS SITUATION USING SMART WAY

Mrs. A.Rosline Mary
Assistant Professor, Department of Computer Science and Engineering,
Vemana Institute of Technology, kormangla, Bangalore, Karnataka, India.
Rachana 1, SanjanaR 2, VinayaM 3, emanthN4
1,2,3,4 8th semester BE, Department of Computer Science and Engineering,
Vemana Institute of Technology, kormangla, Bangalore,Karnataka,India.

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Abstract – Human safety in India is a big concern which has been a most important topic regarding people safety. In the current scenario, every person are worried about when they will drive fastly even at odd hours without thinking about their safety. In India, most of the accidents deaths are due to lack of immediate medical assistance on the roads like highways. Now a day accidents has been increased by negligence of driver's and riders. Hence hospital assistance system for safety has become the most important preference among many organizations. Hence the proposed project is designed to provide security for all people by sending message to nearby ambulance service, blood banks and to the police. The application sends location of the end user and also alerts to the emergency contacts. The application also helps in providing women safety by sending alert message and GPS location to nearby police station.

INTRODUCTION

In the current scenario, every person is worried about when they will drive fast even at odd hours without thinking about their security. Providing security to people in the current world scenario is critical issue but very needed to every individual. Now a day's accident have been increased in public transport by drivers and riders Saving human lives in India is a big concern and has been a most important topic regarding human lives. Especially for women and senior citizen, we have to provide emergency services will help to reach the police when they face eve teasing, harassment, remote places and crime like chain snatching. Also, we need emergency services used to prevent burglaries in locked houses in the city. Once met with an accident it is important to save the life of person by sending alert message to nearby hospital, blood banks for assisting the injury. The term "Android" refers to an Operating System created by Google which is used on mobile devices like Smartphone's and tablets. Android is an open source and free to use platform. It provides greater flexibility for the apps by letting Firefox, Opera and chrome to run. Android provides Software Development Kit(SDK) free of cost for the developers to minimize the development and licensing cost. Android phones come with variety of built in applications and also supports third-party programs. Android programs are coded using Java language and are executed with the use of Google's "Davlik" virtual machine, which was developed for all mobile devices. End Users can download Android applications with the help of online Android Market. The System built using android operating system will compile source code, resources used by the app and wrap the min APKs so that the developer can test, release the application and distribute. Hence the proposed project is designed to provide security and safety for all people, by sending messages to nearby ambulance service, police station, blood bank. The application also sends location of end user and also alerts to the emergency contacts

Methods: The system is divided into different module; in our project we make use of four modules that is blood bank, health monitoring request, panic button, geotracking system through SMS.

BLOOD BANK: Once met with an accident it is important to save the life of a person for sending alert message to nearby hospital blood bank for assisting the injury. Here we will register all the blood bank with GPS coordinates; hence we can edit and view the details of the blood bank.

PANIC BUTTON: It is one such button where once pressed, the nearby police station will be alerted in case of a threat for the women in remote places and the required actions will be taken in order to provide safety.

HOME MONITORING REQUEST: Once the button is pressed, we need to input the details such as GEO location of the house and the following dates of our absence in order to monitor the house from miscellaneous actions such as theft and robbery.

GEOTRACKING SYSTEM THROUGH SMS: In this module a person can know our location if his/her contact is authorized in our device by sending a keyword called "GEO" followed by a common text message.

Design*:* Process of design involves "conceiving and planning out in mind and making of pattern, drawing or sketch". The system design transforms the logical representation of what a given system is required to do into physical reality during development. Important design factors such as reliability, response time, throughput of the system, maintainability etc., should be taken into account. Design constraints like cost, hardware limitations, and standard compliance should also be dealt with it. The task of system design is to take the description and associate with the specific set of facilities-men, machines, accommodation to provide complete specification of workable system.

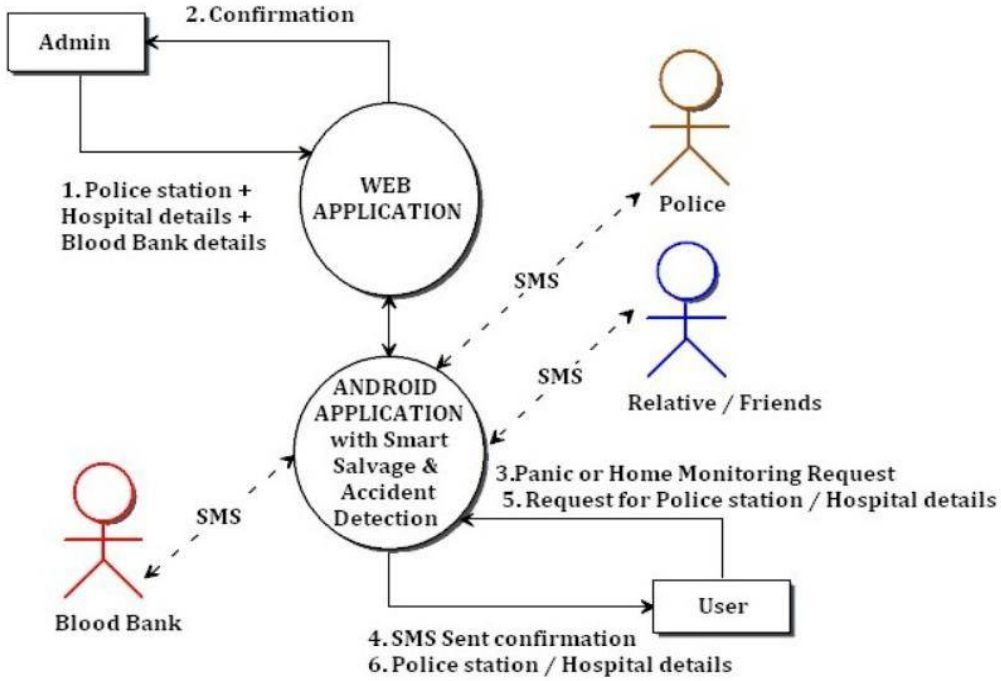

Figure1: Dataflow Diagram for user and android interaction

In Figure1, admin logs into the web application. Admin can only add or editor deletes the hospitals, police stations, blood banks into the database. On the other hand, end-user and emergency services and contacts interact with the android applications.

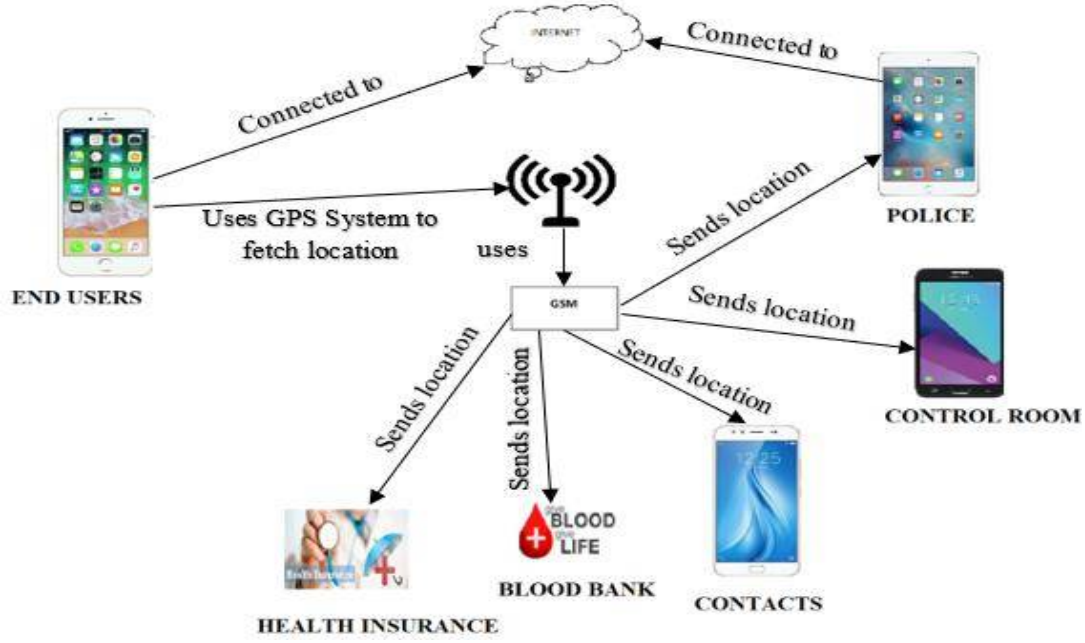

Figure2: System Architecture of Intelligent Protection System

- As shown in the Figure 2, during the time of emergency, the victim's GPS location is fetched and through GSM module the pre-stored message is sent to respective emergency services.
- End user or the victim's mobile automatically sends message to emergency contacts and services.
- Also if victim is conscious then he/she can manually send message to emergency contacts and services.
- But to view victim's location, emergency services require internet connection.
- During any medical emergency, message is sent to only ambulance services to respective contacts of the victim and nearby police station, hospital and blood bank.
- During any fire emergency, message is sent to only fire services and respective contacts of the victim and nearby police station.

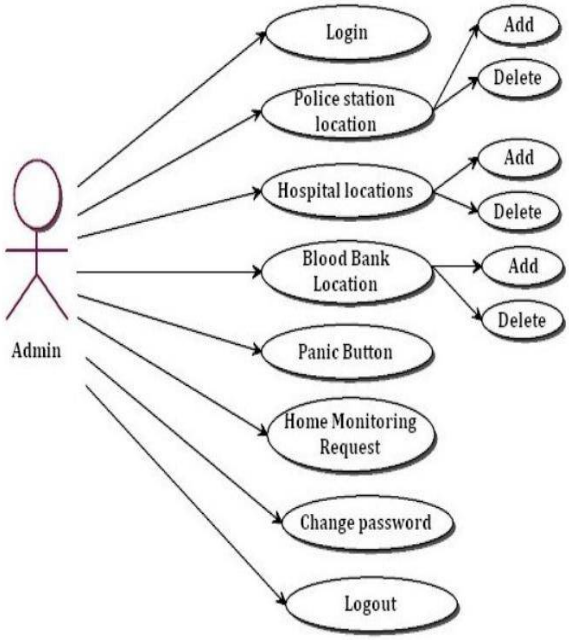

Figure3: Use Case Diagram for Admin

Existing System

In the existing system, android application is embedded with IOT kit. To track the ambulance which is carrying the patient and send text SMS containing location and values of all sensors details to the hospital using GSM technology. And there is no voice reorganization system**.** Mobile accelerometer sensor is not used.

Proposed System

In the existing system, android application is fixed with external IOT kit hence it is expensive. The most enhanced part of the proposed system is that there is no external device is used so that is less expensive and compact. The GPS tracks the longitude and latitude in order to extract the current location of the user and sends the pre-stored emergency message by using GSM to the nearby police as well as to the registered mobile number. The system also safeguards the home from theft and robbery in case of absence of the person, GPS tracks to nearby police station.

Results

The proposed system basically serves purposes such as, when an accident occurs the immediate messages are sent to the contacts saved in application. It also serves the home monitoring in the absence of owner. In case of threat to women safety there is a help option developed where it recognizes the "help" keyword will immediately send the messages to saved contacts and nearby police station .This application also has a blood bank option where the messages are sent to nearby hospital.

SNAPSHOTS

Figure1: Admin Login Page

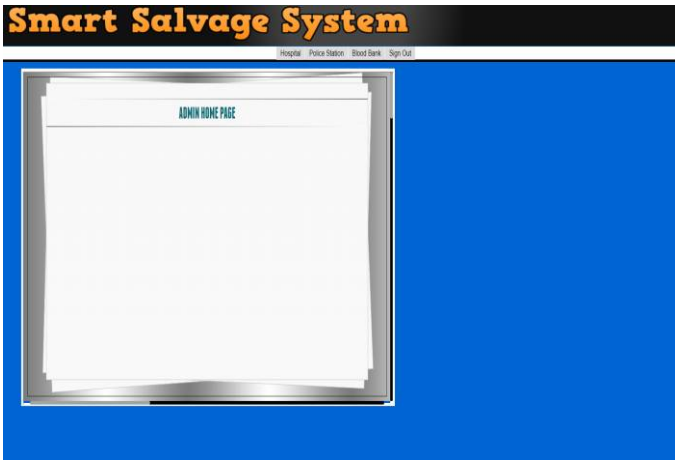

Figure2:Admin Page

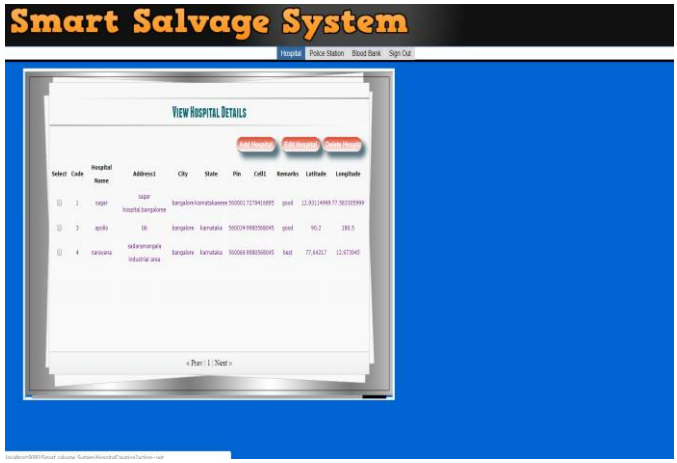

Figure3: Hospital Details

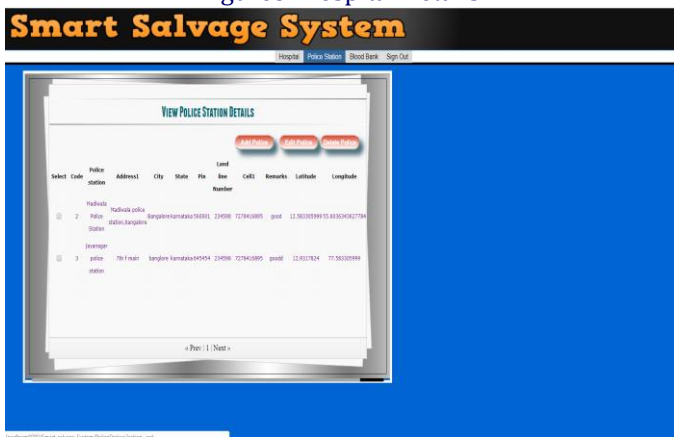

Figure4: Police Station Details

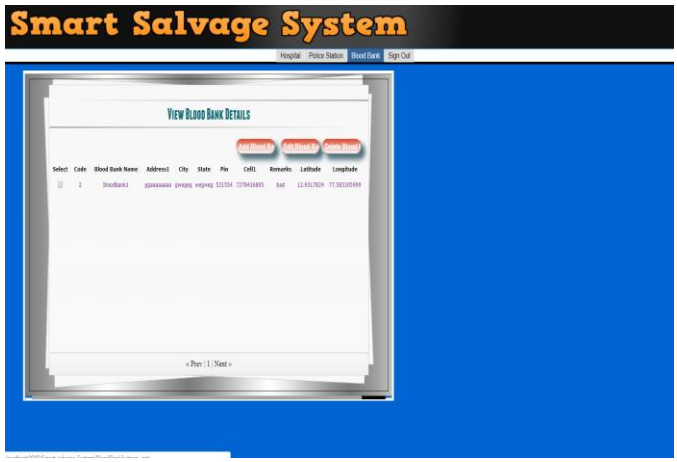

Figure5: Blood Bank Details

Figure6: Accelerometer module In ON mode

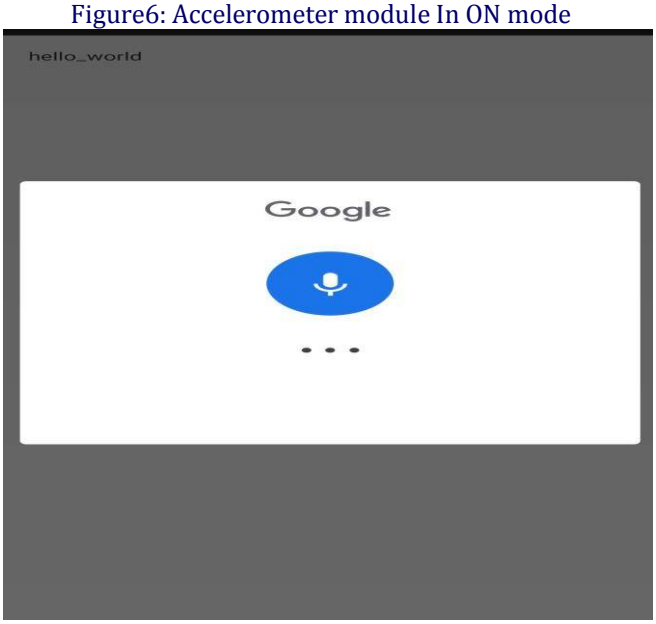

Figure7: Snapshot of Help and Fire button when manually invoked.

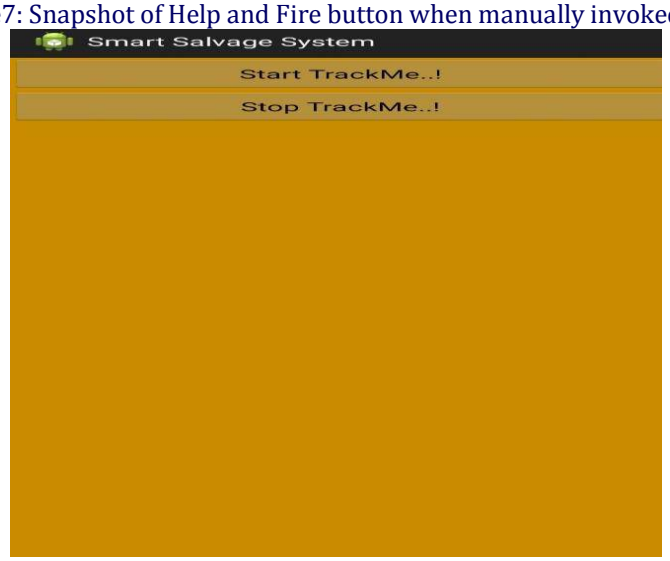

Figure8: Snapshot of Track button

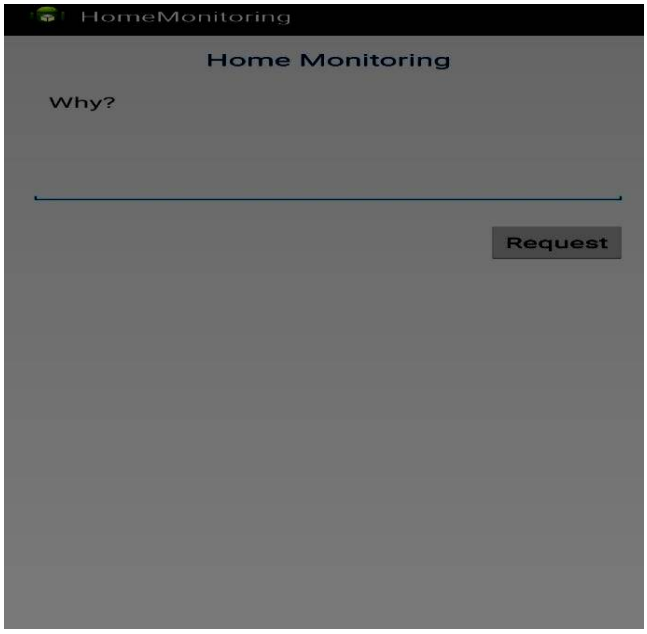

Figure9: Snapshot for Home Monitoring

CONCLUSION

An idea is proposed for saving victims during various emergencies by one touch. The application provides service only if it is in active mode. In active mode, during any emergency case the victim can press "Help" button or can steam for help which Automatically sends message to emergency services such as hospital, blood banks. Also if women is not feeling safe in remote areas then she can press "Not Safe" to track victim location and send message to respective emergency contacts and services such as police station. The proposed system also deals with women safety. It helps the police ,insurance to trace by sending alert message with Location using GSM. The pre stored message will be sent to registered contacts. Police stations and ambulance services during the emergency situation in one touch. Proposed system uses the inbuilt feature voice recognition to recognize voice of a person who is in emergency situation and sends the alert message. Accelerometer sensor which automatically computes the shake value of a mobile and alerts the respective emergency services. It helps to prevent burglaries in locked houses of the city. Provides protection to women by sending message to nearby police station in case of emergency in the remote places.

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