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A Modern Approach of Handling Women Safety using Android App System

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Abstract :
The safety of women is a concern of increasing urgency in India and other countries. The primary issue in the handling of these cases by the police lies in constraints preventing them from responding quickly to calls of distress. These constraints include not knowing the location of the crime, and not knowing the crime is occurring at all: at the victim's end, reaching the police assuredly and discreetly is a challenge. To aid in the removal of these constraints, this paper introduces a mobile application called WoSApp (Women's Safety App) that provides women with a reliable way to place an emergency call to the police. The user can easily and discreetly trigger the calling function by shaking her phone, or by explicitly interacting with the user interface of the application via a simple press of a PANIC button on the screen. A message containing the geographical location of the user, as well as contact details of a pre-selected list of emergency contacts, is immediately sent to the police. This paper describes the application, its development, and its technical implementation.
Keywords : Android, safety, GPS, location, alert

1. INTRODUCTION

Swami Vivekananda stated that, “The best thermometer to the progress of a nation is its treatment of its women.” Violence against women is a significant public health problem, as well as a fundamental violation of women’s human rights. According to the reports of WHO, NCRB-socialgovernment organization 35%Women all over the world are facing a lot of unethical physical harassment in public places such as railway-bus stands, foot paths etc. 10 years ago on the night of December 16, 2012 the brutal gang rape of a paramedical student by six men on a moving bus in the national capital shook the nation for the sheer brutality and torture inflicted on the hapless girl. Thousands of youngsters protested on the streets of Delhi demanding justice for her. She finally succumbed to her injuries on December 29, 2012.

Women are working at different diverse groups for a common cause. women work across different places, religious, political, and cultural divides to promote peace. We are all know about importance of safety of women's but we must realize that they should be properly protected. Women are

not physically strong as mens, in an emergency situation a helping hand would be a relief for them.

It is the best way to minimize chances of getting a victim of violent crime (robbery, sexual assault, rape, domestic violence) is to identify and call on to the friends and parents to help you out of dangerous situations. When we are in immediate trouble or get separated from friends during a night out and don't know how to get home, having these apps on your phone can reduce your risk and will he useful to stay safely

Though there were several apps originally developed for students to reduce the risk of assault on women, they are suitable for all women in the light of recent outrage which shook the nation and woke us to the safety issues for our daughters and all the women, people are gearing up in different ways to fight back. new apps have been developed to provide security systems to women on their phones, so that they can use when they are in need.

This app ensures the safety of women. it helps to identify and call on resources to help the one out of dangerous situations. These reduce risk and bring assistance when we are in danger the help us to send the location to the contacts . The app we designed is to provide security to women is the main purpose of this app to provide the awareness on the time of critical situation for women. The using person can use this service by adding the emergency contacts using the emergency contacts icon in the app. When the person is emergency the user would have to shake up his/her handset, after that a distress signal(SOS) will automatically got generated from the user end and will send SMS messages to those contacts which are saved in the phone at the time of registration. The SMS message contains that they are in danger and exact location of the victim. This app has different features and acts as a very powerful alarm that works on 24 hours to keep you safe.

We will be very helpful in such situation where we have take help of this app, but if in case you come across such situation we have to press on the red button of the app will inform to our parents and friends about your location as well as a text that will make them aware that you might need some help on urgent basis, finally they can give some feedback for the app by pressing “send feedback” button.

2. EXISTING METHODOLOGY:

The recently developed solutions for the safety of women include Smartphone Applications, Intelligent Security Systems and Wearable devices.

1. Suraksha is a security device that can be activated in three ways; a voice command, click of a button and when it is thrown with a force. Upon activation, this system sends the location of the device to pre-selected contacts via an inbuilt GSM module. But during times of distress, it might not always be possible for the user to carry this device in her hand. Also, the attacker might notice the device that the victim is holding.

2. Another such solution is a one touch alarm system designed to look like a watch. The GSM and GPS module within the device is used to send the user's location to preset SOS contacts when triggered by pressing a button. This device may be aesthetically unappealing to the user and might be noticed by the attacker,

3.Another solution suggested installing an Intelligent Security System in public places that would detect the facial expressions of women. If the expression was suggestive of anger or fear, a message would be sent to the control room. But in situations where a woman is angry or upset over any other issue, a false alarm will be triggered. Also, it is not possible to install such surveillance cameras in all areas, The objective of research work is to create a safety system in the form of a portable safety device for women, that does the following tasks:

- Victim has to press Panic button given on the screen, when she is in such condition
- Alerts family and gives location coordinates of the woman being attacked when there is connectivity of Internet.
- Captures and stores an image/video of the attacker to maintain a proof for legal actions.
- Send the Location of Victim via Message.

3. PROPOSED METHODOLOGY:

The proposed system is developed to overcome the disadvantages of the existing system specified earlier. We can create Interactive Women Safety Security user application using Android Mobile Application.

The app developed has panic button that allows the user to press when she is in an unfavourable situation. Pressing this button intimates to her emergency contacts and to the nearest police station about her situation immediately. The police can reach the spot at the earliest before anything worse could happen. This system is being created using Android and SQLite. Since Android is our Front-End it looks more look and feels for the web application is very effective and secure. This look and feel of it is more users friendly and easy to operate on.

The objective of our system to form a portable safety device for women, that does the following tasks:

- Victim has to press power button twice,
- The Location will be send without having connection to Internet
- Alerts family and police and gives location coordinates of the woman being attacked.
- Send the continuous Location of Victim via Message when moved from one place to another place.

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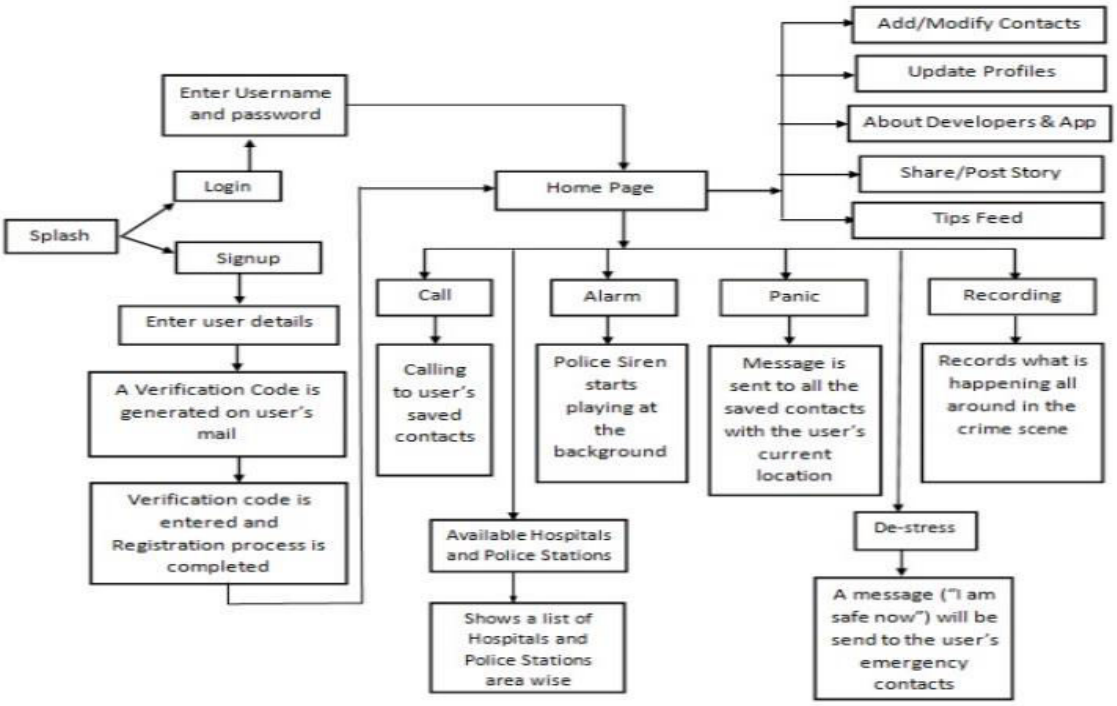

Figure 1. Work flow diagram of the Women Safety app

4. PROJECT MODULE

This project includes five modules and is listed below:

1. Authentication
2. Add Emergency Contacts:
3. Add Personal Information
4. Change personal Information
5. Sending SMS

A. Authentication: Authentication module contains all the information about the authenticated Person. Authentication is the process of verifying the identity of a Person by obtaining some sort of credentials and using those credentials to verify theu users‟ identity. If the credentials are valid, the authorization process starts. Authentication process always proceeds to Authorization process. User without her username and password can‟t enter into the login. If she is only the authenticated Person, then she can enter into her login.

B. Add Emergency Contacts: In this module user add the Emergency Contacts. It contains information about the Id, Name, Mobile Number1 and Mobile Number2. The Emergency Contacts are stored in the database and retrived when an emergency message needs to be sent.

C. Add Personal Information: In this module user enters the Personal Information. It contains information about the Id, Name, Mobile Number, email id and address. The Personal Information is stored in the database.

D. Change Personal Information: In this module the user can her change or update the Personal Information. It changes can be done to information like Name, Mobile Number, email Id, Address. The changed personal information gets updated in the database.

E. Sending SMS Information: It is the core module of this application. In this

module the women safety feature is added. This app is activated by a single click by the women whenever she feels that she is in a stranded situation. A single click on this app identifies the location of the place through GPS and sends a message comprising this location URL to the registered emergency contacts and to the nearest police station immediately and to carry out the rescue operation as soon as possible.

5. SCOPE FOR FUTURE DEVELOPMENT:

There is scope for future development of this project. The Computer technology keeps finding new methods and technologies on a day to day basis. It is dynamic and not static. The skills which is prominent today will become obsolete in a few days. To keep in pace with the technical developments, the system may be additionally improved. So, it is not concluded. Yet it will improve with further augmentations. Augmentations can be done in an effectual manner. We can even apprise the same with further changes and can be integrated with minimal alteration. Thus the project is flexible and can be improved at anytime with more progressive features.

6. CONCLUSION

In this paper, we have proposed the designing and implementation of a safety system for women in the form of application. This paper also describes the application of women's safety app that is designed in android platform for safety of women with the aid of recent improvements in mobile technology. Going serially as per the objectives mentioned, a location tracking subsystem was successfully implemented and the corresponding results were logged. The further implementation of the system will be performed in accordance with the goals mentioned in the future scope. The process is maintained more simple and easy in ensuring the women safety. The system is highly scalable and user friendly. Almost all the system objectives have been met. The system has been tested under all criteria. The system minimizes the problem arising in the existing manual system and it ensures the immediate action to be taken when an unfavourable situation is encountered. The design of the database is flexible ensuring that the system can be implemented. It is implemented and gone through all validation. All phases of development were conceived using methodologies. User with little training can get the required report. The software executes successfully by fulfilling the objectives of the project. Further extensions to this system can be made required with minor modifications.

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