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# A Survey on Women safety System using GPS

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**ABSTRACT:** A wide range of tracking systems has been developed for tracking vehicles and displaying their position on a map, applications have been developed which tracks the mobility of a human being. Nowadays, tracking a person's mobility has become a crucial issue, specifically in the case of women. If tracking a criminal could be implemented as a system that is cost-effective and can be used for tracking a human being using a GPS equipped mobile phone rather than using a handheld GPS receiver. The main aim of our project is to develop an application that reduces the overall cost of tracking based on GPS system, which is a satellite-based service and it is available 24X7 everywhere in the whole world. GPS system can be used to get a location which includes details like latitude, longitude and altitude values along with the time details, etc. It is a free cost service available to every individual. To track the movement of the person we have used Google maps for mapping the location sent by the mobile phone. The mobile phone fetches the GPS location which communicates with the server using General Packet Radio Service(GPRS). This system is a low-cost service which is wireless data communication system. A mobile phone equipped with GPS receiver are easily available in the market, it is the latest technology. Mobile phone technology has enabled us to communicate across the world. The GPRS is one of the best and cheapest mode of communication available today.

**KEYWORDS:** GPS System, mobility, General Packet Radio Service, Google Maps

## I. INTRODUCTION

The main objective of the system is to track the current location of a person who has an android enabled mobile by extracting the longitude and latitude of that target person.

The primary objective of our system is to track the person and plot the location on a real-time system like Google maps. This is a Smartphone app that helps women to ensure their safety using their devices.

This application will help the persons, who surprisingly fall into an emergency and needs instant communication. Day to day need for security is increasing for women, as many incidents perceived about rape cases and many more, they need security at an emergency level, so this application will help to provide security for them.

The Global Positioning System (GPS) is the main key of this application. The location will be tracked with the help of a GPS system, for using this application one must have GPS enabled in her mobile to provide the current location to the friends and family members. The existing model has only enabled to send the location while the phone is on but the proposed model will trigger the location within the 2-3 shakes.

## II. RELATED WORK

This is a privacy security app having a troop of features; GPS tracking, emergency & important contact numbers, directions to safe locations, pins displaying danger zone area and a Safety Score. It drives in advance of exemplary women safety apps and presents a vast range of features, so that, they will help to practically plan and can give a counter-attack to those spots in the locality. When a person is moving to a new locality that is unknown to her and if she needs to know the safe areas, then this app will be much helpful, providing the user, a map-based view of the locality along with its safety score.

In today's world, people using smartphones have increased rapidly and hence, a smartphone can be used efficiently for personal security or various other protection purposes. The heinous incident that outraged the entire nation have wakened us to go for the safety issues and so a host of new apps have been developed to provide security systems to women via their phones. This paper presents, an Android Application for the Safety of Women and this app can be activated this app by a single click, whenever the need arises. A single click on this app identifies the location of place through GPS and sends a message comprising this location URL to the registered contacts and also call on the first registered contact to help the one in dangerous situations.

**Existing System:** This is a privacy security app having a troop of features; GPS tracking, emergency & important contact numbers, directions to safe locations, pins displaying danger zones and a Safety Score. It drives in advance of exemplary women safety apps and presents a vast range of features, so that, they will help to practically plan and can give a counter-attack to those spots in the locality. When a person is moving to a new locality that is unknown to her and if she needs to know the safe areas, then this app will be much helpful, providing the user, a map-based view of the locality along with its safety score.

In the existing system, the android app

1. Charges are applicable
2. Complex to use
3. SMS can go to a nearby police station. In our app, we have given authority to a user to change the setting.
4. Internet is compulsory

### III. PROPOSED ALGORITHM

The application is designed to help Women who surprisingly fall into an emergency situation regarding their safety from rapists, stalkers, hence in need of immediate help. This application can be very useful as it offers many advanced features as compared to the existing system available currently. This is a safety security application having multiple features such as GPS tracking, text indicating the current location of the victim along with the battery level of the phone, pins indicating danger zone areas on Google maps, self-defence videos indicating how to remain safe in dangerous situations. The Global Positioning System (GPS) is the main key of this application. The location will be tracked with the help of GPS system, for using this application one must have GPS enabled in their mobile to provide the current location to the friends and family members. The proposed model will trigger the location within the 2-3 shakes.

### IV. TECHNICAL REQUIREMENT

#### 1. Requires:

Android 4.0 or above versions.

#### 2. Permissions:

Location:

Precise location (GPS and network-based).

SMS:

Sends SMS Messages.

Others:

View Network Connection.

Full Network Access.

#### 3. Enable/disable security alert:

You can enable/disable security:

- OFF- Unable to Sense Message if the App is Closed
- ON- Sends a message to your configured contacts when the app is minimized.

[Note: Message (SMS) cost will be based on your mobile network]

#### 4. Use a widget to send messages:

Three shakes to send an alert without opening the application.

#### 5. Configure Contacts:

You can configure a contact number:

- Primary mobile Number – Mandatory
- Secondary mobile number – Optional

#### 6. GPS status:-

GPS is ON – Message will deliver with your current location

### V. FEATURES

- Your loved ones and close friends can automatically receive a text message.
- The exact time of the alert triggered. Your location (with map link).
- The battery level of your phone.

- It monitors the frequent no of shakes in a particular locality or area and marks that particular location as a DANGER ZONE.
- Automatic prompt for activating location.
- Self-defence video for guiding victim, how to remain safe and protect in dangerous situations arising.

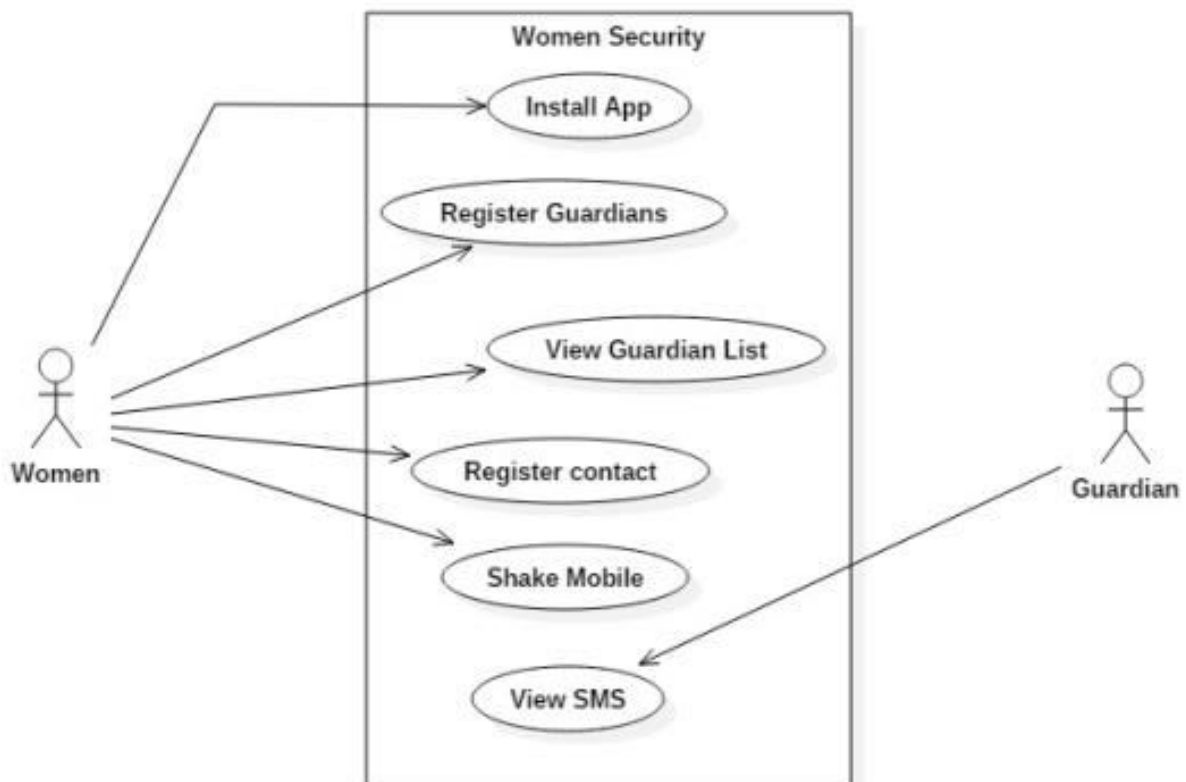
#### VI. PURPOSE OF PROJECT

With the incidence of the Uber taxi rape, concerns about women's safety have taken the front seat. After the Delhi rape case in 2012, there was a surge in women's safety apps that hit the market. The use of technology to ensure the safety of women is a really good concept. This application will help the persons who surprisingly fall into an emergency and needs instant communication. Day of day need for security is increasing for women, as many incidents we heard about rape cases they need security at an emergency level, so this application will help to provide security for them. The Global Positioning System (GPS) is the main key for this application. The location will be tracked with the help of GPS system, for using this application one must have GPS enabled in her mobile to provide the current location to the friends and family members. The existing model had only enabled to send the location while the phone is on but the proposed model will trigger the location within the 2-3 shakes.

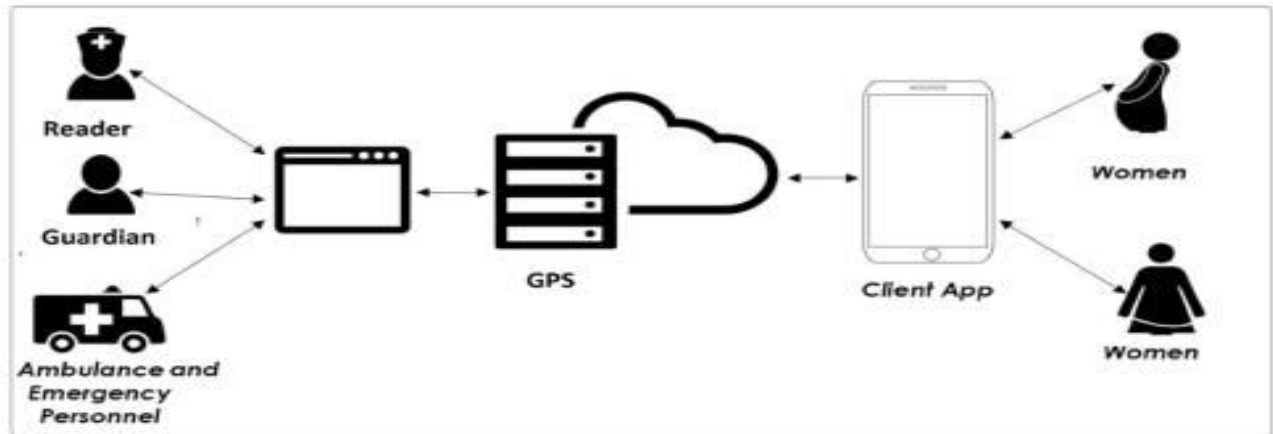
#### VII. PROBLEM SPECIFICATION

This is a privy security app having the troop of features; GPS tracking, emergency, important contact numbers, directions to safe locations, pins displaying unsafe and free from danger areas and a Safety Score. It drives in advance of exemplary women safety apps and presents a vast range of features so that they will help to practically plan and can give a counter-attack to those spots in the locality. When a person is going to move to a new locality that is unknown to him and if he or she wants to know the safe areas, then this app will be much helpful in providing the user a map-based view of the locality along with its safety score. Also, the person can select the areas on those he or she excited to go and can get knowledge about the risks of hassles about the area, so they can finally take safety measures

#### VIII. USE CASE DIAGRAM



### IX. SYSTEM ARCHITECTURE



### X. CONCLUSION AND FUTURE WORK

The safety of women being a big concern in India, it becomes necessary in the age of smartphones for mobile phones to be equipped with tools and features that women users can rely on for help in emergencies.

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