

Android Application for the Safety of Women based on GPS Tracking

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Abstract: *In today's world, people using smart phones have increased rapidly and hence, a smart phone can be used efficiently for personal security or various other protection purposes. The heinous incident that outraged the entire nation have waken 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. So, we are proposing an Android Application for the Safety of Women and this app can be activated by a single click, whenever need arises. A single click on this app identifies the location of place through GPS and sends a message comprising this location to the registered contact to help the one in dangerous situations.*

Keywords: Android, GPS, Authentication, Tracking

1. Introduction

Women are accomplished at mobilizing diverse groups for frequent causes. They often work across racial, sacred, opinionated, and intellectual divides to encourage tranquillity. We are aware of importance of women's security, but we must recognize that they should be well secured. A Woman is not much powerful when compared to men physically, in a crisis situation and needs a helping hand to relieve them. The best way to minimize chances in becoming a victim of violent crime (robbery, sexual assault, rape, domestic violence) is to identify and call on resources to help you out of unsafe situations. Whether you are in instant trouble or got separated from friends during night and do not know how to get home, having these apps on your phone can diminish your risk and bring assistance when you require it. Here, we introduce an android app that ensures the safety of women. It reduces the risk and helps us in need by identifying the location of person who is in danger.

2. Related Work

There is an app called "Raksha-women safety alert". This Raksha app has made for women safety so that a woman will always feel safe. It sends alert messages with location to the specified contacts [1]. Here is another app named "I Go Safely" [2]. This application sends a 30 seconds audio recording and video clip to the registered contacts along with emergency message. The app is activated if the user shakes the phone or will drop the phone. But If anyone shakes the phone mistakenly it will start working which can make unnecessary problems. Similar to this there is another app named "Shake to Alert" [3].

Another example of an application named "Safety pin". The application has some features like emergency contact numbers, GPS Tracking. At the time of danger, the app

pins the safe areas along with their security scores to go. It allows users to identify areas that are potentially unsafe to help others [4].

"Abhaya" is another android application for the safety of women. It identifies the location of the site via GPS and sends a message to the registered contacts that includes this location URL and also calls on the first registered contact to assist the one in dangerous situations. This application's unique feature is to send the message continuously to the registered contacts for every five minutes until the "stop" button in the application is clicked. Continuous SMS location tracking helps to find the victim's location quickly and to rescue safely [5].

3. System Implementation

User Registration:

In this system, the user will be getting registration with this system. So, while registration the user needs to enter the name, user name, password, mobile number, address and emergency number. These all details are stored in SQLite database.

User Authentication:

Here the user should be authenticated with valid login credentials such as user name and password. These credentials are verifying with existing database then if those credentials are matched with existing users, then they can able to access their portal, otherwise then will denied to access their portal.

Track Me:

In this module, the user will be operated when the user authenticated successfully. Here the user needs to enter

destination address where they want to travel then later it can show the direction of source and destination path in Google map. Thereafter, they can use the track me feature when they were feeling insecurity then automatically the current location address will send to the emergency number as text message.

Settings:

In this module users can update their profile details such as name, mobile number, email, address and emergency number.

4. Experimental Results

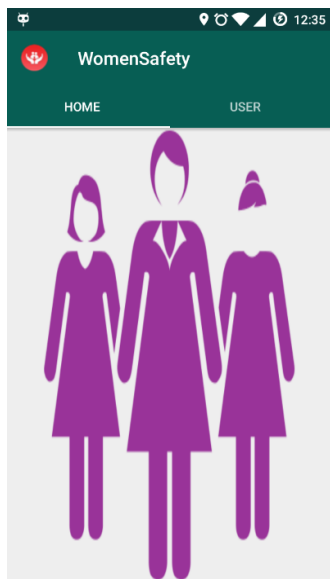


Figure 1: Main Layout

From the figure.1 the main layout will be launch when the user clicks on App icon.

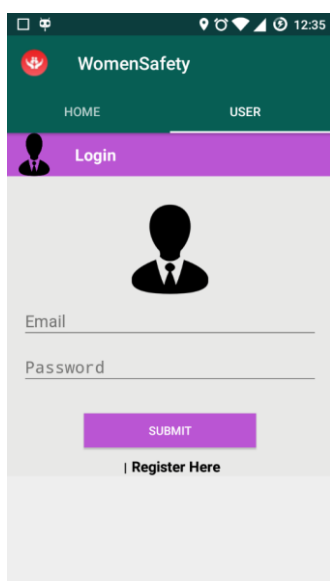


Figure 2: User Login Layout

From the figure.2, the user will be login with email and password which is provided in registration form.



Figure 3: User Registration Layout

From the figure.3, the user will be registered with this system then they need to fill up the all fields.

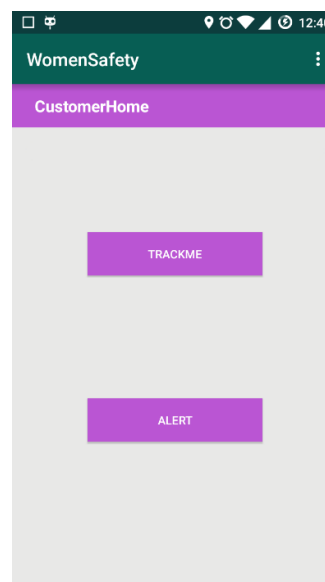


Figure 4: User Dashboard

From the figure.4, the user will be getting their respective dashboard when they authenticated system securely.

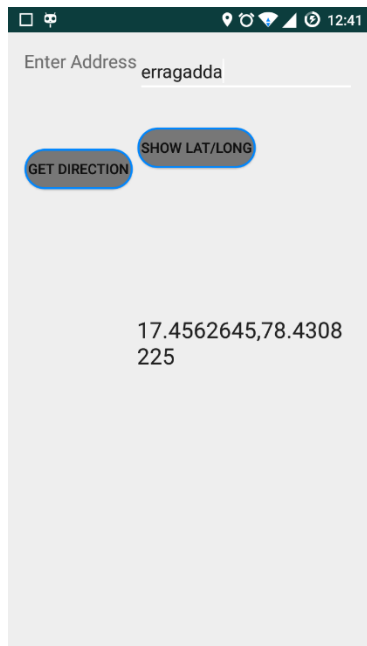


Figure 5: Selection of Destination

From the figure.5, the user needs to enter destination address then it will draw the source and destination direction path.

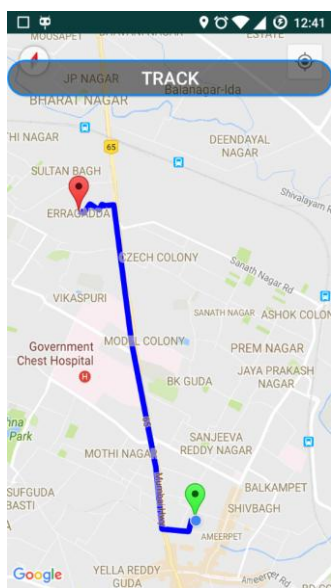


Figure 6: Tracking Me

When the user feeling insecurity then the user will use the track feature then the current location address will be sent to reported number which is shown in figure 6.

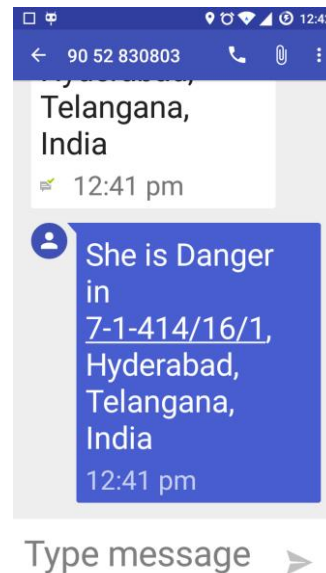


Figure 7: Alert Message

5. Conclusion

This mobile application is very much helpful for any woman. Because when a woman is in danger position then she simply touches this I Safety mobile app and alert their guardians that the woman is in danger. By simply touching the app it sends the call for the first added guardian number and sends the message that she was in danger and sends the location message to the all saved guardian contacts. Through this mobile app we can alert the people at home that a woman belonging to their house is safe or not. This mobile application is helpful in future when any problem arises in travelling or any kind of situations. As the technology emerges, it is possible to upgrade the system and can be adaptable to desired environment. Because it is based on object-oriented design, any further changes can be easily adaptable. Based on the future security issues, security can be improved using emerging technologies.

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