**PROJECT**

**DEVELOPING AN ANDROID APPLICATION**

**TITLE: Personal Security Android Application-“Go Safely”**

**AIM**

To develop an android application to enable the vision of smart and safe city, to provide a location-based alarm system, to provide location with GPS or with GSM, to forward location to registered users, to make emergency calls on press of a button

**PURPOSE**

The number of crimes has been increasing since the past few years. To avoid such crimes we need immediate attention or help when the problem is encountered. Also imagine that you are hiking in the forest alone and don’t know how to get back to your car, or you get lost driving to your friend’s home. Consider the safety of woman returning from jobs late night and someone tries to attack them, journalists, mountaineers, etc. Considering all these threats an immediate prevention is needed where this application proves to be helpful.

**DESCRIPTION**

The goal of this project is to provide a location-based alarm system through which users can broadcast their last known position in emergency situations. The system will be able to send an SMS or an e-mail containing the user’s location coordinates to the already registered mobile numbers using GCM service. The location information is obtained using GPS technology and real-time location is shown on the receiver’s application using Google Maps API. In situations where GPS is not available, the system tracks location using LBS technology

The functionalities are listed as follows:

* The user can call or message the emergency contacts by just a single click of button given in the application.
* The user can register phone numbers of family, friends etc so that the user can reach them in case the user is in trouble. These are to be stored in Sqlite database.
* When GPS is enabled the user can see his/her live location in his/her mobile on Google Maps using Google Map API.
* A marker displays the current location. Clicking on it will lead to Google maps app to guide the route to the destination.
* The user can delete anyone in the existing contact list and make amendments anytime.
* If GPS is available, location can be calculated using GPS. This gives precise location.
* A GPS receiver uses signals transmitted by GPS satellites to calculate the exact location in terms of the latitude, longitude and altitude.
* If GPS is not available, location can be calculated using GSM Network. Based on the location of the cell towers the approximate location of the user is calculated.
* Whenever a user feels that they are in trouble, they just need press a single button. By doing so, the system will immediately notify the predefined contacts of the user by sending their current location as sms using GCM (Google Cloud Messaging Service).
* The user can alarm the registered contacts by ringing up, on click of a button.
* On availability of Internet, the location co ordinates get converted to real addresses

with the help of geocoder.

* The user can call up the emergency contacts on click of a button.