



# SHE-ILD: Women Safety and Awareness Application

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**Abstract—** *The United Nations general secretary, Ban Ki-Moon, said that Violence against women is never permissible, never justifiable, and never bearable; this is a universal reality that applies to all nations, cultures, and societies. Abuse of women is both an issue of public health and an essential abuse of women's human rights. In the last five years, the use of GPS navigation which comes inbuilt into smartphones has risen rapidly from 3% to more than 20%. As a result, a hand phone can be effectively employed for personal safeguarding or different types of measures, particularly for females. When the user believes she is in danger, she can activate this app by pressing the up/down volume button of the smartphone for 5 seconds. The alert or SOS message is notified to the saved emergency contacts which are stored in the database, in addition to this, the trigger also initiates a call to these contacts. Hence our project "SHE-ILD: Women Safety and Awareness Application" will help lessen violence against women or any other person in need at any given time and place as they can be simple to use, effective, and mountable at a low cost.*

**Keywords—** Android, Emergency Contacts, GPS, Helpline Number, Java, Live Location, Safety, Smart Phone, Trigger Button

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## I. INTRODUCTION

In the modern world, it is being seen how dangerous it is to take a nighttime alone trip, especially for women; because of the increasing crimes against them. Finding and using services to get you out of dangerous circumstances is a smart approach to lower your risk of being a target of vicious criminal activity (including burglary, sexual assault and domestic abuse). Getting these

applications on your smartphone can reduce your danger and fetch you support when you need it, either when one is in an emergency situation or one gets separated from companions at night and are unsure of how to return home. In this article, we introduce Security Alert, an android-based smartphone application. According to the National Crime Records Bureau of India, there were 6.4 percent more reported incidences of crime against women in 2012, and one is committed every three



minutes. According to 65% of Indian men, women should put up with violence in order to maintain the stability of the home, and occasionally women even deserve to be battered.

According to the “International Males and Gender Equality Survey (IMAGES) Questionnaire from January 2011”, 24 percent of men in India had at some point in their life engaged in sexual violence. Since the majority of people now take smartphones with them wherever they go, our goal in creating this app was to give ladies a safe atmosphere through smartphones. The case of Nirbhaya from Delhi has undoubtedly prompted the administration to reinforce the law, yet the number of sexual crimes in India has not diminished. Therefore, it is preferable to take personal safety precautions than to fall victim to such crimes.

Although this app has been developed keeping in mind women's safety, we have extended the utility of this application to not only the females of society but also the senior citizens who might require such safety. This application can be used by anyone in general and has no user limitations. The fundamental function of this project is to: **1)** Alert the contacts in case the user is in danger to ensure timely response; **2)** It also has one-click access to helpline numbers ranging from women's safety helpline, domestic abuse, a senior-citizen helpline to basic facilities like police and ambulance, etc.

We ensure here that the GUI is interactive and comfortable for a user from any background. Like in the case of one-click access to helpline numbers, as soon as one clicks on the required helpline button, the application redirects the user to the dial pad with the respective contact number.

## II. LITERATURE REVIEW

[1] This research has presented a safety app for woman which is been built to stop women assaults. A user can save and change emergency contact number which can be used to send alert message when user is in danger. Along with the message, app shares the user's current location so that one could reach the place as soon as possible to rescue the one in trouble. This women safety app also has other features such as Automatic dialing, finding the locations of hospitals and police stations nearby, etc. The project was built in Java Development Kit with Android Studio. Thus, this software acts as a guard who chases the user until they feel secure.

[2] This research represents a NAARI safety app which mainly focuses on precautions and safety mechanism. The application comes up with two features – user can fetch detailed information of vehicle by scanning QR code which can be sent to emergency contact number and the other is the application has GPS tracker which helps to retrieve the current location of user. Besides these features, it also has page for safety and precautions tips.

[3] Thanks to the current advancements in cellular technologies, this paper introduced a mobile application called safety alert which can be easily enabled with just a tap or click whenever user feels she is in some kind of danger. User can save three contact numbers where the user's current location can be continuously sent to them in the form of message until user clicks the help button. SMS-based continuous location monitoring information makes it easier to locate the victim promptly and evacuate them securely.



[4] All existing safety application in require internet and send SMS services. In this research paper they have developed the app named "Safe Girl" which works offline and online both. When the user press power button 3 times continuously or if they don't get the time to press power button then the keyword which we added can detect the voice then that voice will match through keywords and then added people will be getting the message, call and our location. At the same time the pictures are also captured in front and rear and siren will be ringing in an emergency contact if they are registered.

[5] This research paper shows how the existing women safety system have this unnecessary hassle of first switching on the data as well as live location in order to use the system. This, especially in case of an emergency can prove very time consuming. Hence the paper here proposes an application that can help user connect to the internet as well as enable its live location through a single button click.

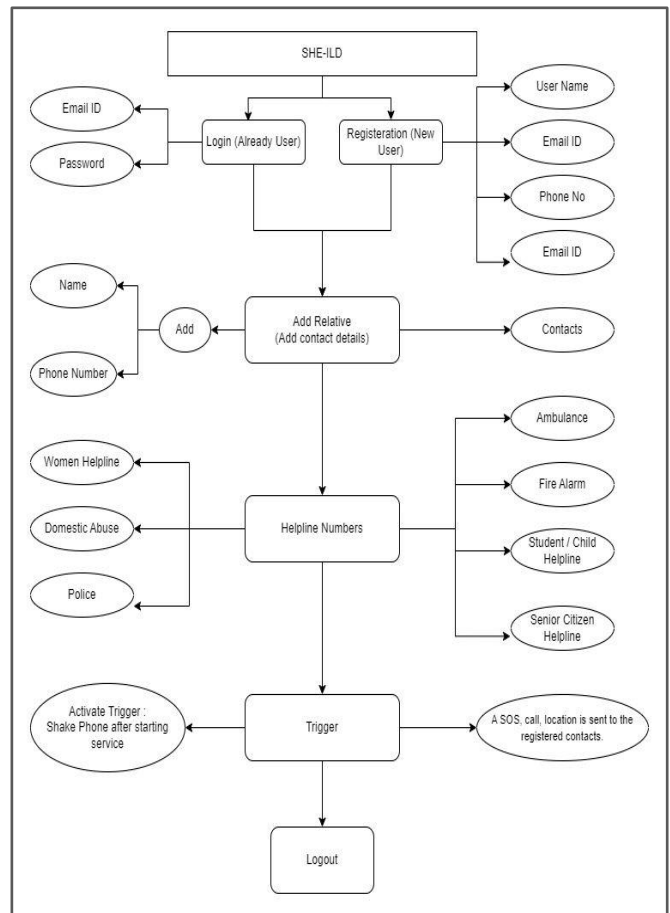
[6] As evil increases against women safety, there increases the need to create a system through which one can alert their contacts and colleagues. "BELIEF" is one such application which enables this exchange of data through features like sending messages and even emergency calling. It includes crucial features like sending audio recordings and even pictures of the surrounding to get instant help. Hence it not only offers the trivial features but includes a range of these.

[7] The said paper talks about an application that includes a registration to get started. It also includes the feature of updating the contacts occasionally, in case the user is travelling the feature of GPS tracking is also provided to view the current location. In case of emergency, a SOS

button is provided pressing which shall direct an SOS message along with the live location of the user and the integration of these data is ensured using Firebase.

### III. METHODOLOGY/EXPERIMENTAL

#### A. Flowchart



#### B. Algorithm

1. Start the App.
2. Register entering Your Full Name, Valid Email, Your Contact Number and Password. If already registered, click on "Already registered? Login here."



3. In case, if already registered, then login by entering a valid email address and your password.
4. After login, the main screen containing all features will appear.
5. You can click on the "Add Relative" button to add numbers of relatives by entering their name and contact number. Added contact number can be seen using "Contact" button
6. You can click on "Helpline number" to get one-click access to helpline numbers like Women helpline, Domestic Abuse, Police, Ambulance, Fire Alarm, Student/Child Helpline, Senior citizen Helpline.
7. You can get information on how to use the trigger function by clicking on the "Trigger" button.
8. If you wish to log out, select the "Logout" button. which will lead you back to the login page.
9. End.

### **C. Working**

#### **A) Main Activity.java**

Step 1): We have imported all the necessary packages for UI and events happening in the application for interconnection between files and the methods involved for proper functioning of the application.

Step 2): Inside the main class we interconnected the following classes:

#### **B) AddRelative.java**

This class is responsible for connecting the main interface to the Addrelative class so that the Phone number as well as the name of the relative is stored as per the input given by the user ahead of time.

#### **C) HelplineCall.java**

This class is responsible for providing essential features to the user such as:

- To report a Distress Call(Women helpline)
- To make a call to report Domestic abuse
- To Call the Police
- To call the ambulance
- To call fire brigade
- To call Student / Child Helpline
- To call senior citizen helpline

#### **D) TrigActivity.java**

This class is responsible for activating triggers that display the necessary instruction needed to be performed by the user to send the SOS message. The trigger performs 2 major functions here-

Sending SOS messages to registered family members along with the user's current location.

The trigger also initiates a call to the registered contacts.

#### **E) Login.java**

This class is responsible for authentication of the user by logging in to the application using Firebase auth.

#### **F) Registration.java**

This class is responsible for registering and saving new user data such as user's full name, email address, password and phone number to the database.



### G) DatabaseHelper.java

In this class, all the connection made to database for storing, maintaining and accessing the contacts numbers of relatives entered by user.

### H) ViewListContent.java

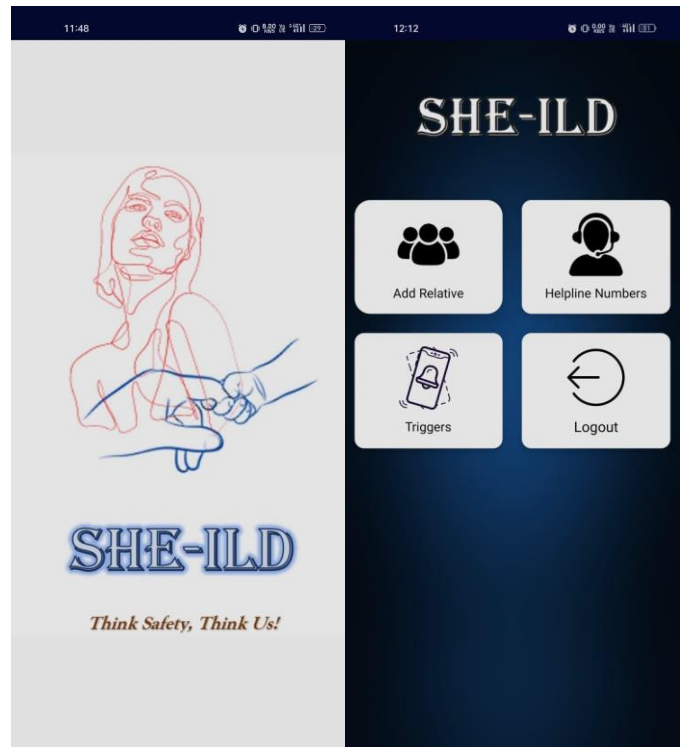
All the contacts numbers which are stored in the database can be viewed with the help of this class.

## IV. RESULTS AND DISCUSSION

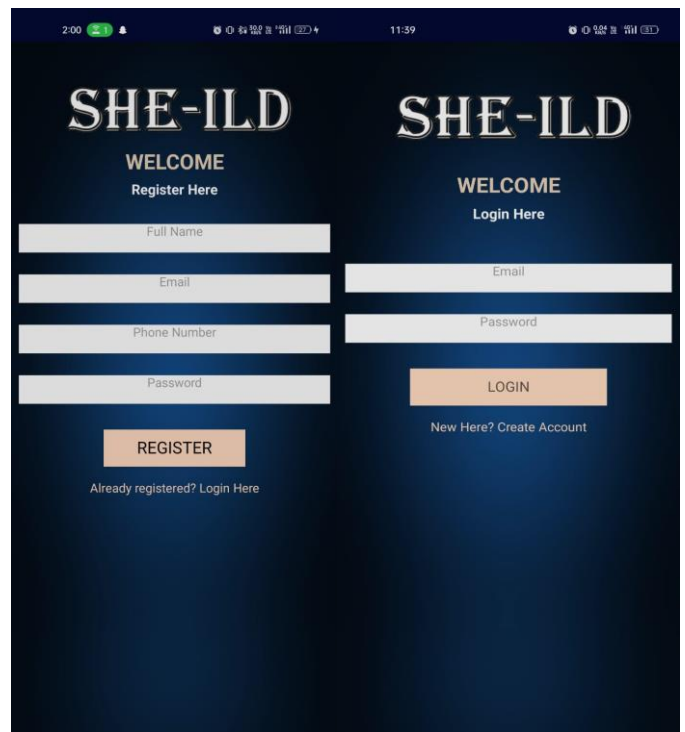
With a hassle-free and a simple UI, our application will be used to basically send SOS messages to the emergency contacts registered by the user along with their live location. An important feature that it also includes is- making a call to all the registered numbers in the database as soon as the trigger fired. Whenever the user feels they are in an uncomfortable situation, they can simply initiate the trigger by pressing the up/down volume button for 5 seconds. Doing so sends the message to the respective contact and makes a call. It also includes all important helpline numbers (such as Women helpline, Domestic abuse, Police, Ambulance, Fire alarm, Child helpline and senior citizen helpline) that can be easily accessible by user when in some danger situation.

The screenshot of our app is attached below –

### 1) Splash Screen and Main Screen



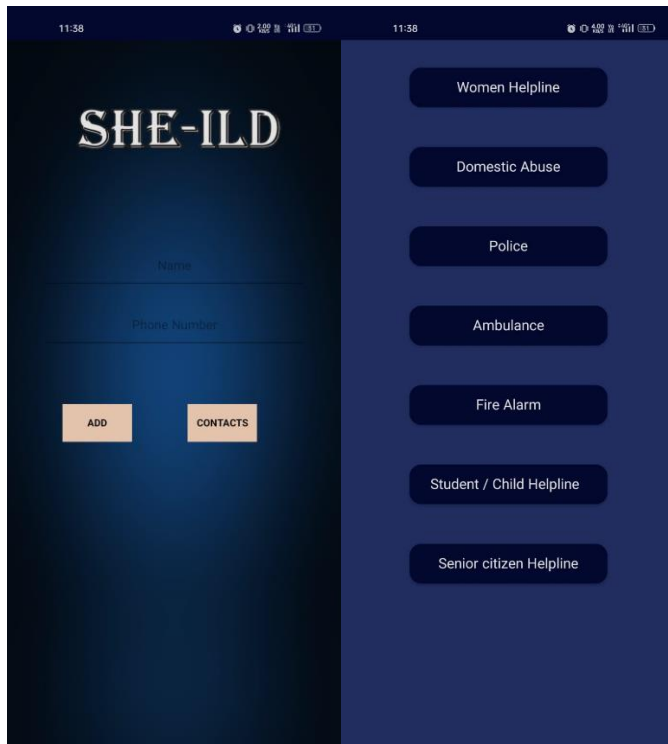
### 2) Registration and login page –



### 3) Add Relative and Helpline Numbers Interface –

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## V. CONCLUSION

The project is an emergency-based application typically for females, senior citizens and the vulnerable classes of the society but can be used by everyone in general. It has been made sure that the app is not very complex and time consuming to handle which is necessary in dire situations.

To ensure that the accuracy of the trigger is higher, we introduce the method of using the volume button rather than the shake detection which is used by some papers we reviewed. The idea behind this being, although introducing the trigger through shaking the device is easier, but it can also reduce the precision and the alert may be triggered even when the user is not in danger.

