iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 10 **Issue:** IV **Month of publication:** April 2022

DOI: https://doi.org/10.22214/ijraset.2022.41766

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 10 Issue IV Apr 2022- Available at www.ijraset.com

BeCareful: Personal Safety Application with Scream Detection

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Abstract: ***It's turning more and more unsafe for a person to travel alone in the dark. the foremost effective because of avoiding being a victim of a violent crime is to identify and switch resources to help you out of unsafe things. whether or not or not you are in peril or get separated from friends throughout the night and do not understand the thanks to getting home, having facilitated at hand once we want it is a relief. thence we tend to gift BeCareful, a non-public safety application. BeCareful means providing protection, saving, shielding or defending yourself from danger. This application tracks things of the user through GPS and permits a non- public to at once request for facilitating in black things with merely a regulator. It transmits the user's location And AN alert message to the positive and registered contacts once the user feels unsafe. These contacts can track the user's location in real-time and provide the desired facility.***
Keywords: GPS, Google Maps, SOS messages, Google API, Firebase.

I. INTRODUCTION

In today's time, safety has become a major issue as they can't get out of their house at any given time thanks to a priority of attacks or violence. Even at intervals in the twenty- first century whereby the technology is swiftly developing, and new gadgets were advanced however still ladies and girls square measure desire troubles varied helps with merely a swipe.

1) Scream discovering: this is {often this can be} often a separate portal within the app designed to observe screams if the user if a user is not able to activate the application.
2) Family locator: Guardian can track users simply just in case of any emergency.

Even recently in India, ladies cannot move within the dark in legion locations or maybe at daytime packed locations as a result of an entire bunch and thousands of incidents of physical/sexual abuse happen to women daily. Among the various crimes, rape is the fastest-growing crime lately, and attacks on girls' square measure increasing day by day, making it impossible to call the police or completely different relations as a result of the attacks square measure temporary and additionally the victim cannot act or assume at that time. So here, BeCareful is an automaton app that ensures the protection of women and might offer all the protection ways. As crime has increased over the past few years, there is a demand for fast, easy-to-use, modern security measures that have to be improved. facilitate must always be at hand.

The key features of our application are:

a) Real-time location pursuit.
b) Normal mode: this is {often this can be} often a mode where you will be ready to add your emergency contacts (up to 5 contacts) and request

II. PROJECT IDEA

The rise in crime rates at intervals over the past few years has resulted in a dire wish for the latest, quick, and easy-to- use safety measures to be developed. facilitate must always be at hand. New Year's celebration in Bangalore, become mass molestation as ladies were cornered and ill-treated. In Mumbai in 2014, at a very boy's hostel, a student was brutally slapped and overcome up. once his friends found him, he was completely unconscious and was then taken to the hospital. In a blog, a lady describes her feeling unsafe when returning home late at night from work as an individual was ceaselessly watching her making her feel uncomfortable and unsafe. one the protection of a non- public is of utmost importance and lately, extraordinarily questionable. The usage of excellent phones equipped with GPS navigation units has speedily increased from three-dimensional to over eightieth at intervals over the past eight years. Hence, a wise phone is employed with efficiency for personal safety or varied completely different protection functions significantly for ladies. With the increase in the use of smartphones equipped with GPS technology, we've come up witha system that allows a non-public to at once request for facilitating in black things with merely a regulator.

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III. GOALS AND OBJECTIVES

Dealing with gift eventualities security could be a huge concern to folks, our application focuses primarily on ladies' safety.

1) To study on the prevailing mobile- application for private safety options.
2) To propose the look of a private safety mobileapplication because the results of this analysis. - to hold out the study on the effectiveness of smartphone towardsthe aim of private safety.
3) To develop associate robot application that focuses on personal safety.
4) To do the study on the effectiveness of Smartphone towards the aim of private safety.

IV. MOTIVATION OF THE PROJECT

Everybody needs to be freelance however what stops them to be carefree? the solution to on top of question is their security specifically just in case of ladies. this is often a really necessary issue to debate and existing application for security purpose isn't enough as these applications might not be utilized by victim thanks to an extended operational procedure for requesting facilitate. The on top of scenario offers rise to our main purpose that's easy exploitation security application. we tend to try and build a simple and friendly computer program that additionally provides direct shortcuts for contacting emergency contacts with simply a gesture swipe. this is often helpful feature because it isa smaller amount time overwhelming for the victim to work theirdevice and evoke facilitate.

V. RELATED WORK

A. Women Security. [5]

This app is developed by App Soft India. The key options of the app are: the user should avoid wasting details. These details include: Email address and word of the user, Email address and mobile variety of the recipient and a text message. Then, app is loaded as a gizmo, so once the user touches the app, it alerts the recipient. Another key feature of app is that it records the voice of surroundings for regarding forty-five seconds and this recorded voice, text message containing location coordinates of the user is distributed to the recipient mobile variety.

B. VithU.

Developed by Star Republic of India Pvt. Ltd. this is often associate emergency App that, at the clicking of the ability button of your smartphone two times consecutively begins causation out alert messages each two minutes to your contacts that you just feed into the app because the selected receivers or guardians. This app is developed by Bipper opposition. On March 6, 2015. The app's catchword is rarely Walk Alone. This app helpsthe user to form a gang of 'Guardians' and SOS message are going to be received by them once the user is inhassle. Additionally, another smart feature of this app is one in all the guardians also will be referred to as. The SOS message additionally includes location of user via GPS. The user may also alter the GPS hunter and let the buddies apprehend location at any time.

C. Scream Alarm

Scream Alarm, associate robot application developed by Go Pal App Maker in Nov 2013. By clicking this app, it generates a really high-volume scream in times of distress once the lungs of someone fail in screaming in hassle. The generated scream is in a very woman's voice is severely useful in discouraging the potential robust hasslemanufacturers. the sole work done by this application is whenever the person pushes or touches the applying, the phone screams loudly with a woman's voice.

VI. PROPOSED SYSTEM

The projected system is associate robot application that takes user contact details and private data throughout sign in method. On the most page of the app it foremost makes user to piece its account by adding emergency contacts and alter necessary modes of operations. This application needs permission to access net, Contacts, Location, Phone and electronic messaging that has to be provided by the user. so as to supply time period location trailing this app makes use of Google maps API and base cloud. information needed by this application is maintained in base cloud.

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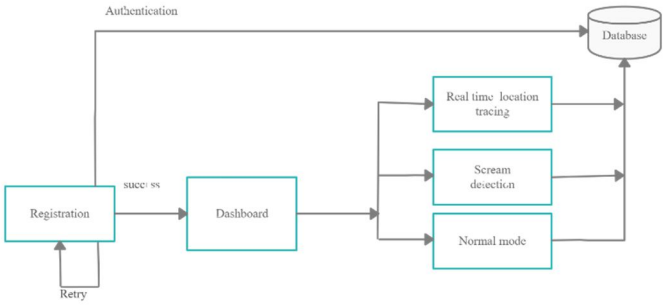
VII. ARCHITECTURAL DESIGN

Fig.1. shows the design of the projected system within which there are completely different modules with different practicality.



The operating of this application is split into five modulesreferred to as as modes. These modes are the options introduced in our application. they're delineate as follows:

A. Normal Mode

This is a mode wherever you'll add youremergency contacts (up to three contacts) and requestvaried helps with simply exploitation message button you'll either send request to all or any your contacts or simply the chosen ones.

1) Message Button: Send predefined message like “request for pickup”, “I am in danger”, “please decision me” to your hand-picked contacts.
2) Phone Button: decision the chosen contacts.

B. Emergency Mode

This mode are going to be activated mechanically once you ar in a very danger. you simply ought to press the amount button three times and every one your emergency contacts (including traditional and field mode) are going to be conversant together with your current location and facilitate message. currently your emergency contacts will track you in rescue mode.

VIII. METHODOLOGIES AND WORKING

The planned system is AN mechanical man application that takes user contact details and private data throughout register method. On the most page of the app it first off makes user to tack together its account by adding emergency contacts and modify necessary modes of operations.

Thisapplication needs permission to access web, Contacts,Location, Phone and electronic communication that must be provided by the user. information is keep and synced with our NoSQL Cloud info, Firebase. The base of operations time period info allows you to build made, cooperative applications by permitting secure access to the info directly from client-side code. so as to produce time period location following this app makes use of Google maps API and base of operations cloud. The primary practicality of BeCareful is predicated on location following. it's fully smitten by the GPS to trace the placement and update it to the info in real time. In BeCareful the time period changes in user’s location is set and updated to the info. The update gets mirrored to theinfo inside zero.5 seconds relying upon the web association that constitutes the second demand of the appliance.

A. Pre-requisites of BeCareful (Mandatory)

1) Android Device V4.4 or above.
2) GPS in high accuracy mode for correct performance.
3) Working web association, The key componentresponsible for the entire functionality of the application is the backend database and cloudengine (Firebase). It is responsible for providing Authentication, Social Integration, Storage andReal-time database.

The key elementanswerable for the wholepracticality of the appliance is that the backend info and cloud engine (Firebase). it's answerable for providing Authentication, Social Integration, Storage and timeperiod info.

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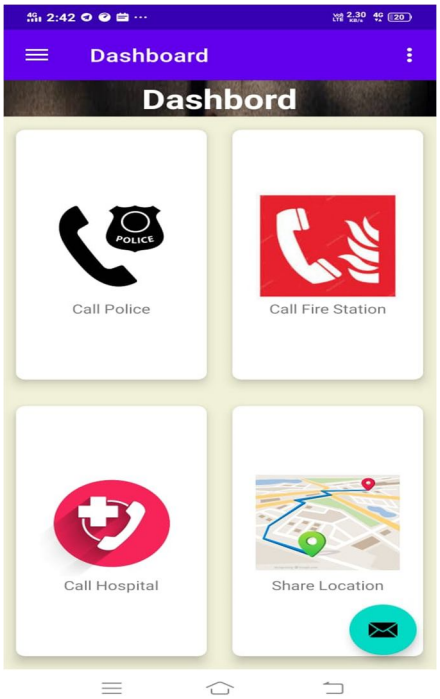
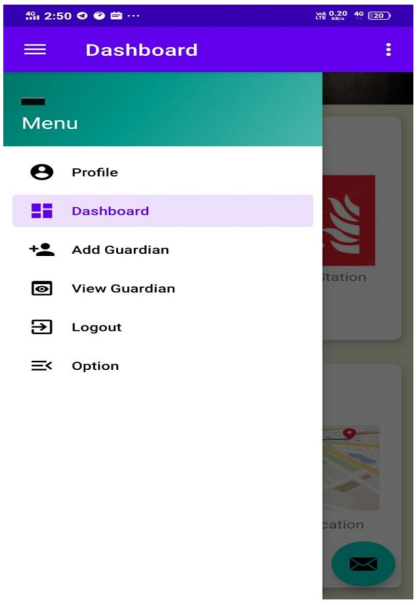
BeCareful maintains a user-defined list of "Trusted Contacts" for each traditional and field mode. These contacts are alertedby push notification and SMS just in case of any emergency once triggered by the victim. It permits the sure contacts/emergency contacts to trace the victim's location intime period in an exceedingly Map portal provided in Rescue Mode. To enter the rescue mode it's necessary for the "Trusted Contacts" to own the appliance put in. The user will choose at most three sure contacts from the

phone book of the device for every traditional and field mode. The list of those contacts is maintained within the info.




Dashboard
Menu
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View Guardian
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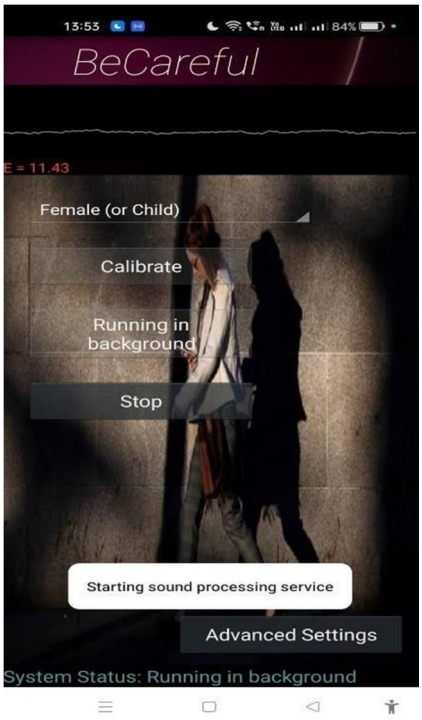
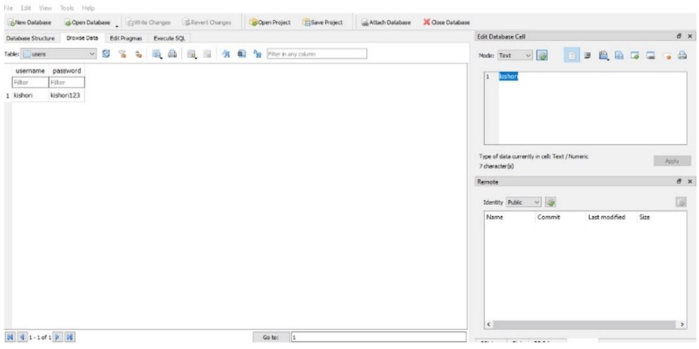
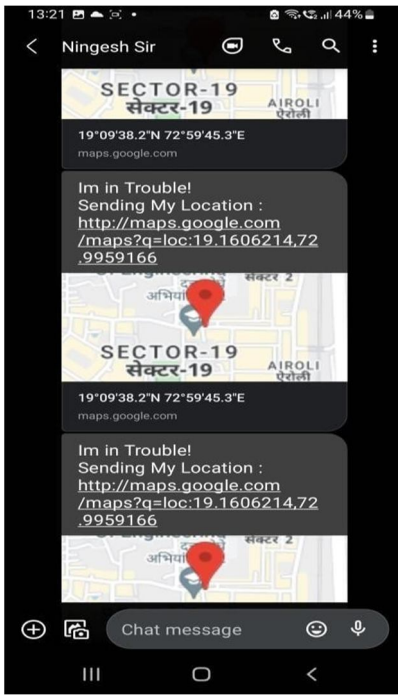
Option


BeCareful
Female (or Child)
Calibrate
Running in background
Stop
Starting sound processing service
Advanced Settings
System Status: Running in background





IX. CONCLUSION

We developed a system that works for safety of a privatechiefly that specialize in ladies safety. Building region time access system, we offer continuous following of the user. Adding special options to our application we offer a user friendly and simple interface. We build a network of relationship together with your family and friends providing fast access to assist once in an exceedingly venturesome condition. fast access provided in our application facilitates the victim to urge out matters simply and help the victim. Providing sureness to a private by providing them our systemthat facilitate them to be freelance without fear concerning security problems that will occur. Targeting the rise in no. of sensible phone users we have a tendency to get scope of our application in market. This application is obtainable to mechanical man users initial then analyzing the scope of the project we'd extendits use to different platforms too.

X. ACKNOWLEDGEMENT

We take this chance to give thanks our principal Dr. Prashant Deshmukh., Head of the Department Dr. Sheetal Jadhav and project guide Mrs. Sheetal Jadhav for his or her valuable steerage and for giving all the required facilities that were indispensable for the completion of this project. We also are glad to all or any the employee members of the Department of laptop engineering of recent horizon instituteof technology and Management for his or her valuable time,support, comments, suggestions and persuasion.

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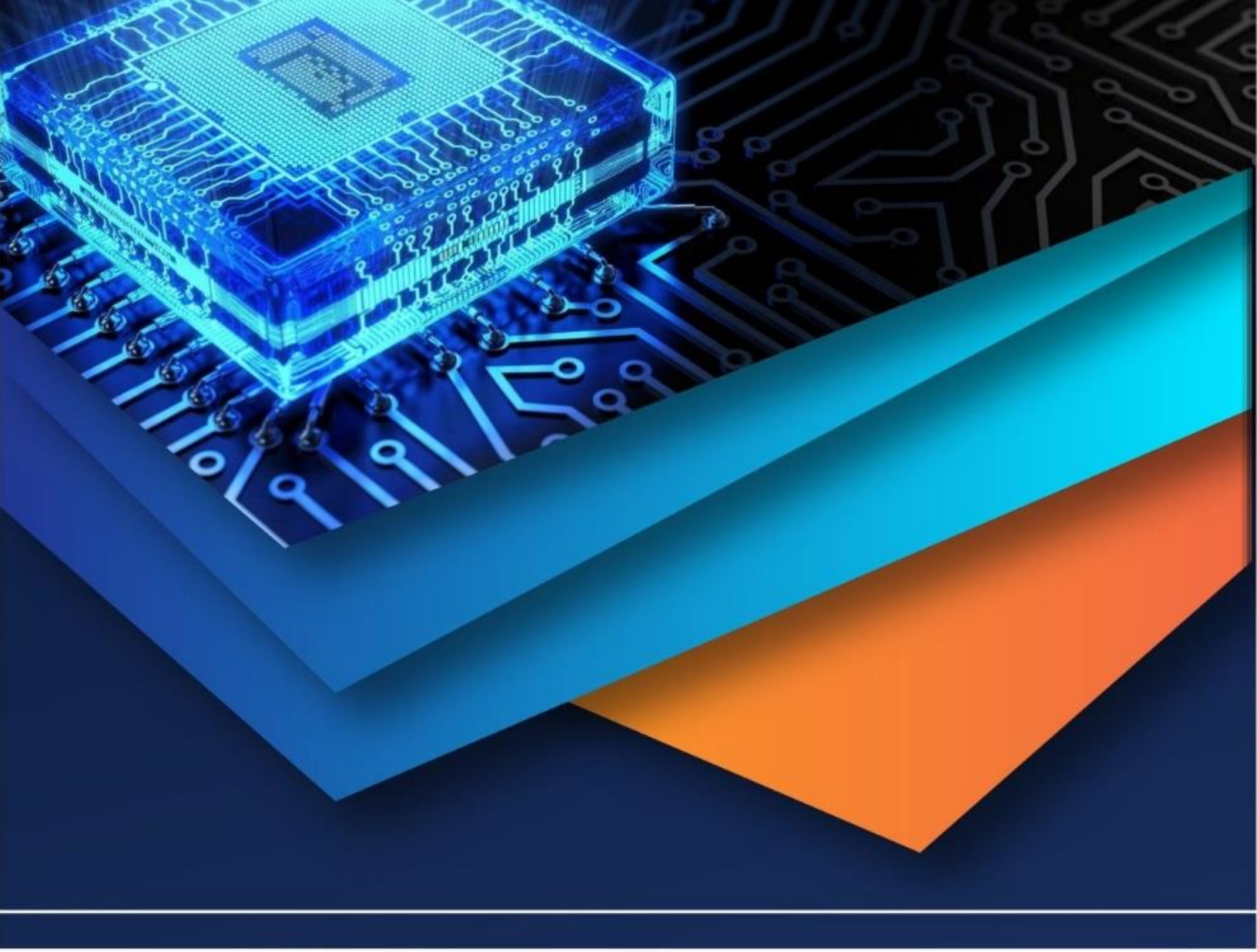

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