A
Project Report
On

"WOMEN SAFETY APP ANDROID APPLICATION"

Submitted By

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CERTIFICATE

This is to certify that,

Miss. Shraddha Shekhar Kashid,

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Miss. Vaishnavi Vishnu Patil.

have satisfactorily completed the T.Y.B.Tech Domain Specific Mini Project entitled, **"Women Safety App Android Application"**. This work is being submitted in partial fulfillment for the Third Year in Computer Science and Engineering of the Shivaji University, Kolhapur, and Maharashtra, INDIA for the academic year 2023-2024.

Prof T. R. Shinde	**Prof. S. P. Kakade**	**External Examiner**
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I cannot forget to express my immense sense of thankfulness towards all the teaching and non-teaching staff of Computer Science and Engineering department, and all my friends who offered their helping hands at the time of need.

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ABSTRACT

Safety for women has become a major issue as the day-by-day cases increasing in all over the world. This proposed project explains women's safety and their security by using an application to send alert message, showing safe location & alert authorities. It suggests a replacement view to use technology to guard women. In this project, an android based smartphone with an integrated feature that alerts and provides location-based information. It provides self-defence and SMS alert when a woman is in danger. The voice recognition will happen when the women is shouting. It will recognize the voice and send the alert message to contact send alert SMS with (GPS) Global positioning system location to emergency contacts. In Safety domain, most of the women's are worried about their safety during any situations. In this proposed system, the user selects the contacts to which the alert message and location has to be sent and save it. So, when she is in some danger by just opening the app and pressing the some key button and shaking the phone, the message containing her current location will be sent to those numbers she has added in this application. So that she can receive the help in correct time.

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1. INTRODUCTION

1.1 Project Idea

The project "Women Safety App Android Application" aims to develop an Android apps that run on mobile devices that integrates real-time location tracking, distress signaling, and a comprehensive database of safe zones and emergency contacts. Users can discreetly alert trusted contacts in emergencies, access relevant resources, and report incidents to authorities, fostering a safer environment for women. In this proposed system, the user selects the contacts to which the alert message and location has to be sent and save it. So, when she is in some danger by just opening the app and pressing the some key button and shaking the phone, the message containing her current location will be sent to those numbers she has added in this application. So that she can receive the help in correct time.

1.2 Need of project

In Safety domain especially in India, most of the women's are worried about their safety during any situations. Many women encounter dangerous situations like harassment, assault, and discrimination. As travel safety has been a major concern with respect to women. Some women don't know how to protect themselves or what to do in emergencies. That time such an app can provide a lifeline for women facing threats or emergencies, offering features like real-time location tracking, emergency alerts to trusted contacts, access to resources for self-defense. It serves to empower women by enhancing their safety and providing immediate assistance in times of distress.

1.3 Literature Review

1) **Android app for women safety**

- **Dr. K Shrinivas Dr Suvarna Gothane1 C. Saisha Krithika2, Anshika2, T.Sushmitha2**

We looked at various market-ready applications for women's safety as part of our literature review. The goal is to examine how these apps function and determine how they might be the following Android apps for women's security have been shown to be effective and to provide a reasonably equivalent level of service. A. Women's safety AppSoft India created the app in question. The user must store certain information, which is one of the app's main functions. These specifics include the user's email

address and password, the recipient's email address and cell number, and a text message. The app is then loaded as a "widget," so that it alerts the receiver when the user touches it. The app's ability to capture the audio of the environment for around 45 seconds and send the recipient's cell number a text message with the user's location information is another important function.

2) **Women Safety App**
- **Prof. Aditi Patil1 , Shraddha R. Ramshette2 , Chaitali L. Dhengle3 , Hamd J. Ansari4 , Sayali S. Madhurkar5**

In today's fast moving world, Women Security is an issue of growing concern. We have read about many unfortunate incidents happening with women and the rate is increasing. Women these days are working women and the globalization has made us aware of gender equality. Earlier the women were restricted only to the household chores. With the changing scenario, women are competing with men in all fields. We can see women going to great success levels in all fields, may it be corporate, scientific, education, business or any other field. Safety of women matters a lot whether at home, outside the home or working place. Because of such crimes, women safety has become a major topic. According to the statistics, it is found that every two out of three women have suffered trauma in the last year. According to the survey of women, it is found that women are losing their confidence because of such incidents. By the survey of Delhi government's Women and Child Development Department, around 80% of the women in national capital have fear regarding their safety.

3) **Android app for women safety**
- **DR. Chanda V Reddy1 , Sabarish I J 2 , Samiksha S 3 , Sathvik U M4 , Swagath Aithal P G5**

GPS Based Women Safety Device is women's safety gadget described in this paper is intended for usage in India. For ladies who might be in danger, this device serves as an emergency device. An SMS with the location's latitude and longitude will be sent to a list of pre-fed cell phone numbers when the woman clicks the panic button on the device. In this manner, anybody who receive the message will be able to utilise the coordinates to locate the woman in need and offer assistance. The purpose of this device was to reduce India's rising rate of crime against women. The use of hardware elements such an Arduino Uno microcontroller and a GSM module, as well as the usage of a money-saving gadget, are the key strategies covered in the article.

4) **Android app for women safety**
- **Prof. Kishore Sakure Department of Computer Engineering Terna Engineering College Navi Mumbai, India.**

The basic problem with the police handling of these occurrences is that they are not always able to respond swiftly to distress calls. These limitations include not knowing the location of the crime and not knowing the crime is occurring at all: it is difficult for the victim to call the police confidently and quietly. To aid in the removal of these prohibitions. This article presents the Women's Safety Application, a smartphone app that provides a reliable way for women to call the police in an emergency. Women who are victims of abuse are often denied basic human rights. Gender-based violence has become a national and global issue as a result of decades of civil society activism,

assisted by women's organizations. Despite the fact that each country has an extraordinary number of laws against domestic violence, sexual assault, and other forms of violence to protect its female citizens from such abuse, enforcing these laws is extremely difficult. As a result, society becomes unjust and insecure for women, with the great majority of criminals going unpunished.

5) **Android app for women safety**
   Author: Shubham Nikam*1, Jay Hiray*2, Kalpesh Gaikwad*3, Sanket Patil*4, Prof. Smita K Thakare*5

This paper introduces a mobile application known as WoSApp (Women's Safety App) that gives ladies with a reliable thanks to place associate emergency decision to the police. The user will quickly and discreetly trigger the vocation perform by shaking her phone or by expressly interacting with the application's program via a straightforward press of a push button on the screen. A message containing the geographical location of the user, additionally as contact details of a pre-selected list of emergency contacts, is instantly sent to the police. This paper describes the applying, its development, and its technical implementation.

2. PROBLEM STATEMENT & SCOPE

2.1 Problem Statement

To create a robust mobile solution addressing the safety concerns of women in various settings. Android application project is to address the prevalent issue of women's safety by developing a mobile solution tailored to their needs. The goal is to develop an intuitive and effective tool that empowers women to navigate their daily lives with a greater sense of security and confidence.

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2.2 Project Scope

- The scope of a women's safety app can encompass a wide range of features and functionalities like Location and SOS alerts aimed at addressing the safety concerns.
- The app should provide quick and easy access to emergency contacts and also provide information about basic women’s related laws.

2.3 Area of project

The “Women Safety App Android Application” provide a comprehensive solution for enhancing the safety of women. It includes Incorporating technologies like GPS, messaging, and database management to enable functionalities like location tracking and emergency alerts. The User Interface (UI) Design creating an intuitive and user-friendly interface to ensure easy navigation and accessibility for women users. Additionally, it offers educational resources on self-defense and legal rights to empower women with the knowledge and tools to navigate safely in various situations.

2.4 Goals & objectives

- Enable users to share their real-time location with trusted contacts or authorities and raise awareness about women's safety issues, educate users about preventive measures, and promote a culture of respect and equality.
- Provide safety to women’s and provide integrity, confidentiality and security to user’s data.
- Create User Interface (UI) Design to easily navigation and accessibility for women users.

3. SOFTWARE REQUIREMENT SPECIFICATION

3.1 Software Requirements:

- Operating system : Windows XP and above
- Front End : Android
- Back End : Sqlite
- Tool : Android Developer Tool

3.2 Hardware Requirements:

- System : Pentium IV 2.80 GHz.
- Hard Disk : 160 GB.
- Monitor : 15 VGA Colour.
- RAM : 4 GB.

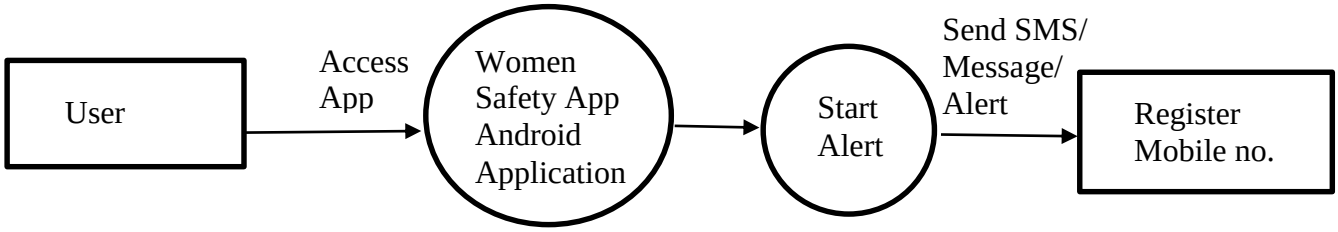
4. PROJECT PLAN

4.1 Project Schedule

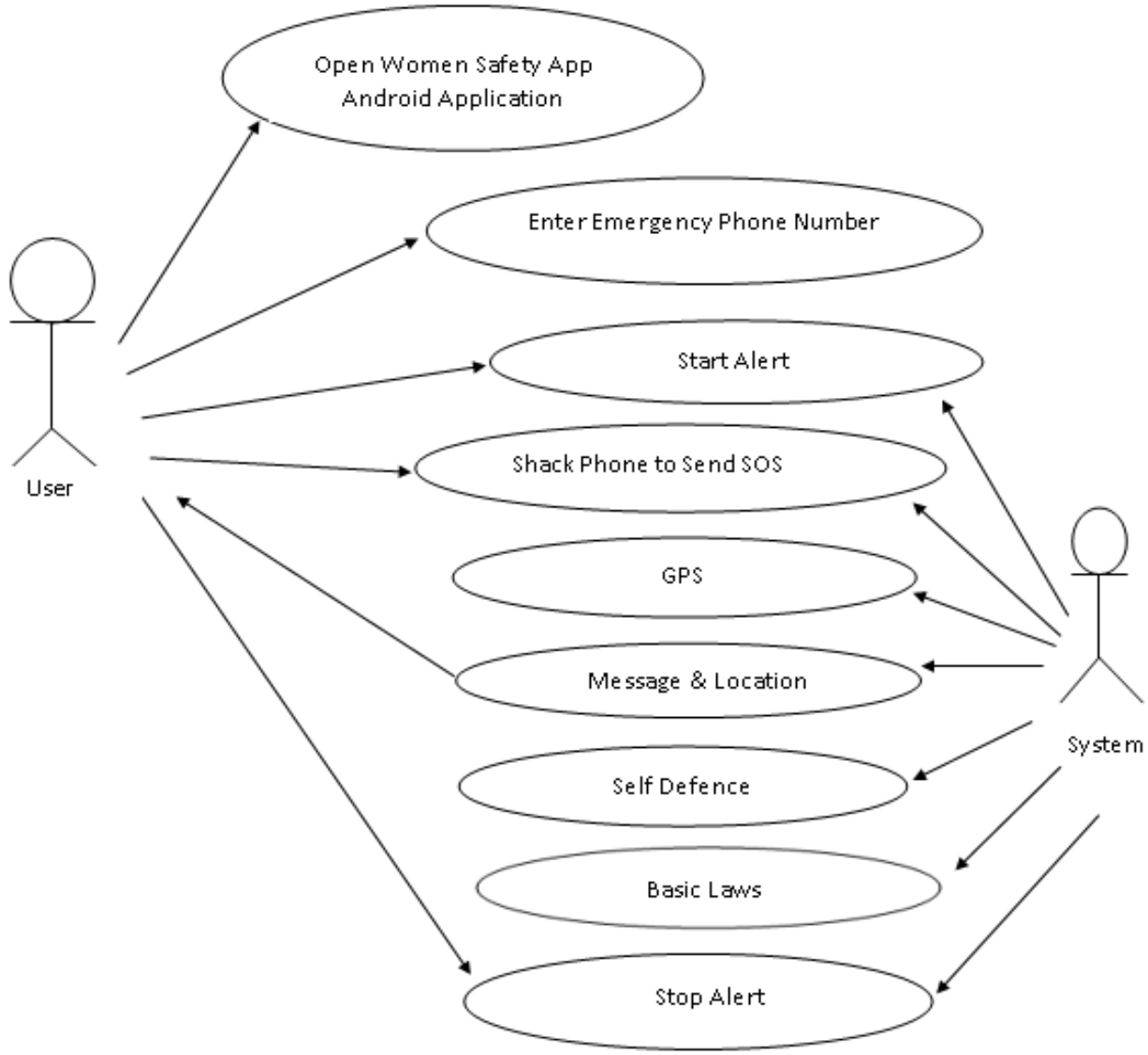
Month	Week 1	Week 2	Week 3	Week 4
Jan 2024	Introduction To DSMP Project	Search The Project Topic	Collect The Related Information	Create The Synopsis
Feb 2024	Start Working On The Project	Design And Coding Project	Coding	Testing
March 2024	Improvement In Code	Testing	Report	Updated Report
April 2024	Enhancing Project Code	Create Executable Android Application	Testing	Final Project And Presentation

5. SOFTWARE DESIGN

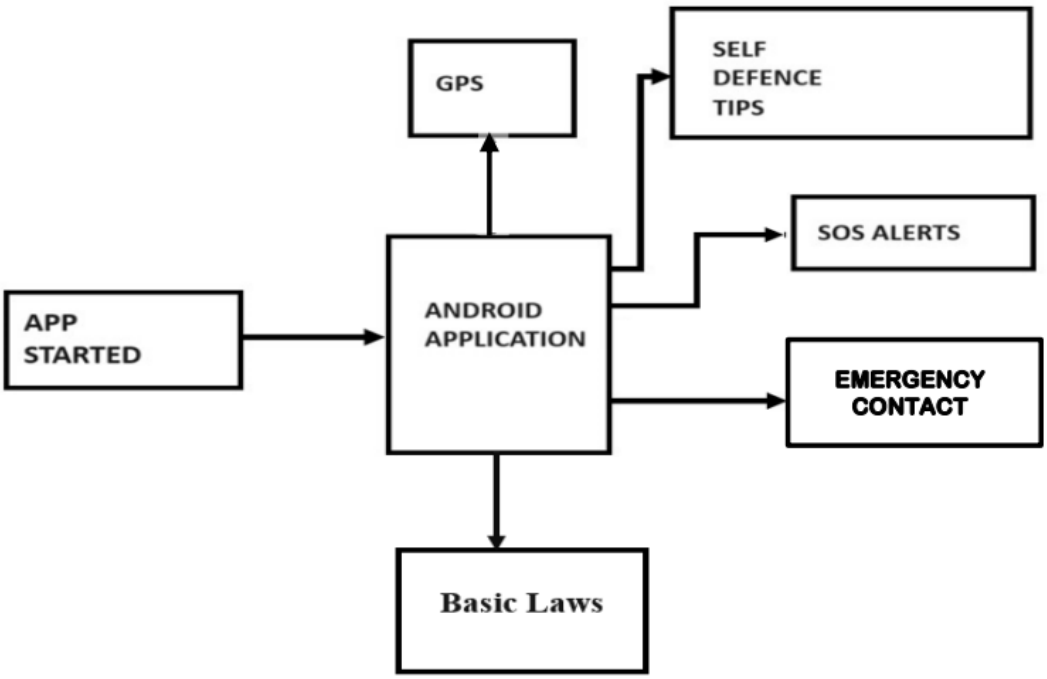
5.1 DFD



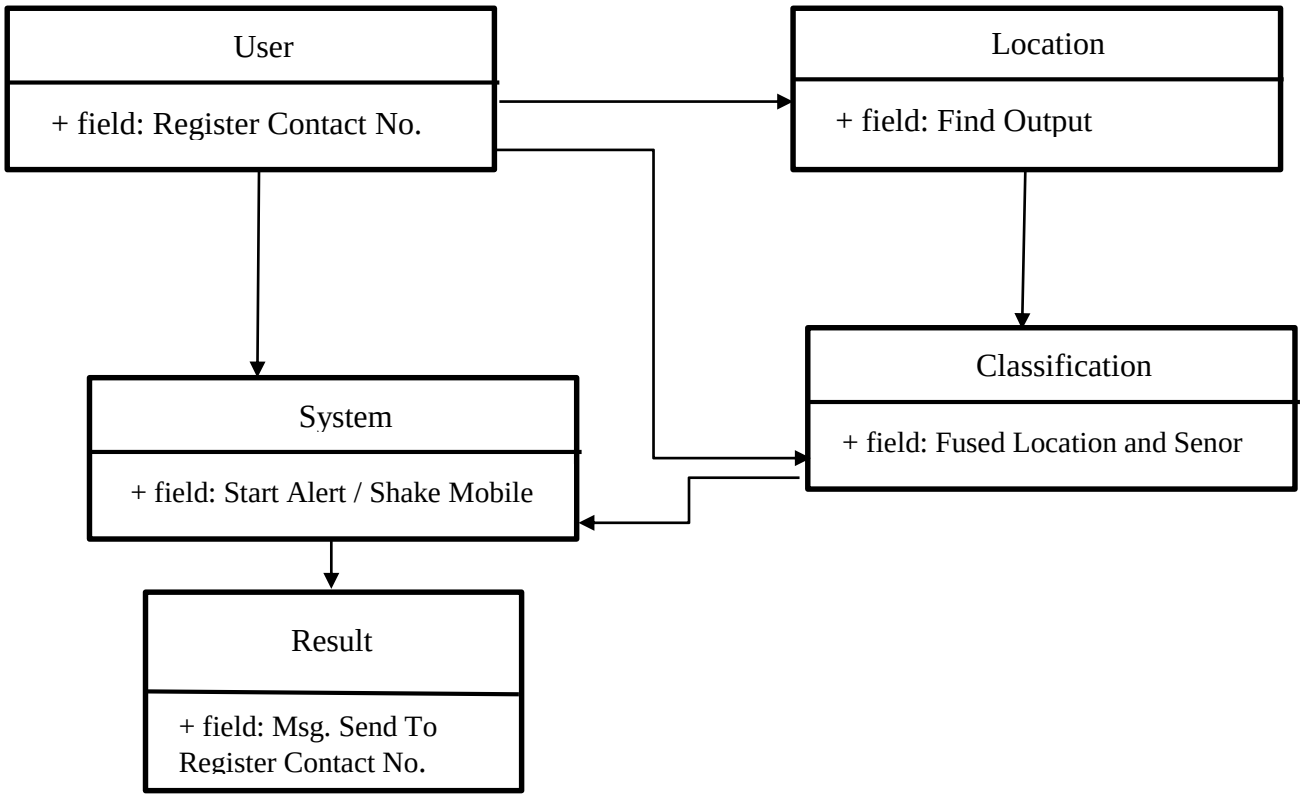
5.2 Use Case Diagram



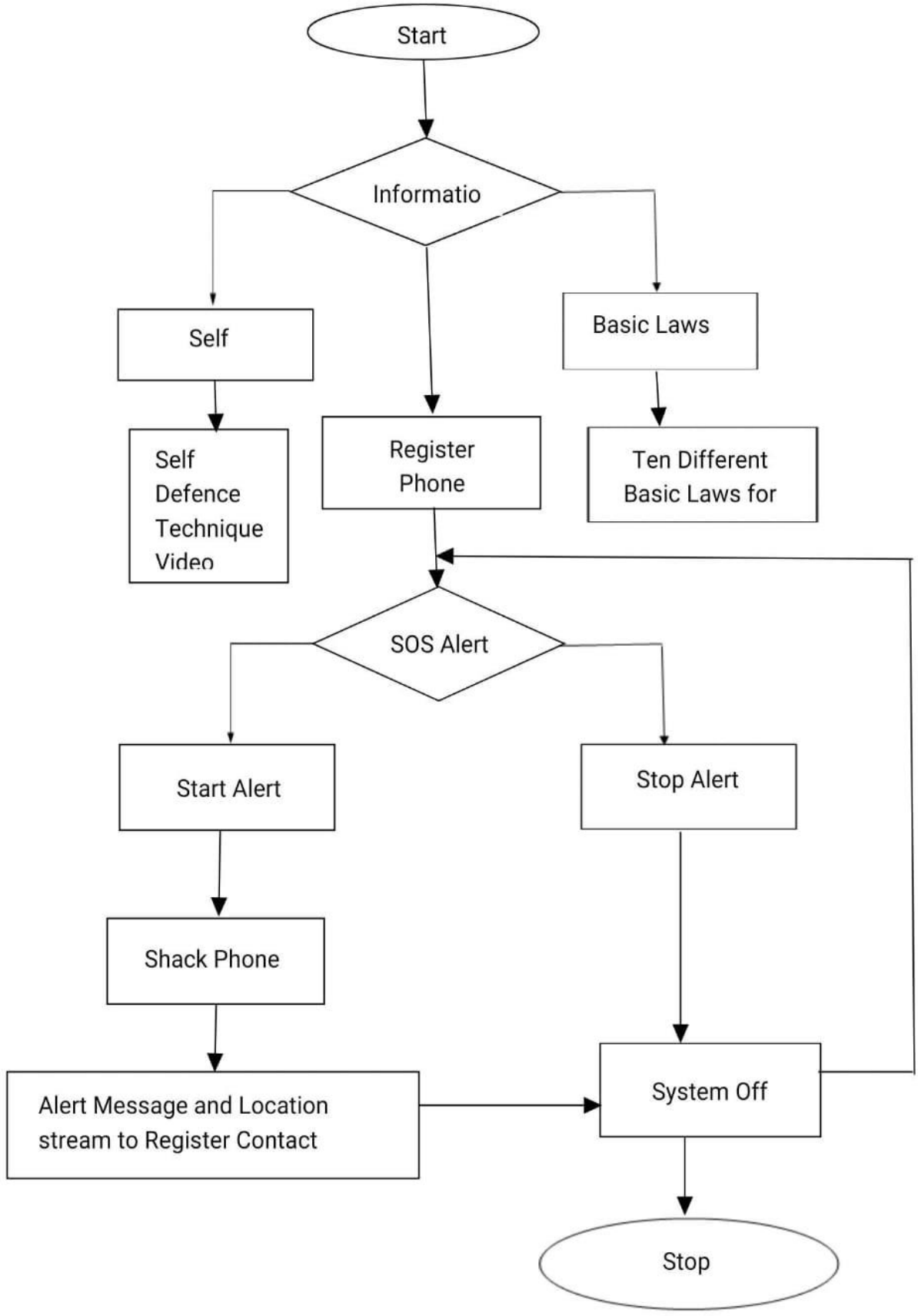
5.3 Architecture Diagram



5.4 UML Diagram



5.5 Flow Chart



6. IMPLEMENTATION DETAILS

6.1 Modules and their Functionalities:

A module description provides detailed information about the module and the supported components, which is accessible indifferent manners.

6.1.1 Start Alert:

Which is useful for the user when she is in some problem or needs any help? When the user opens this application, he can see a Start Alert button. Then send SMS to Register contact nos.

6.1.2 Adding Contact:

Using this module Adding Emergency contacts numbers and save it, so adding contact nos. and change nos. if needed.

6.1.3 GPS:

Through GPS, the current address of the user will be fetched if connected to network.

6.1.4 SOS:

Opening the app and pressing the start alert button and shaking the phone, the security get activated and message of current location will be sent to Register contact number.

6.1.5 Messages:

Store some message, to your danger situation. It's using to Emergency situation. Once the SOS key is pressed and the Application get activated, and send a formal alert massage along with the location of the user is sent to the nearest authority when shaking the mobile phone.

7. TESTING

Introduction

The development of software involves a series of production activities where opportunities of injection of human fallibilities are enormous. Error may begin to occur at the very inception of the process.

Testing is the process of executing the program with the intent of finding an error. A good test case is one that which has high probability of finding an as yet undiscovered error. A successful test is one that uncovers an as yet undiscovered error.

System Test

System testing ensures that the entire integrated software system meets requirements. It tests a configuration to ensure known and predictable results. An example of system testing is the configuration oriented system integration test. System testing is based on process descriptions and flows, emphasizing pre-driven process links and integration points.

White Box Testing

White Box Testing is a testing in which in which the software tester has knowledge of the inner workings, structure and language of the software, or at least its purpose. It is purpose. It is used to test areas that cannot be reached from a black box level.

Black Box Testing

Black Box Testing is testing the software without any knowledge of the inner workings, structure or language of the module being tested. Black box tests, as most other kinds of tests, must be written from a definitive source document, such as specification or requirements document, such as specification or requirements document. It is a testing in which the software under test is treated, as a black box .you cannot “see” into it. The test provides inputs and responds to outputs without considering how the software works.

Test Items

This test plan applies to each part of our project as well as overall integration testing. For each module, the input and output will be tested on validity. This will also require that each function supporting the modules be tested similarly. After each module is tested the final project has to be tested.

Test Plan

Test planning was planned as soon as the requirement specifications were prepared. Detail definition of test cases was started as soon as the design of components was finished.

The first test plan executed generally focuses on individual components, and then the focus shifts towards the larger components. Module testing will be used for each unit. An overall system test will be executed after integration.

Unit Testing

Unit testing focuses verification effort on the smallest unit of software design-the software component or module. Using the component-level design description as a guide, important control path are tested to uncover errors within the boundary of module. The relative complexity of test and uncovered errors is limited by the constrained scope established for unit testing. The unit testing is white-box oriented, and the step can be conducted in parallel for multiple components.

Integration Testing

Integration testing exercises several units that have been combined to form a module, subsystem or system. Integration testing focuses on the interfaces between units, to make sure the unit together. The nature of this phase is certainly ‘white box’, as we must have certain knowledge of the units to recognize if we have been successfully in fusing then together in the module.

Performance testing

In software engineering, performance testing is testing that is performed to determine how fast some aspect of a system performs under a particular workload. This phase includes testing of the entire application as whole in order to ensure that the application function successfully as a coherent unit without errors and breakup points.

Item Pass/Fail criteria

- **For Unit Level:**

  A unit level test is placed if each module satisfies the following conditions:

  All test cases completed: Each function returns the expected output for given input.

- **For Integration Level:**

  All unit level plans completed successfully for all test cases.

  All modules integrated together gives valid result

- **For Performance Level:**

  The monitoring application as a whole gives valid result for all possible operations.

  Performance results for the entire application are within acceptable limits.

8. SNAPSHOTS/ GUI

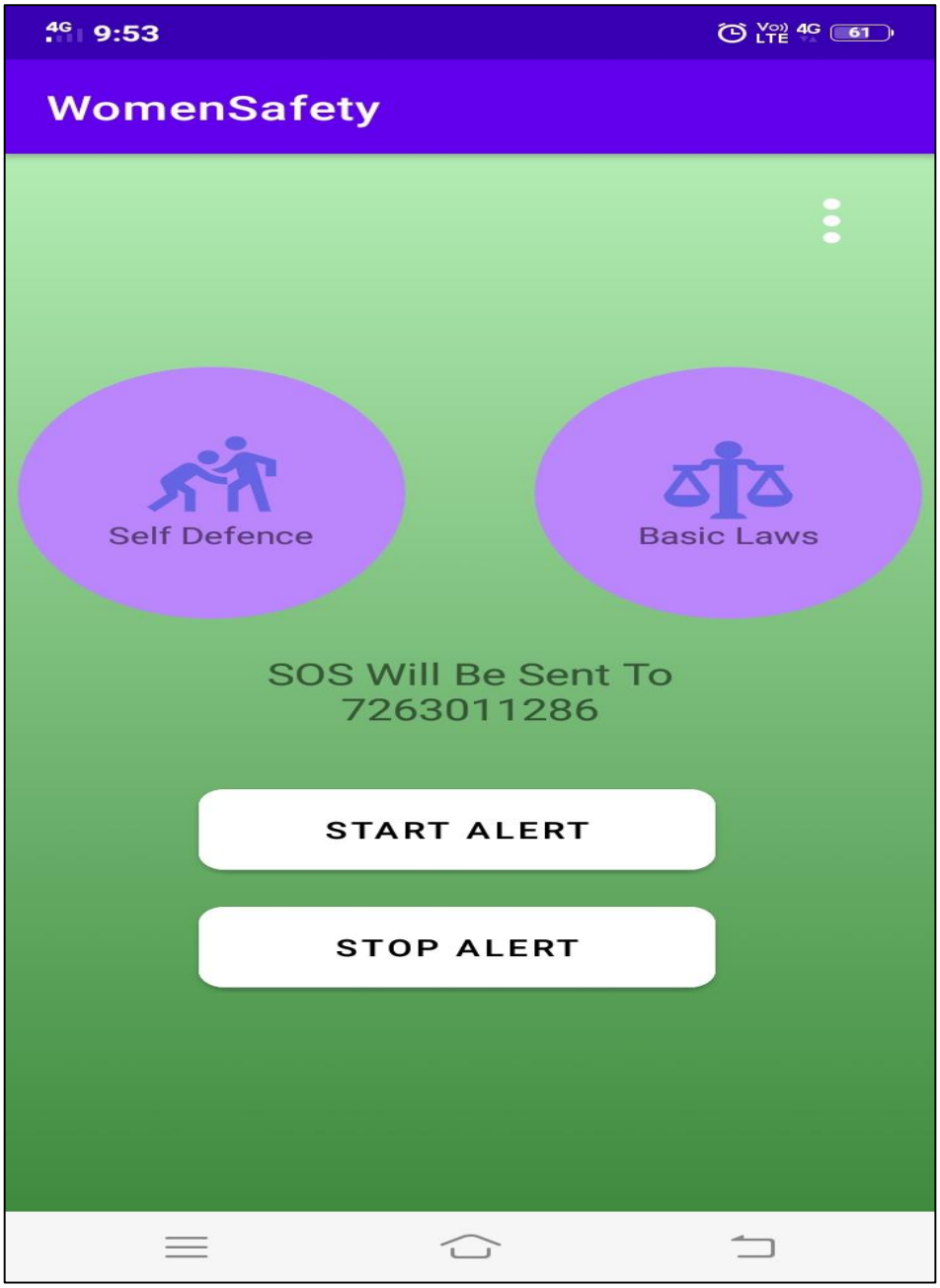


Figure: 8.1 App Layout

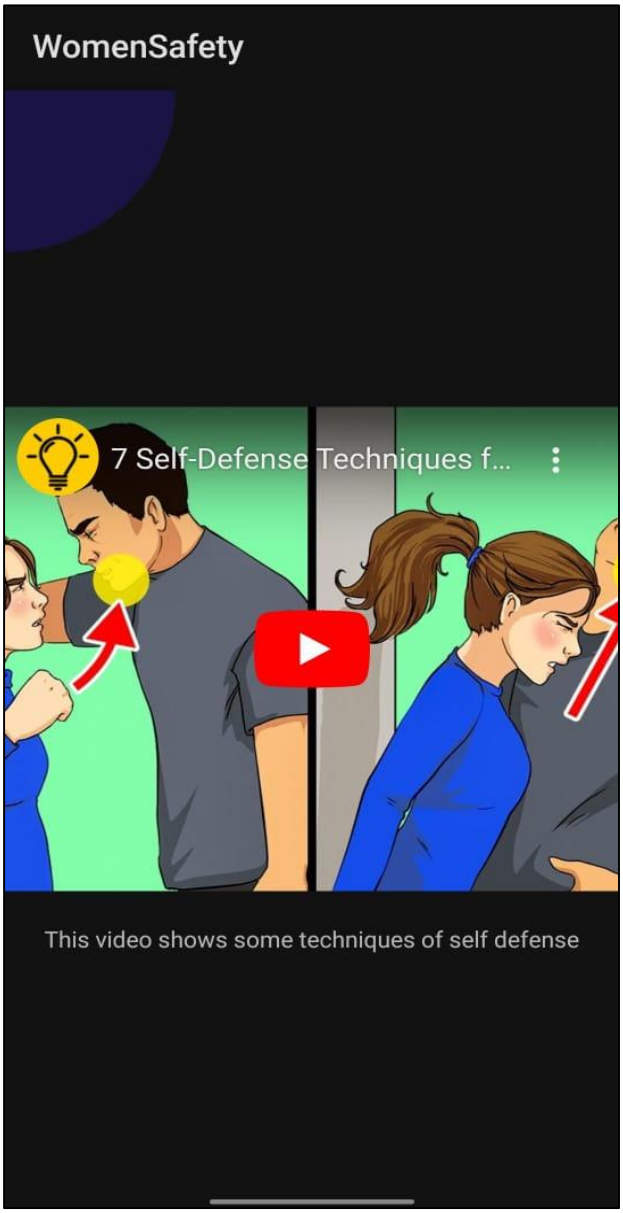


Figure: 8.2 Self Defense Video

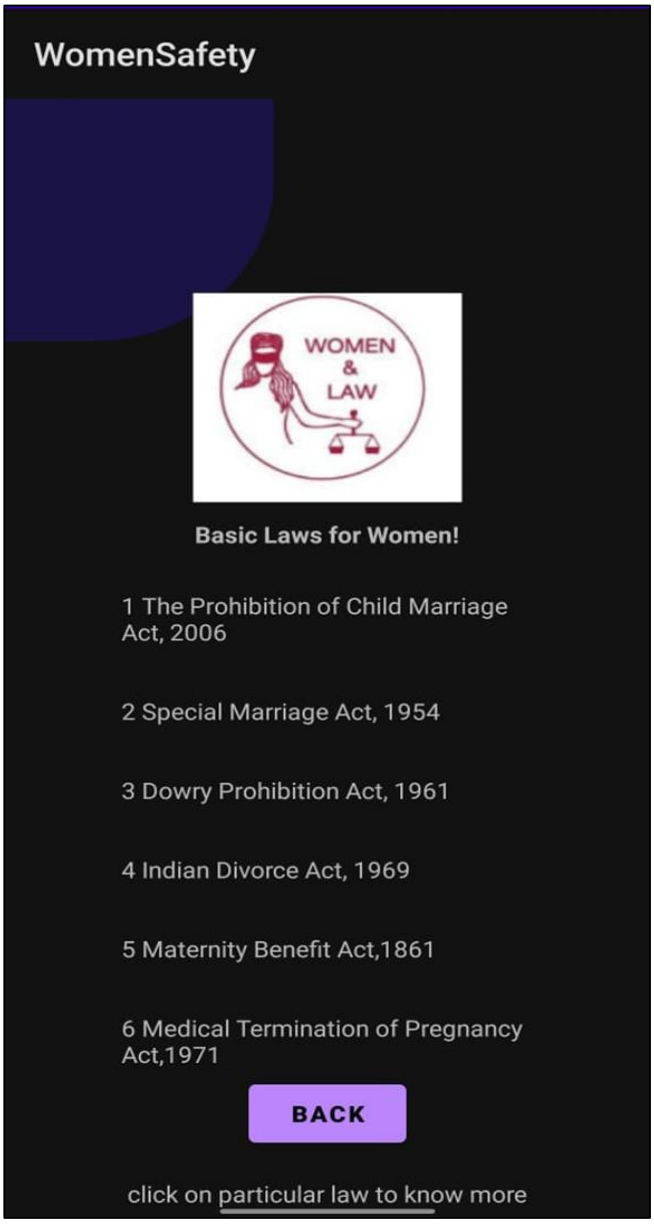


Figure: 8.3 Basic Laws

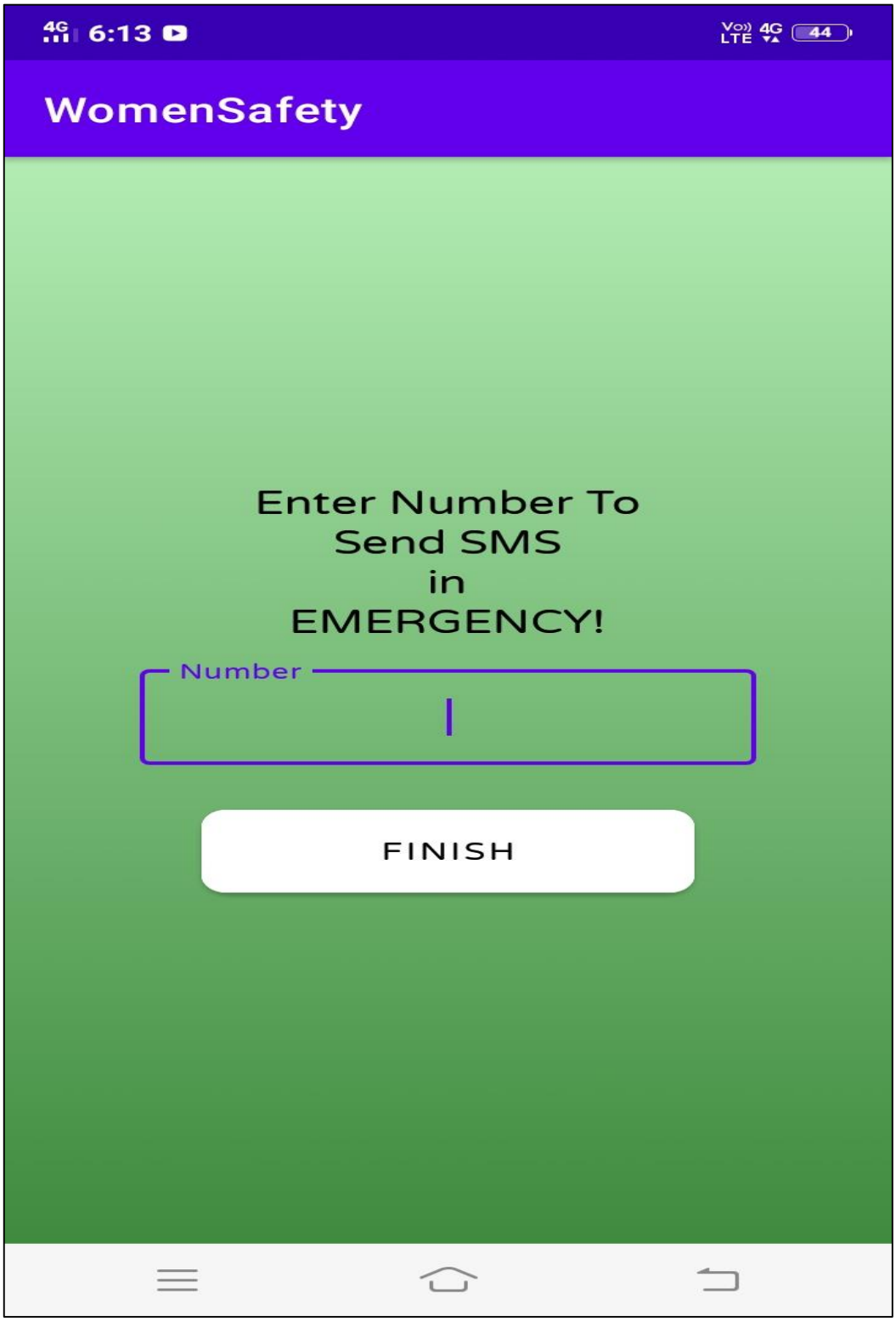


Figure: 8.4 Enter Emergency Contact Number

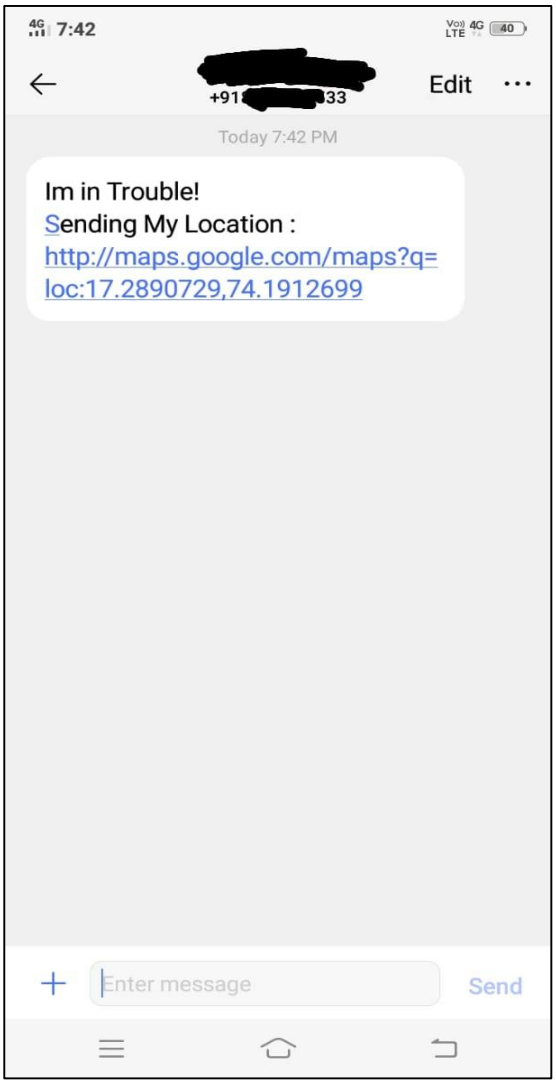


Figure:8.5 Alert Message

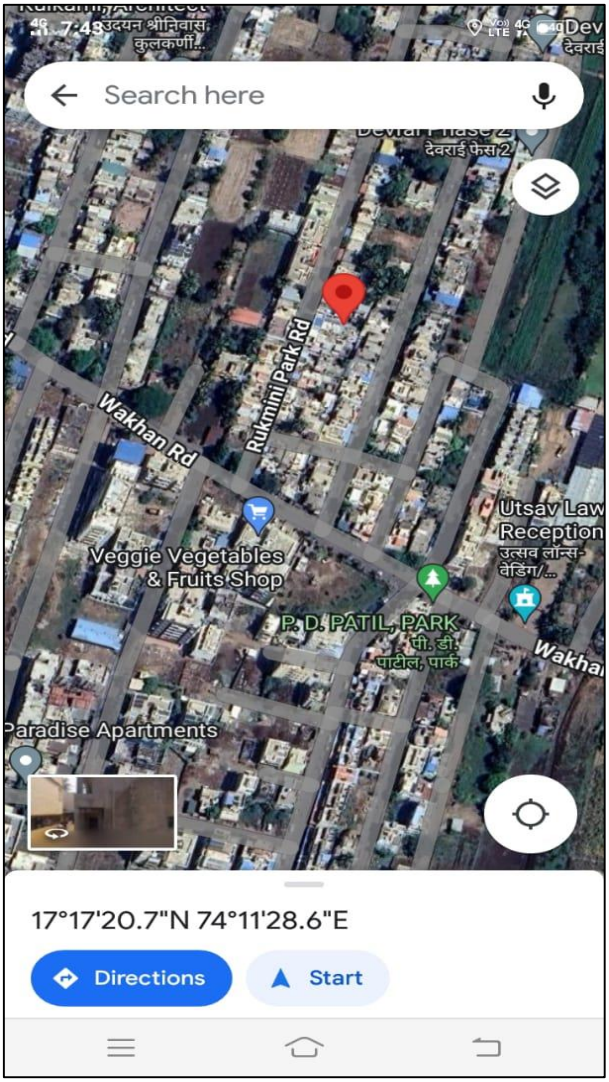


Figure: 8.6 Live Location

9. CONCLUSION

In conclusion, the “Women Safety App Android Application” is the best app to inform and update your close ones if you are in an unsafe place. The app is the fastest and easiest way to update your close ones about your location. You will never feel unsafe with this app. Keep it installed and stay alert. "Women Safety App Android Application" is a critical tool in empowering women to navigate their daily lives with confidence and security. Its intuitive interface and comprehensive features, including real-time location tracking and emergency alerts, offer peace of mind in potentially unsafe situations. By facilitating quick access to support networks and enabling timely assistance from law enforcement, the app ensures rapid response in times of distress. Moreover, its integration of crowd-sourced incident reporting fosters community engagement and awareness, contributing to a safer environment for all. Incorporating technologies like GPS, messaging, to enable functionalities like location tracking and emergency alerts to filing women safe always.

10. FUTURE SCOPE

1. **User Interface (UI) Design:** Creating an intuitive and user-friendly interface to ensure easy navigation and accessibility for women users.
2. **Feature Development:** Implementing key features such as real-time location tracking, emergency alerts, and access to support resources to enhance women's safety.
3. **Integration of Technologies:** Incorporating technologies like GPS, messaging, and database management to enable functionalities like location tracking and emergency alerts.

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