

**DESIGN AND DEVELOPMENT OF AN ANDROID BASED APPLICATION FOR  
WOMEN SAFETY**

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This Report Presented in Partial Fulfillment of the Requirements for the  
Degree of Bachelor of Science in Computer Science and Engineering

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**DHAKA, BANGLADESH**

**12 SEPTEMBER 2022**

## APPROVAL

This Project titled “**DESIGN AND DEVELOPMENT OF AN ANDROID BASED APPLICATION FOR WOMEN SAFETY**”, submitted by Saikat Ghosh and Pranta Das to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation will be held in September 12, 2022.

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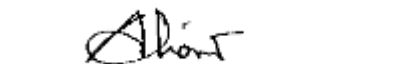
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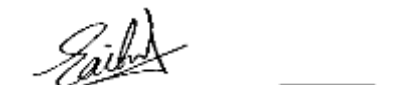
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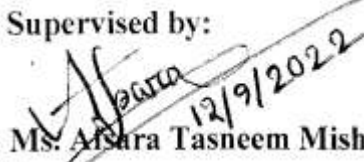
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## DECLARATION

We hereby declare that this project has been done by us under the supervision of **Ms. Afsara Tasneem Misha, Lecturer, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for the award of any degree or diploma.

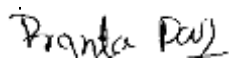
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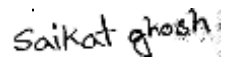
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Finally, we must acknowledge with due respect the constant support and patients of us parents.

## **ABSTRACT**

In the present world, it is dangerous for anyone to go alone at night, especially ladies. Knowing what resources are available to us in dangerous situations and using them to our advantage is an excellent strategy to ensure the safety of women and lower your risk of becoming a victim of violent crime. By having safety software on our phone, we can lessen risky situations and provide aid when we need it. This program can be used as a safety or preventative measure, unlike the other existing applications, which only function in an emergency or when there is a danger. A proverb goes that “Precaution is better than cure”. So taking the first steps is the right choice. Nowadays we're living in a technology-based era. We depend on it and also couldn't think a single moment without it. Women in Malawi and Swaziland show the most concern about violence and harassment at work, with up to 75% of female workers in some nations sharing this issue. According to the World Risk Poll, workplace violence and harassment have a similar prevalence among men and women, affecting close to 11% of female workers globally. That's why we want to develop this android application. With the help of it a girl can feel safe.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

Nowadays we're observing a lot of women harassment cases. No girl can go out because of the bad situations. In this modern era, we need a modern solution. Nowadays people have smartphones. 98% of people have phones in our country. And 80% of people are smartphone users. If we count 80% as 100%, in this 100% of the people 80% people use android phones. These days, we use mobile applications on a regular basis. Numerous features have been added to the field of mobile computing as a result of the revolution. At the point when somebody needs help or someone harasses her then she can get security help through our application. It is crucial for everyone to take action to protect women since their safety is a serious matter. When it comes to safety and security, a smart phone can be an effective instrument to stop violence against women. With this in mind, a specially designed Android app has been created to help those who are in need. Nowadays, we utilize versatile put together applications with respect to a regular schedule. Various elements have been added to the field of versatile figuring because of the unrest. This Android app was created to help you quickly find help from police. This app can be a self-protection weapon for a girl.

As demonstrated by the survey from the issue enunciation subchapter we have addressed recently that she can send messages to one person. As we said this item is an electronic application that suggests flexible data or web affiliation ought to be spread out on the contraption. The real performers of our endeavor are setbacks and police or saver. The organizations of the structure spread out by the help of the different sides. The organizations are: Share region, Get help, Emergency, helpline and visit.

For executing the structure UI, we have used XML (Extensible Markup Language) where we have made a mix of Recyclerview and Cardview where an android material arrangement is accessible. On the backend section, we have used JAVA language because of dissent plans. To store the information and things we have used Firebase real-time features which are assigned "Realtime Database".

In all actuality, the backend of our endeavor is parceled into three areas, one server, one informational collection, or more every one of the one application. If you book an air ticket in a movement administration, you commonly open the ticket booking site and interface with the frontend in light of the fact that the front end contains a supportive course to

investigate a client. Right when the data client needs is inputted, the application saves it to an informational index made on a server. Consequently, in our back-end system we make an informational collection to store the data that the server overcomes the clients. We included JAVA for our application progression.

## **1.2 Motivation**

Over the past five years, the use of smart phones with GPS navigation units has rapidly expanded from 3% to more than 20%. Because of this, a smart phone can be effectively used for personal safety or other forms of protection, especially for women. In an emergency, the user only needs to click once to activate this app. This application sends messages informing the registered contacts of the user's location every few seconds. As a result, it functions as a sentinel who trails the user until she decides she is safe.

## **1.3 Objective of Project**

We have set a few goals to accomplish our points. This will advance a lot more straightforwardly. The objective is pointed out beneath.

- To cultivate a caring attitude towards communities that need a girl
- making an easy security system for everyone
- To create awareness among people of the importance of women's security
- making a development base security system
- making a secure society

## **1.4 Expected Outcome**

We are hoping to offer this assistance all around the country. Ideally, it will function admirably.

- An easy and useful android based women security application
- Provide help at a short time
- Saving time and work pressure
- To create a better society and also a secured society
- Making a swift and easy way for both victims and police
- To create a secure and better society for everyone, especially women

## **1.5 Report Layout**

Report arrangement is basically the summarization of a project report format.

Chapter 1 has illustrated an Introduction to the project with its introduction, inspiration, objectives, and proposal.

Chapter 2 will have a “Background” consisting of an introduction, related work, Comparative Analysis, and Scope of the problems and challenges.

Chapter 3 will have Requirement Specification. Here we'll try to say about the DFD model, Block Diagram, and Requirements Collections & Analysis

Chapter 4 will have Design Specifications. Mention about introduction, Proposed system, and Front-end Design.

Chapter 5 will interpret the Implementation & Testing

Chapter 6 will discuss Impact on society, Environment, Ethical Aspects & Sustainability

Chapter 7 will discuss the Summary and Conclusion and also demonstrate the future works.

## **CHAPTER 2**

### **BACKGROUND STUDY**

#### **2.1 Preliminaries/Terminologies:**

We are living in a developing country. Everything is converted to an android based application. In this era, women's harassment has become a serious issue. Even a girl is not safe in their family. The framework is planned and created keeping in view that it ought to be user friendly, searching ought to be basic, and it ought to have a high-grade and light presentation and client ease is given to the client. The Interface of the framework is created remembering that it ought to be gorgeous, interesting, from the start, simple to comprehend, and clear as crystal. In these circumstances, we analyze some problems and try to make a solution to get rid of the problem It will similarly ensure that the right application way is taken the major time, that turn of events and business charge examinations have been considered to oblige likely plans, and that misconceptions are kept to a base, diminishing the fundamental for future IT invigorates, which is more reasonable, supportive, and adaptable.

In this section, we provide some related studies and describe some women's security applications in our country and also different countries.

#### **2.2 Related Works**

Many mobile applications are being created today to carry out various academic tasks. This is employed by numerous educational establishments globally. The following are some examples of outstanding contributions made to this subject:

AppSoftIndia is the organization that made the "WOMEN'S SECURITY "application. The client should save specific data, which is one of the application's primary capabilities. These points of interest comprise the client's email address and secret key, the beneficiary's email address and portable number, and an instant message. The application is then stacked as a "gadget," which cautions the collector when the client taps it. An instant message with the client's area is shipped off the objective versatile number in the wake of recording the voice of the climate for about 45 seconds [2].

BigSystems made the "POLICE NEARBY" application in 2013. The police close by scanner Android application were made fully intent on associating occupants and understudies to the nearest police headquarters in their urban communities with a solitary snap. It additionally empowers the local area to get more dynamic straightforwardly from Android cell phones. The Police Scanner Android App permits other policing and neighborhood, state, and school police divisions to speak with you and deal with you with better help. Downloading the police application is free and requires no registration [3].

Yell Alarm, is an android application made by GoPalAppMaker in November 2013[10]. By clicking this application, it makes a very high-volume yell amidst wretchedness when the lungs of a singular bomb in yelling in a tough spot.

The generated yell in a woman's voice is seriously useful in putting the conceivable strong lowlifes down. The primary work done by this application is the point at which the singular pushes or contacts the application, the phone yells loudly with a lady's voice. The applications referred to the above deal with different stages, a few applications work on Android, Windows, and IOS anyway some are essentially in android or windows. In any case, this application Security Alert is planned only for the android stage yet in the future working over Windows and IOS platforms can be loosened up. The android stage is open source and was fabricated including an open Linux Kernel to engage the designers in making charming convenient applications that will take advantage of the handset offers. A Virtual Machine is arranged and utilized by Android In solicitation to propel the memory and equipment assets of a flexible environment.

One more intriguing application called "NAARI" was made by Shreya Chakraborty, Debabrata Singh and Anil Kumar Biswal. This application's essential objective is to offer a solid stage through an Android telephone. An individual can get the area by GPS tracker [15].

Nowadays, people using PDAs have increased rapidly and, in this manner, a PDA can be utilized gainfully for individual security or different other insurance purposes. The

disgraceful episode that shocked the entire nation has excited us to go for prosperity, hence an enormous gathering of new applications has been created to give security structures to women through their cells. This paper presents an Android Application for the Safety of Women and this application can be started by a singular snap, at whatever point the need arises. A single snap on this application recognizes the area of a spot through GPS and communicates something specific containing this region URL to the enrolled contacts and besides moves toward the primary enrolled contact to help the one in a long time.

Our work plans to give data at an early time. The product program refreshes the data of a young lady who sends messages likewise in her area.

### **2.3 Comparative Analysis**

In view of the data we have gotten from the overview, these prerequisites are more significant in the ladies' security framework. Dealing with all women's security frameworks in a manual framework is both tedious and risky. So despite the fact that we can't satisfy every one of the prerequisites referenced above, we have given answers for a portion of the serious issues in this application.

### **2.4 Scope of The Problem**

Here we've seen that the vast majority of the undertaking depends on the web . Yet, we do our undertaking in android based. Since we realize the vast majority utilize cell phones. Then again, Android is easier to use than the web. In our undertaking, we used a firebase informational collection which is thoroughly free and gives a nonstop update and clients will get cautioning. We've seen that the referenced works are bunches of intricacy and exorbitant yet our work is free. It is likewise an easy-to-use android application.

#### **2.4.1 Background of the Project**

We are living in a developing country. Everything is converted to an android based application. In this era, women's harassment has become a serious issue. Even a girl is not safe in their family. The framework is planned and created keeping in view that it ought to be user-friendly, searching ought to be basic, and it ought to have a high-grade and light

presentation and client ease is given to the client. The Interface of the framework is created remembering that it ought to be gorgeous, interesting, from the start, simple to comprehend and clear as crystal. In these circumstances, we analyze some problems and try to make a solution to get rid of the problem.

#### **2.4.2 Problem Statement**

In case of emergency, needs help a girl can get from this app. Women's harassment problem is increasing day by day. None is safe anywhere. There are different types of harassment that a girl faces. Sexual harassment is one of them. We also see disability harassment, racial harassment, gender identity, ageism. Because females frequently lack power, are in more vulnerable and insecure positions than men, lack confidence, or have been conditioned to suffer in silence, women are considerably more likely to become victims of sexual harassment. It is crucial to examine some of the root causes of this situation in order to comprehend why women experience the great majority of sexual harassment. So, we've decided to develop this app.

#### **2.4.3 Proposed System**

We are proposing an android base application which will help a girl in their dangerous situation. By this she can be helped by herself. There will be some features . With the help of the app she can get emergency help and also complain about problems. When she'll feel unsafe or in danger then she'll press the emergency button. In the emergency button there will be 3 options such as- get current location, nearby police station and nearby hospital. First and foremost, the system is a mobile application native to android platform. The intercommunication of each user with the application depends on who the end user is. By this application a victim can communicate with police as soon as possible.

#### **2.5 Challenges**

Topic selection was one of the biggest challenges for us. We're totally confused about which topic we'll choose. At the time of development, we're facing a lot of problems. On the other hand, we've no idea about the android studio. We've learned about it. Practiced more and more. We also learned about real-time databases. As it is for a girl's safety application that's why we've to secure the safety part very carefully.



## **CHAPTER 3**

### **REQUIREMENT SPECIFICATION**

#### **3.1 Business Process Modeling**

Frameworks approach for making great mechanization frameworks are alluded to as Systems Analysis and Design. Data innovation is joined. Arranging, examining, planning, executing, and supporting are steps simultaneously. It covers both the creative interaction and impending framework support assignments. The cascade model, which is extremely easy to apply by following the model stages, is the fundamental SAD methodology. Writing computer programs is in this way the principal center.

It has a few targets. These are:

- This sort of assessment gives a lucky spot of information and detachments of different frameworks, measures, limits and complete designs.
- Framework evaluation helps with achieving ease and strength of different designs.
- In particular, it spins around frameworks where the other minor designs could have conflicting protests and it moreover connects with the comprehension of principal plans.

#### **3.2 Logical data model**

This smart movement application has a client server plan. All of the clients' data is kept in the Real-time enlightening record server. A steady enlightening record server is at this point the solicitation. This is an enlightening record structure which involves a momentous procedure for managing the information and the unprecedented way is Real-time dealing with. For this current situation tolerating the state is incessantly changing, there is no impact on information base access. At any rate, data can be gotten to by clients yet before that they should introduce the application on their remote.

The block diagram is given below:

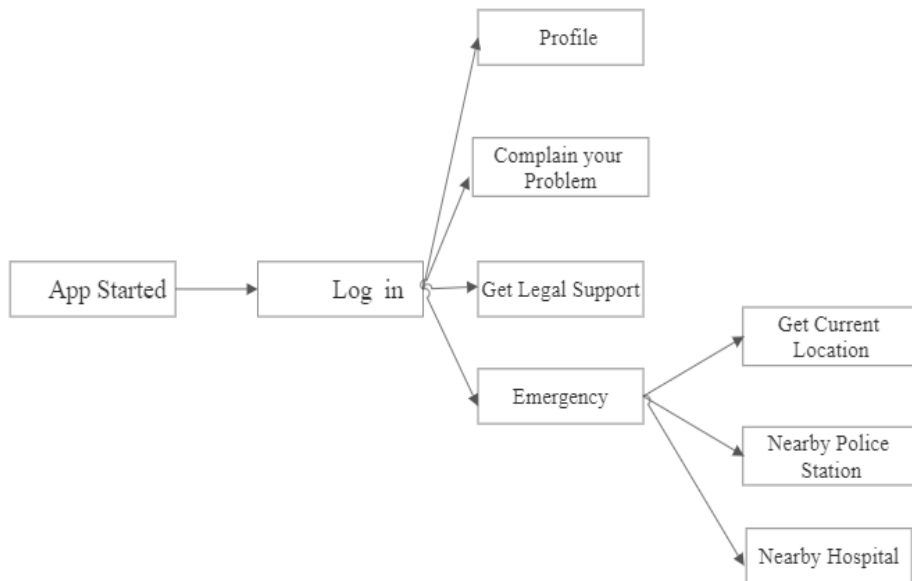


Figure 3.1 App's Block diagram

### 3.2.1 Data Flow of Women Security App

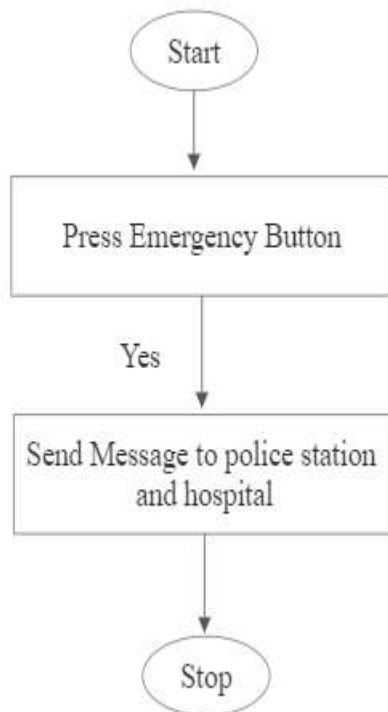


Figure 3.2: Flow chart of Women Security App

### 3.3 Requirement Collection and Analysis

Our project is an Android Based application. We've used Java to develop it. It has some requirements. Those are mentioned below:

- Hardware Configuration
  - Figure 3.1.1: Data flow Diagram, A pc with internet connection
  - Figure 3.2.1: Block Diagram, A pc with internet connection
  - A Pc
- Software Configuration
  - Java
  - Tools: Android Studio IDE(3.0.1 version)
  - Database: Firebase
- Features
  - Signup Function. For signing up the user must have to fill up the name, email, password, and contact number.
  - Login function. After signup, the user can be inserted into the application. For this, she'll enter her username and password.
  - Emergency. At the time of emergency, she could share her live location. On the other hand, she could contact the nearby police station and Nearby hospital.
  - Complaint. She can submit her complaint.
  - Profile. Here she'll add her details. Also, could add an emergency contact number?

#### 3.3.1 System Analysis

It is a framework for a get-together and studying information, seeing an issue, and destroying a motorized design into its constituent parts. This sort of evaluation is coordinated to zero in on a manual issue or its parts to see its necessities or targets. A definitive thinking cycle manages the methodology and guarantees that any overabundant bits of the robotization framework work impeccably to achieve their motivation.

Improvement and life cycle are the chief pieces of construction assessment. The Software Development Life Cycle is a strategy for making fabulous programming at the most reduced possible expense in the briefest extent of time. This life cycle gives a coordinated

movement of stages that help a relationship in conveying overall around having a go at programming quickly. SDLC might be depicted utilizing different models.

### 3.4 Use Case Modeling and Description

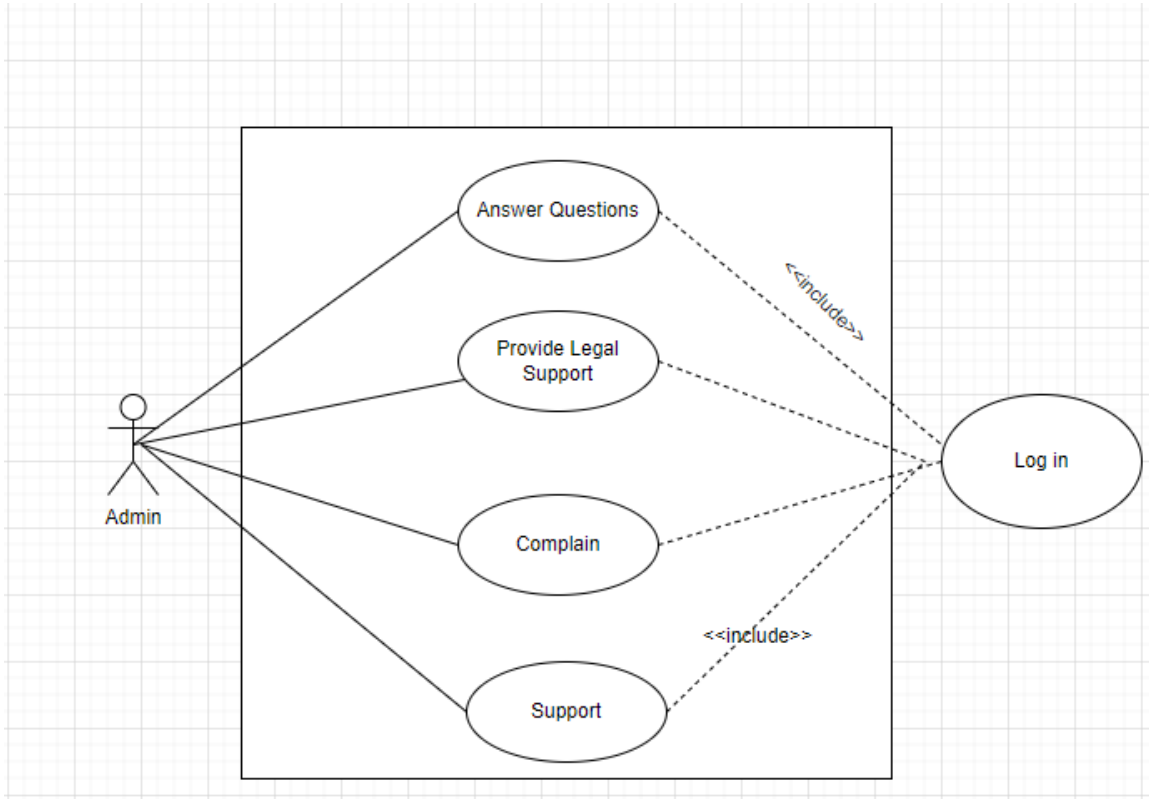


Figure 3.3: Admin's Use Case Model

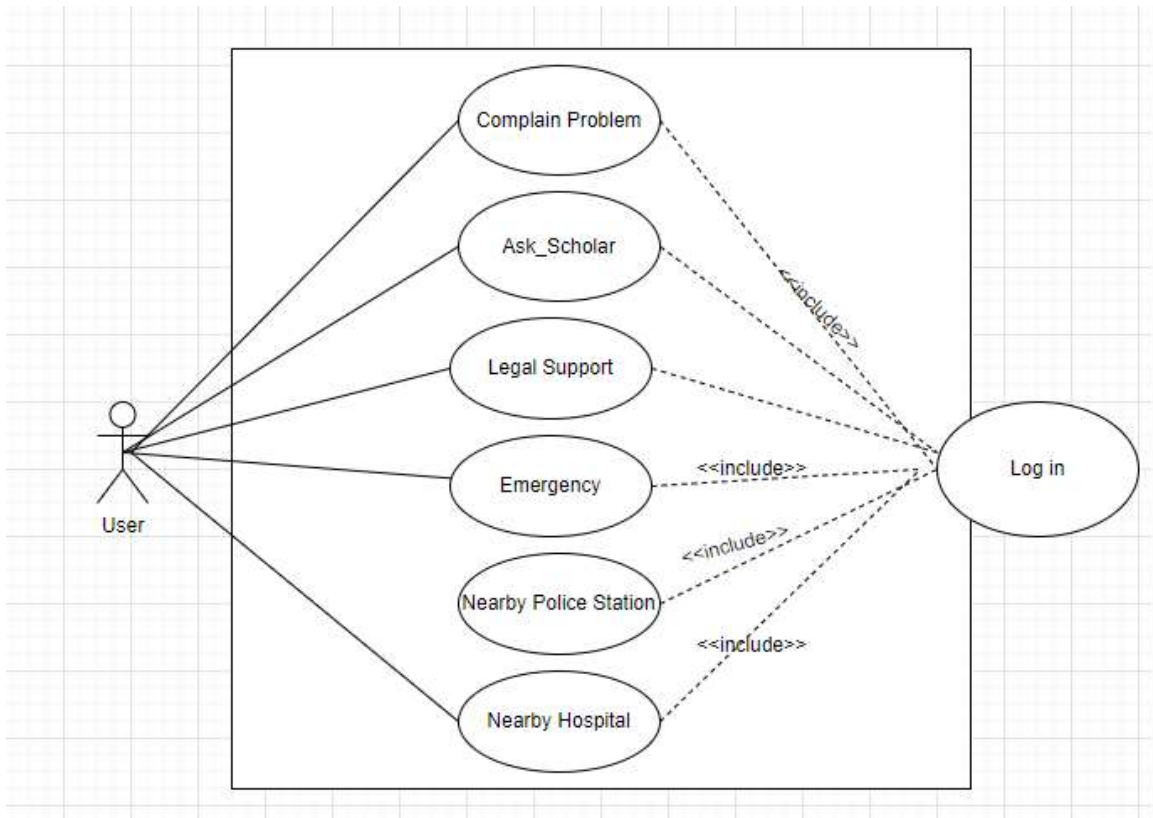


Figure 3.4: User's Use Case Model

### 3.5 Design Requirements

Programming setup is the cycle by which an expert creates a detail for an item that is expected to achieve goals and relies upon a lot of rough parts and restrictions. "Every one of the cycles drawn in with envisioning, illustrating, executing, approving, and over the long haul adjusting complex systems" or "the development following necessities definition" are two strategies for portraying programming plans.

#### 3.5.1 Conclusion

The entire part has been centered around the design evaluation and plan that will be used to gather this application. This application's framework incorporates an exhaustive assessment of a construction to find regions for development and, whenever required, make invigorates. Precisely when a framework evaluation is done exactly, it guarantees that the sensible course is taken to the degree that applications and assists with diminishing bungles, which decreases future IT fundamentals for conclusive thinking. If the above cycle is followed conclusively, it won't simply save the connection cash quickly, yet it will

similarly ensure that the right application way is taken the major time, that turn of events and business charge examinations have been considered to oblige likely plans, and that misconceptions are kept to a base, diminishing the fundamental for future IT invigorates, which is more reasonable, supportive, and adaptable.

## **CHAPTER 4**

### **DESIGN SPECIFICATION**

#### **4.1 Front end Design**

Android Studio, Visual Studio, and Droid Script are a few of the IDEs accessible for organizing Android applications. We included Android Studio for our task. Since one of the most mind-blowing IDEs for Android making PC programs is Android Studio. Google made this movement instrument, which has been praised by adaptable application designers starting with one side of the planet then onto the next. The benefits of including Android Studio as an Android progress climate are unique. Front-end and back-end improvement might be finished in a liquid climate utilizing this thing.

#### **4.2 Functions**

There are five functions of our system. We've tried to develop our application as much as possible. The functions are: Update your information, complain about your problem, ask a scholar, get legal support, emergency. . We've also tried to add a function which is totally different from the existing aphthae is the Emergency function. Here she can get 3 options.

##### **4.2.1 Signup As a User**

In this feature, users can sign up to use the apps.

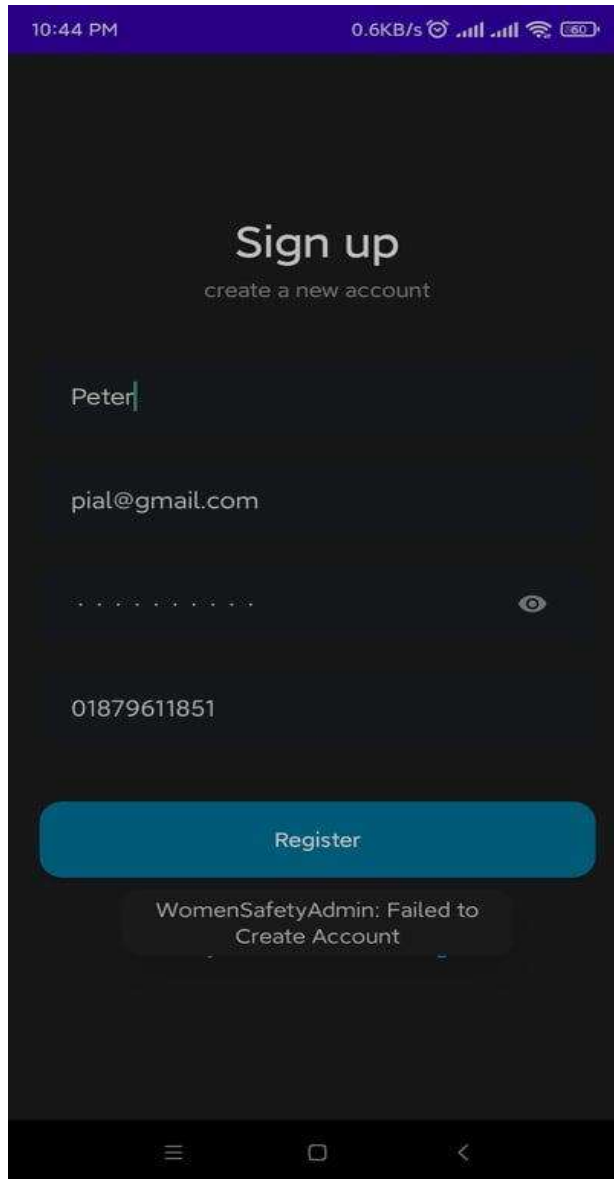


Figure 4.1: Signup function

#### **4.2.2 Login As Admin**

After logging in as an admin, they can see a dashboard. There we added some information. There, admins can find their profile, and basic information, change passwords, and logout options. Admin can use complaint answers. Admin can communicate with each other.



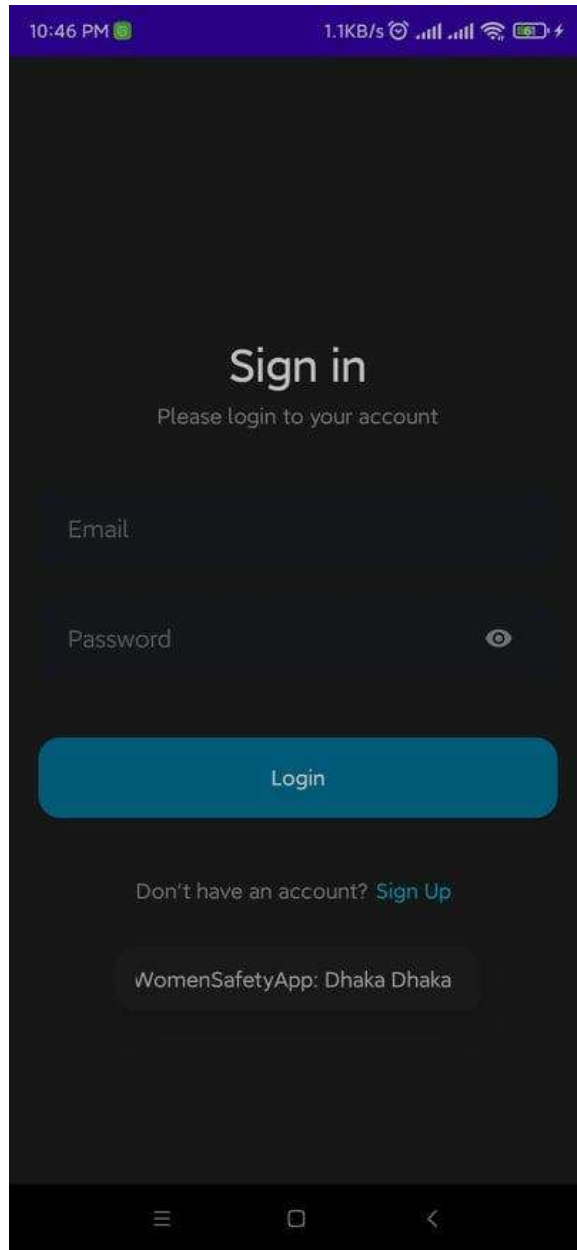


Figure 4.2: Login Function

### 4.2.3 Admin Home Page

After logging in as an admin, they can see a dashboard and use the feature. admin as to which expertise they use this type of feature.

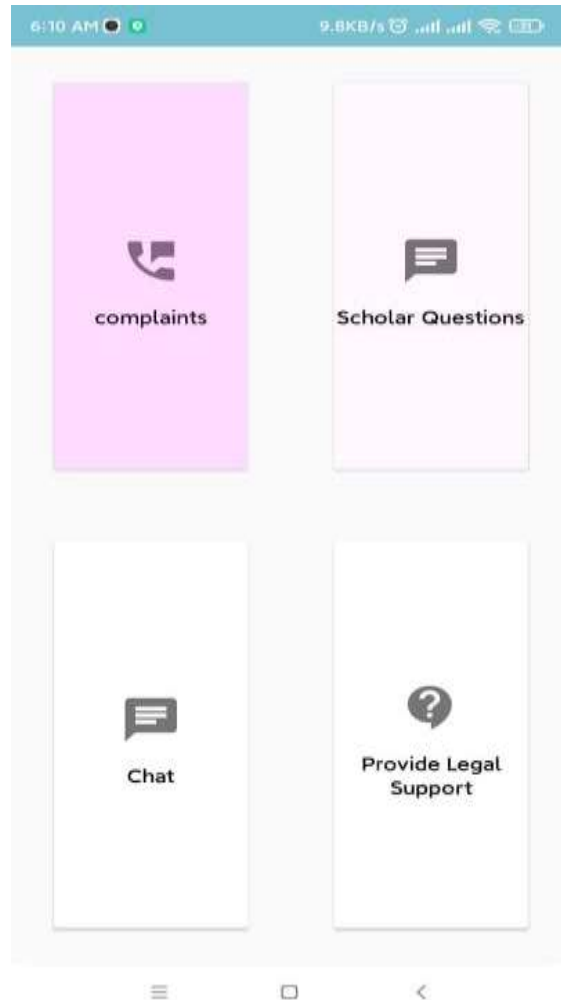


Figure 4.3: Admin Dashboard

#### 4.2.4 User Home Page

The homepage is generally the first page of an app. Anyone is able to visit this page whether they are using the apps or not. We can find a lot of features on the homepage. Although, not anyone can have the opportunity to use all the features unless they are registered.

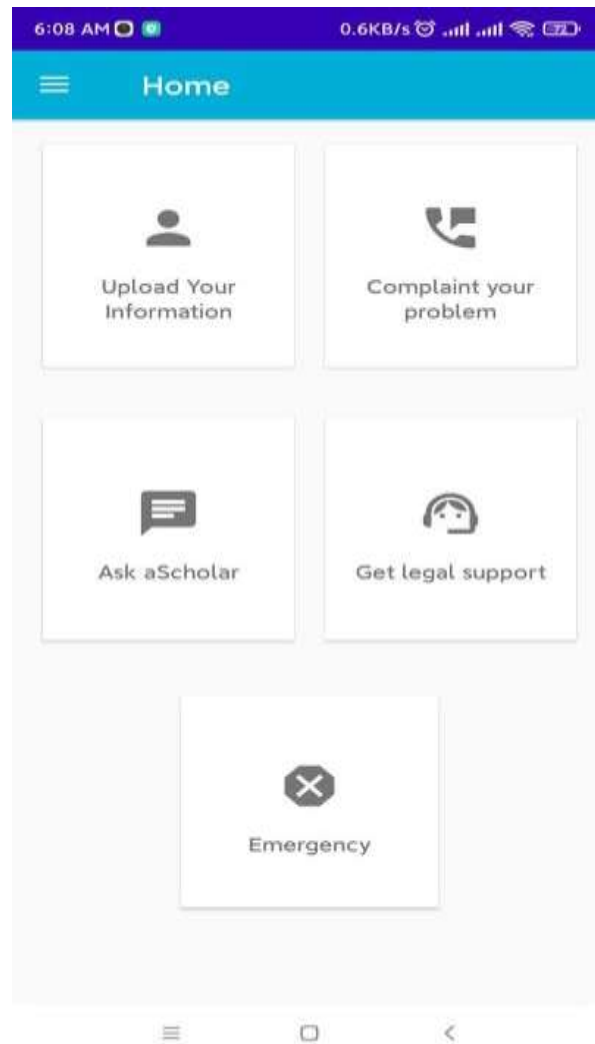


Figure 4.4: User Dashboard

#### 4.2.5 User Navigation

At the top of the page, we can find a menu or navigation bar. Here We can find all the features.

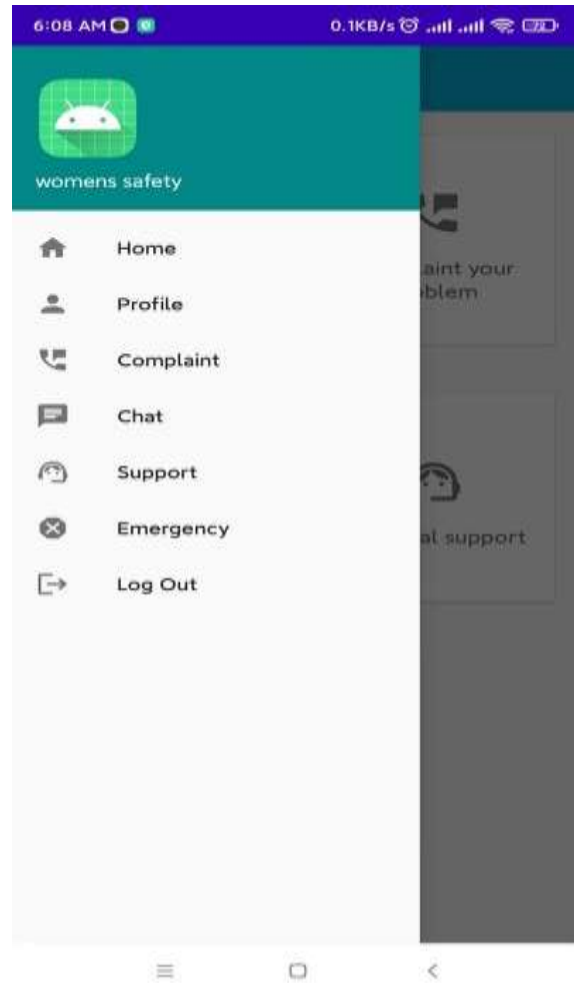


Figure 4.5: User Navigation or Menu bar

#### 4.2.6 Profile Function

This part is for giving information. First, they'll fill up the sign-up part. There all information of a user will be inserted. After signup they'll be able to see the home layout.

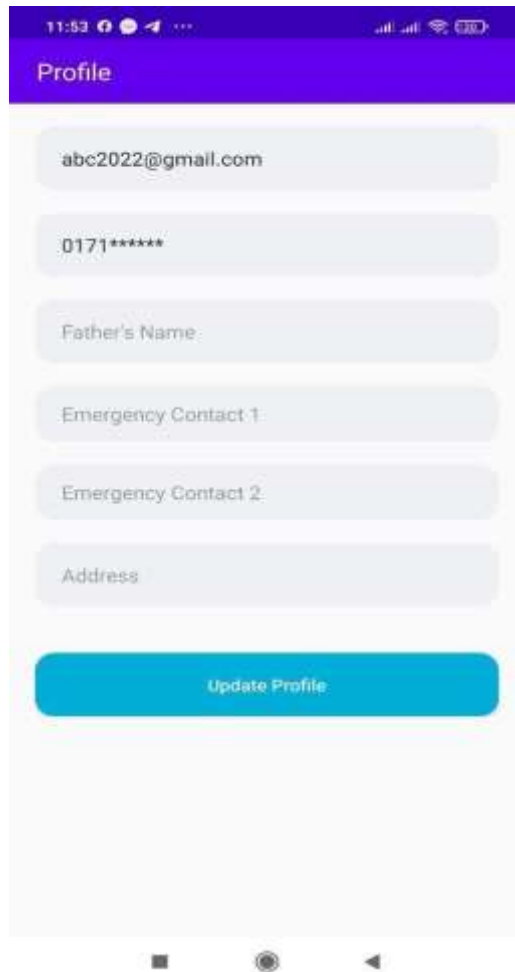


Figure 4.6: Profile Function

#### 4.2.7 Emergency Button

As the user adds their location. So, a user can find the nearest police station. A user can also find the nearest hospital by this function.

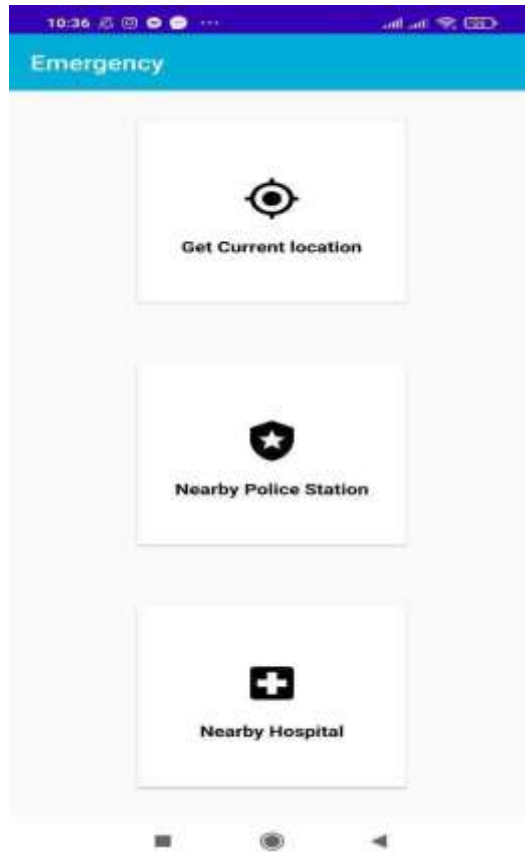


Figure 4.7: Emergency Button

#### 4.2.7.1 Get Current Location

Users with any problem in a dangerous situation can share their live location via admin.

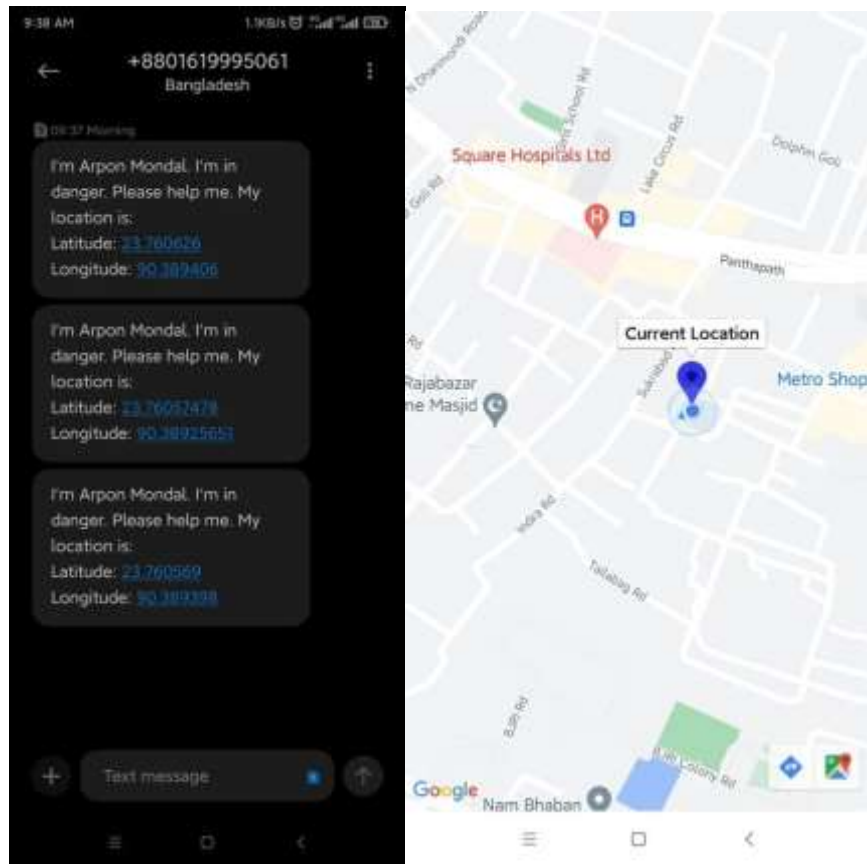


Figure 4.8: Current Location

#### 4.2.7.2 Nearby Police Station

It's a prototype app so we are using a free GPS app. Users with any problem in a dangerous situation can see a nearby police station and contact her.



Figure 4.9: Nearby police station

#### 4.2.7.3 Nearby Hospital

It's a prototype app so we are using a free GPS API. Users with any problem in a dangerous situation can see a nearby Hospital and contact her.



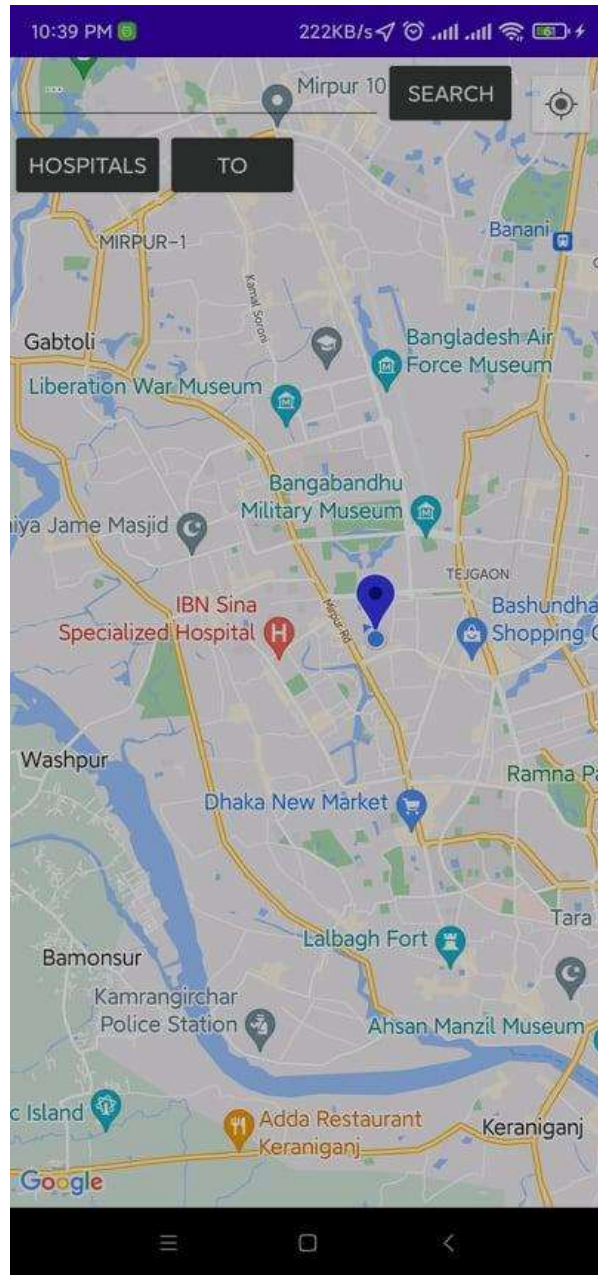


Figure 4.10: Nearby Hospital

#### 4.2.8 Ask a Scholar Function

If a user wants to know something or they have questions then with the help of this function they can text a scholar.

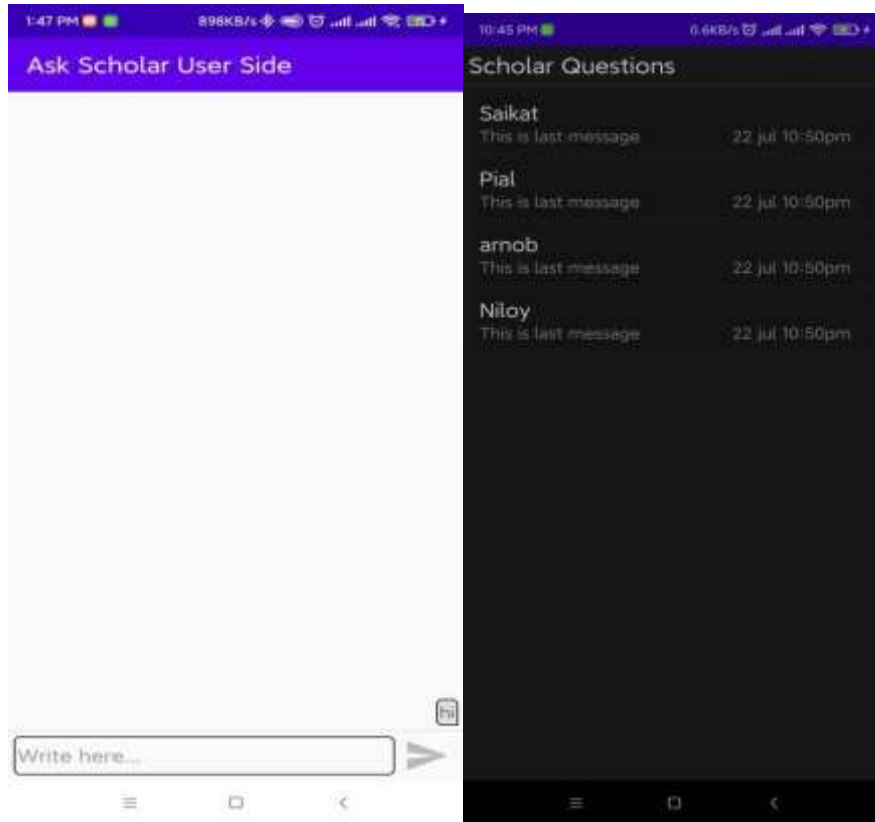


Figure 4.11: Ask a Scholar Function

#### 4.2.9 Complain your Problem:

The user can also complain about their problem.



Figure 4.12: Complain your Problem Function

#### 4.2.10 Provide Legal Support:

Users of any kind who need legal support can use legal support.

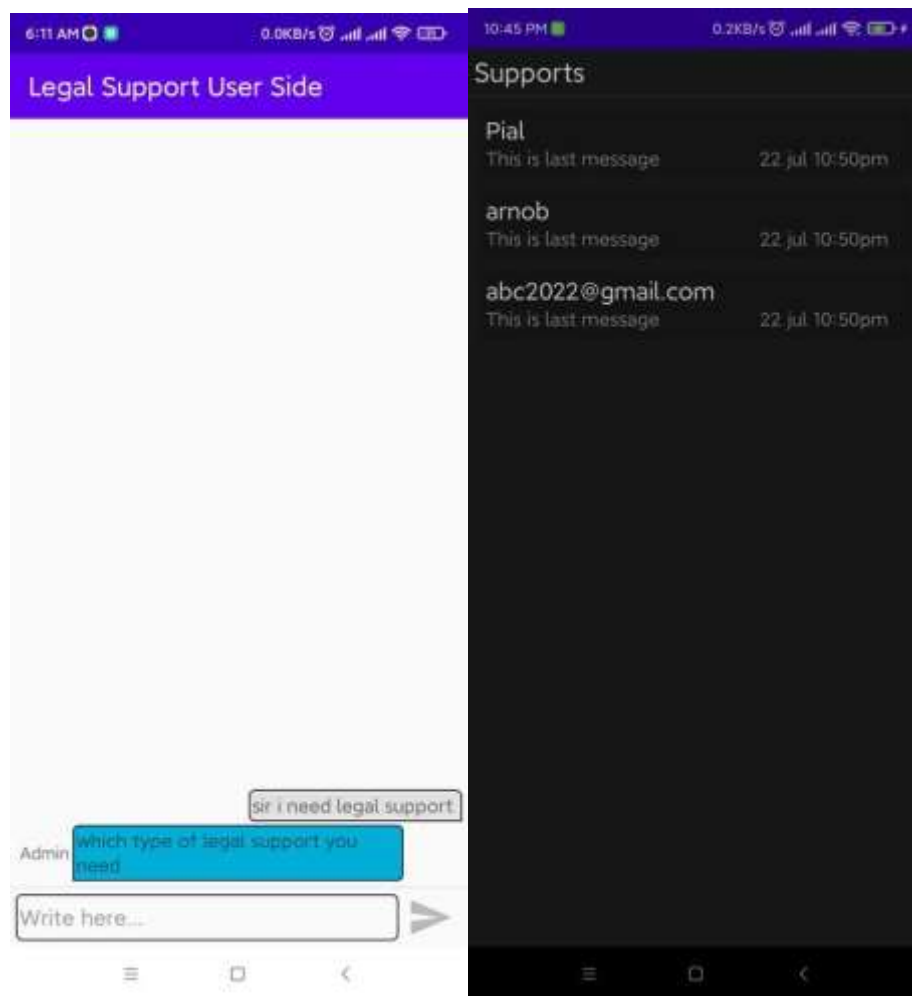


Figure 4.13: Legal Support Function

#### 4.3 Interaction Design and User Experience

XML was utilized to develop our undertaking's affiliation point. We're inspecting the Extension Markup Language when we say xml. A markup language for information portrayals is in every way that really matters, vague from HTML. People and robots the identical can rapidly look at Xml. On Android, we use xml to make our designs since a lightweight language keeps our arrangements light. Believe it or not, the whole considered xml is depicted by the consistently developing game plan of Endlessly View Group objects.

A View Group is a strange compartment for coordinating youngster sees. These youngsters see extra contraptions that are utilized to make different UI parts. The UI wavers relying on the client. To show this application, we have two specific kinds of affiliation centers. Since their positions are verifiable, the perspectives on a client's action and a specialist's improvement are totally unique.

#### 4.4 Back End development

We utilized the JAVA programming language to fabricate the burial service chief's back end. We comprehend that Java is an article-organized programming language. It is a fair-minded, class-based, widely significant programming language. It is very important that it expects as two or three circumstances as could really be expected. The Java Virtual Machine executes the run-time code as united code (JVM). Traditionally, Android applications are made utilizing the Java programming language and the Android SDK. It is the most remarkable and customarily involved programming language for making Android applications.

The basic objective of the Android improvement application was to construct a stage application climate that could manage any contraption. Changing your thing into a clever system is certainly clear. Since Java has this sort of norm, it was picked for Android progress.

##### 4.4.1 Database

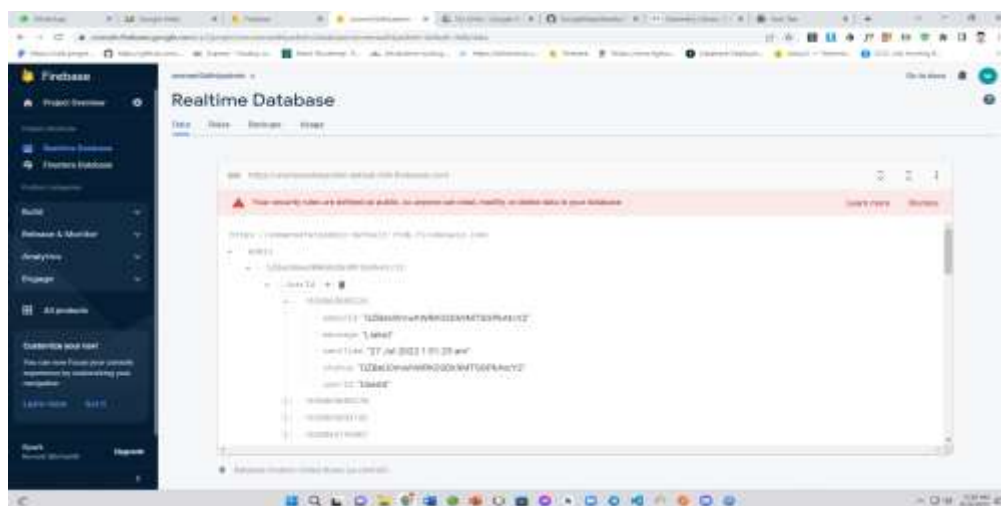


Figure 4.14: Firebase Database

## 4.5 Implementation Requirements

\*Database: Heroku open source server for rest API.

\*Dart

\*Retrofit: for notification response

\*Rx Java

\*MVVM Architecture Pattern

\*View Model & Live Data

\*Android

\*Language: Java

## **CHAPTER 5**

### **IMPLEMENTATION AND TESTING**

#### **5.1 Implementation of Database**

An educational record is a reliably referred to the social event of the shaped enlightening list to the side in a PC structure electronically. The security of enlightening records and the safeguarding of individual information are both truly controlled. The mark of the union of a computerization system is a safeguarded informational index. To store data in our application, we use a Firebase edifying variety behind a room instructive rundown.

Firestore is a backend programming structure. A piece of programming awards clients to team up with an instructive record in a social arrangement. It's a Google stage for making cautious versatile applications and online applications. Thus, we could package it as a Google backend application that conveys magnificent relationships, for instance, application crash objective, evaluation uncovering, and following. An illuminating rundown in Firestore is kept in a specific record, which separates it from different instructive document engines. The significant objective of embracing Firestore is to make the application as determined as could be expected. Since Firestore is the underlying stage through which we could advance, analyze and make associations. Since the educational assortment table is dealt with in a steadily developing manner, getting to the central key is essentially basically as crucial as showing up at the root information. It does, regardless, have two or three undeniable parts, for example, endorsement, limit, cloud firestore, and advancing information base.

We've comparatively incorporated a report issue choice utilizing the Firestore advantage. Any client who experiences an essential issue or unlawful bugs can report it to the makers. He should give the subject's name and subtleties for this. His ID will be sent with the report capably with valid time and date inside the method. The fashioner could perceive the individual and tackle the issue by using the ID. We can basically depict the particulars in the educational assortment audit.

For additional advancement we can utilize application informing administration from this firebase.

## **5.2 Implement of Front-end Design**

We have planned the android application's User Interface by XML code. Also, the site is planned by HTML and CSS. We have attempted to make an easy-to-use and enhanced UI so the client can get a decent encounter by utilizing this application. As an issue of some significance, execution proposes the system is attracted to getting a structure moving. The assignment plan is set into influence during the execution stage. On the other hand, project testing after execution is a vital push toward ensuring the endeavor a decent result.

## **5.3 Testing Implement**

Programming testing is a procedure for closing whether the genuine programming thing meets the regular measures and guaranteeing that it is sans contortion. As opposed to genuine fundamentals, programming's difficulty will presumably track down staggers, openings, and missing necessities.

In our endeavor, the testing result is all around founded on the educational assortment's appropriate exchange. Lately, understudies could incorporate the solicitation as the avocation behind their requests. As such, whenever individuals search or post a request, the information in the enlightening record ought to be changed utilizing SQL orders. In the meantime, a strong endorsement structure is introduced. Appropriately, the testing result is absolutely subject to the endorsement framework. During testing, all special cases ought to mix paying little mind to what the error is. All toasts and botch messages should be shown impeccably.

There are several pieces of our endeavor that should be executed faultlessly for it to succeed. For instance, the endorsement structure, the piece introduced, the button group's flawless tuning in, the goal starting with one action then onto the accompanying, etc. The most basic point of view major areas of strength for is access. Our framework cannot get to it without an Internet association. The endorsement was obtained from the Android Studio manifest record. Application enlightening, test adventure, and study past demands all require web access. Since we've proactively said that we're involving a live server for our persistent instructive assortment. Clients can't get to the instructive list on the off



chance that their web alliance is down. Thus, they won't get a fortunate warning at the fitting second.

We'll analyze how to set the testing that accomplishes development in this section. Mixed up Login Credentials, for instance. It may, for instance, be a consequence of the head board being gotten to with some unsuitable login record and secret word. In the event that your login licenses are really special, you cannot get to your enlightening record utilizing the past authorizations. Likewise, the primary concern you ought to do is twofold check that the login abilities you're utilizing are right. To make a record in our undertaking, clients should give a couple of essential data as well as a couple of astounding data. An avoidance notice will seem expecting that someone won't supply the right data or give wrong data. Just in the wake of wrapping the sign-up process, you will be moved closer to entering your username and secret word during the sign-in process. On the off chance that somebody gives beguiling genuine data, an exemption notice will appear. If a client forgets to remember their secret articulation, they can utilize the significant disregard of secret articulation choice. The client should give their email address, and an email will be shipped off that region meanwhile.

#### **5.4 Test Results and Reports**

The venture's still up in the air by the aftereffects of all testing and the execution stage. These events, including question looking by Help, emergency, talking are recorded straightforwardly in the data set. Especially on account of a commitment framework, the client should initially enroll in, then, at that point, supply the significant information of the inquiry in the commitment section, prior to perusing the inquiry from his gadget's hard drive. In the wake of transferring to the data set, it becomes apparent to all clients, permitting them to look for information or get data from the data set. This is the application's genuine calculation.

In the event that the UI is direct and great, the errands ought to be all finished all the more plainly. The UI in this undertaking is profoundly easy to use, and there is likewise a client guide where the client can get all of the data about the framework. There is likewise a connection to the power's contact activity, which clients might use to reach them in the event that they have any issues utilizing the program. We definitely have some familiarity

with the room information base from the last part, which utilizes accommodation comments to save dull and mistakenly inclined standard code. This is a fabulous opportunity for the venture's turn of events. It dispenses with the requirement for an engineer to compose a ton of it to lay out and oversee information bases. SQL inquiries can likewise be approved at an arranged time. The notifications are all referenced in another part class. Over Custom Adapter, the warnings will be all displayed in a listview. The connector is an Android part that interfaces a UI part to an information source and permits us to populate information into the UI part. It keeps the information and sends it to an Adapter view, which may then take the information from the connector view and show it in different perspectives like List View, Grid View, etc. Be that as it may, we can without much of a stretch use the Array Adapter for this situation. Our significant objective was to make the application as powerful as could be expected, which is the reason we used Custom Adapter.

We've tested the app & the result is given below:

Table 5.1: Testing

<b>Test Case</b>	<b>Test Input</b>	<b>Obtained Outcome</b>	<b>Result</b>	<b>Date</b>
Install	We've tested in different versions of Android	Installed	Passed	27/07/22
Signup	Inter invalid email	Not	Passed	27/07/22
Login	Without mail verification	Not Log in	Passed	27/07/22
Password	Wrong Password	Not log in	Passed	27/07/22
Again Login	After all steps	Go to homepage	Passed	27/07/22
Sign out	Successfully	Sign out successfully	Passed	27/07/22

We've also tried the emergency Function. We've send our live location.

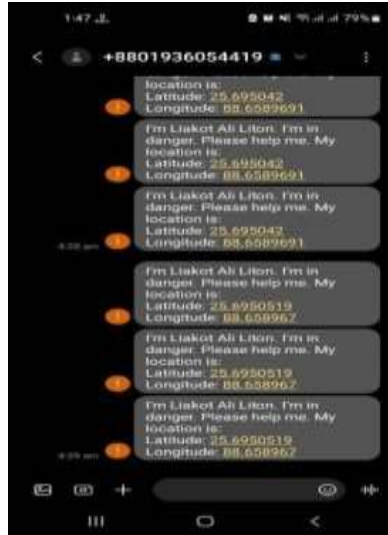


Figure 5.2: Testing result

#### 5.4.1 Conclusion

By and large, different principal undertaking related subjects have been made sense of in this segment. From the first subpoint, we're talking about valuable and authentic programming testing, and how it affects genuine accomplishment. Utilitarian bugs can commonly be fixed, but genuine bugs can't, which is an incredible unique case. Mistakes can every so often cloud further botches. To that end comprehensive testing is fundamental. The execution cycle should be done after the module, as shown by the testing show. It was referred to in the second spot of this segment. The authentic aftereffect of the execution is shown in the joined screen catch. The smooth working part is similarly inspected here, which brings a satisfactory application.

## CHAPTER 6

### Impact on society, Environment, Ethical Aspects & Sustainability

#### 6.1 Impact on Society

The world has been halted due to danger for a girl so our application will be gainful for the general public. We are making an application which will be extremely compelling in this present circumstance and a valuable apparatus for everybody. No one is safe outside. Also, they are not safe at their home. At the right time they became very afraid. Furthermore, they Don't understand what to do at the emergency time. However, our application will direct them. By Using this application, they will get help very fast and nearby police stations and hospitals.

#### 6.2 Impact on Environment

In this era of women, harassment has become a serious issue. Ladies reserve the privilege to be liberated from savagery, provocation, and segregation, and eliminating the obstructions of a perilous climate can assist ladies with living up to their true capacity as people and as supporters of work, networks, and economies. So, by using our app there will be no risk. Because we'll try to deliver our best one. We'll be concerned about it. For this reason, now people will be able to get pure and right blood and they'll be stress-free.

#### 6.3 Ethical Aspects

Plan choices might be useful in the midst of an emergency, in this way getting the mechanical plan of contact-following applications right is significant. This application will assemble geolocation information through GPS. These are innovative plan contemplations that integrate moral and legitimate worries including consent, reason impediment, information decrease, and information security. Whether information is put away locally on client gadgets or traded to incorporated data sets run by states or wellbeing specialists, Whether information is utilized for examination, and whether clients have any command over who approaches their information are choices that decipher moral and lawful worries like assent, reason restriction, information minimization, and information assurance into specialized plan.

#### **6.4 Sustainability Plan**

Our application must be updated sequentially. Because without an update it can't be perfect. As it will be used for the women security sector then the update must. By providing every necessary criterion we'll be able to save our user.

The main objectives of our development are to ensure security and stop violence against women in all aspects by any means. We are planning a long-term program to establish our objectives. Though there are some barriers to this approach, like spreading rumors, misguiding by providing invalid information, etc. But there is a chance that if we can ensure 2 out of 10 women's security it will be an inspiration for us. It's going to be challenging to establish such objectives in our patriarchal society full of superstitious beliefs but we will continue our program. We are also thinking of involving government and non-government organizations to work hand in hand. Spontaneous Participation can bring a change and hope it will come to an end

## CHAPTER 7

### Conclusion and Future Scope

#### 7.1 Discussion and Conclusion

In this innovation subordinate world, since the coming of android the universe of portable application has seen an enormous change. The significant explanations for that are android being an open-source OS. However, in each area android applications are accessible, in our nation it's really missing in the lady's security framework. This computerization framework can without a doubt change the standpoint of customary frameworks.

Women security framework cannot stop because of any circumstance. So. This undertaking can guarantee the ladies' security framework appropriately. By this venture, individuals don't have to sit tight for a more drawn out time frame or go to the police headquarters straightforwardly. They can take their administrations from the spot they'll be. In the not so distant future, we will foster this framework as more adaptable by bringing staggering elements.

#### 7.2 Scope for Further Development

We have found some lacking in the current system. Now we are using the real-time database of firebase. In the future, we will use a dedicated server for the project. Users complain they have limitations after setting up a dedicated server that can store a large amount of data. On the other hand, now, our current location is working but the other two options are not working. In the future we'll work more on it. We'll also develop the security part at an advanced level.

Now, in the project, we are using an emergency system. In the future we will integrate more security-based systems. On the other hand, this system is an android Operating system-based application that IOS user will be deprived of. So, in the near future, we will develop this system into responsive web software. Moreover, for ensuring different mobile devices and a variety of users we will develop this system. We will also work on the interface to make it more user-friendly.

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DESIGN AND DEVELOPMENT OF AN  
ANDROID BASED APPLICATION FOR WOMEN  
SAFETY BY Pranta Das (ID: 183-15- 11857)  
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