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SAS (Safety App)

Aditi Khare, Amit Kumar, Shreya Srivastava, Snigdha Srivastava, Ms. Garima

Krishna Engineering College, Ghaziabad, Uttar Pradesh

Abstract- ***The SAS application is an API (Application Programming Interface) based on online emergency applications useful to contact the mentioned emergency contacts. The user will only have to provide a GPS location of the area to be searched. With the help of this application, the user will also be able to make calls and send messages to a selected person. In this project, the application can be scaled up to the procedures that can be carried out in an emergency. For future scope is that the application can be mapped into any other operating system and can be used on any device. Since this application is phone-based, it can run on any Android OS-based device. It is a mobile phone application that anyone can use.***

Keywords— SAS-Save All Souls, GPS-Global Positioning System, SMS-Short Message Service, SOS-Save Our Souls, IOS-iPhone Operating System, OS-Operating System

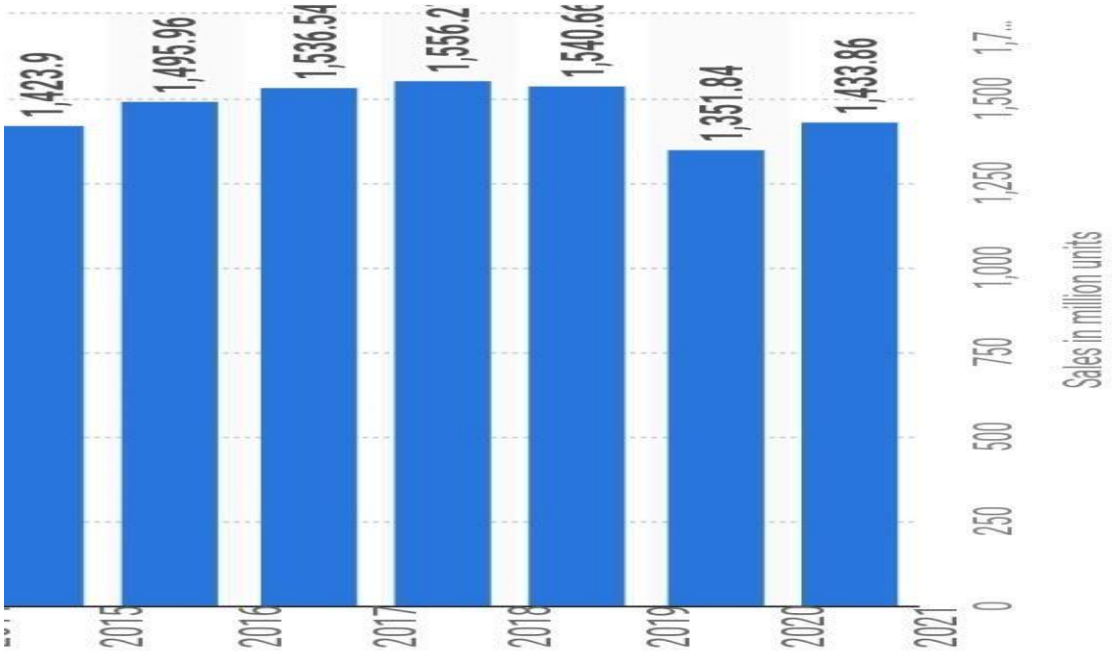
I. INTRODUCTION

Sometimes students and working people tend to get late in their day-to-day lives. So sometimes they opt for areas where it is dangerous for them to go at night due to robbery or other criminal activities, and since those areas are usually deserted, it is difficult for them to get direct help in such cases.

We bring you this app for rescue, which will send messages and calls to the user's added emergency contacts with a single command. We can use this app if someone has been through an accident. They can use the direct command feature to get help urgently, which will help in avoiding deaths and many other casualties. SOS is the International Morse code distress signal. It stands for Save Our Souls. In an S.O.S system, a distress signal is generated when the S.O.S button is pressed or a gesture is made traditionally. The distress signal consists of a text message consisting of the sender's location. This message is sent to the cops and close relatives whose contacts are fed beforehand to the application. The text messages sent along with the content also have the last know location of the users. This is very helpful in tracking the where about of the person. The user can also call emergency contact directly from within the application if the nature of the situation demands it and the user of the application may also allow the application to track their location which is very useful information is very useful in a variety of ways. With the help of technology & internet, we can control and access the machines and things that are connected to the internet even if the distances are too long. We can directly send and receive Without any human-human and computer-human interaction, which is a major benefit.

II. LITERATURE SURVEY

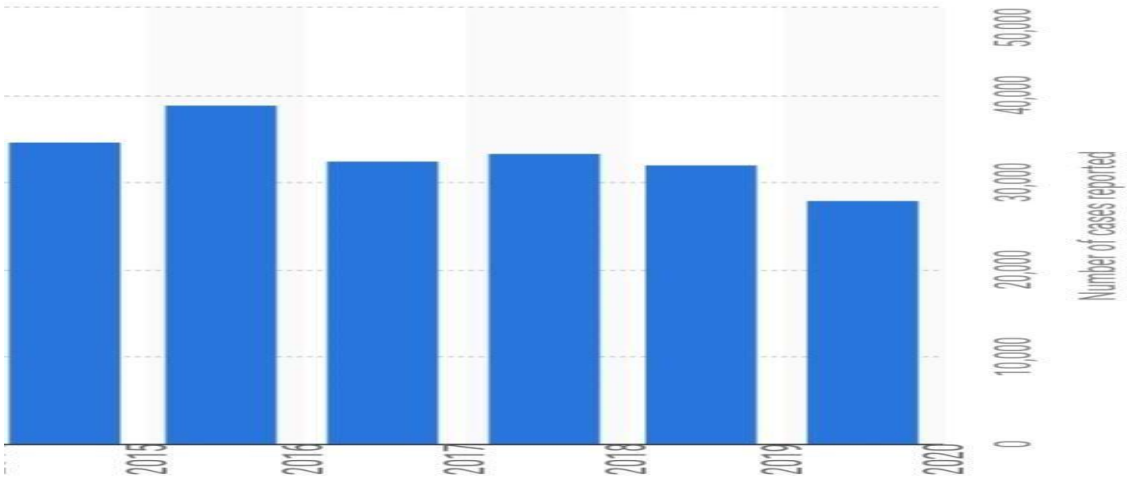
Mobile phones are a huge part of people's lives, so if you don't have a phone, you can't keep up with the norms. People take the phone as a symbol of their social status, and so it is better to have an application rather than a website, since an application can be accessed by a single touch, but websites take longer to access.



Since it is a safety app, we need to know how to reach people easily and what the most available device is, and also what is preferable to people. Since mobile is the only device every single person carries with them every day, we decided to create an app and a website is rather not necessary since, in a panic situation, an app would be faster to access than a website since all permissions are already given and you just have to give a signal to trigger the app.

In the survey, we studied various apps made for the same social emergency alert service that selects nearby members of the social group of the victim and notifies them about the victim's need for help and the victim's location, but many of these apps were not working, and the ones that were working were paid.

In our app, when an accident happens and the emergency button is pressed, a message is sent by the user/victim to the contacts added in the application as emergency contacts, as we all have a set of people who will help us in tough situations. The message sent to contacts contains the current location of the user so the savior can reach and help them as soon as possible. A call is sent to contacts saved. Each press sends the call to every number one after the other. GPS is a group of communications satellites that transmit signals globally around the world. Using its receiver, anyone can quickly and accurately determine the latitude, the longitude, etc.



The everyday crime index is increasing in every country. Various crimes are occurring, like robbery, rape, kidnapping, etc. Nobody is thinking about people who are scared of tragic things occurring to their relatives or neighbours, who are the victims of some crime, and now they can't feel safe in their day-to-day life and are scared to do work, which results in low productivity. This app will ensure that people can at least be fearless and do their everyday things without getting affected.

As we can see below the graph, India has a high rate of crime with an increase every year. Although it is saddening to think that India is one of the most crime-rated countries, in the end, we should accept the truth and work toward a solution. So, the Indian government created a helpline for women, and within 24 minutes of launching the helpline number, thousands of cases were reported. People will know that they can call for help faster, and sooner they will fear more. This will cause a decrease in the graph of the crime rate. For older people, it's easier to call by using a single button since they can suffer from a heart attack, etc.

III. PROBLEM STATEMENT

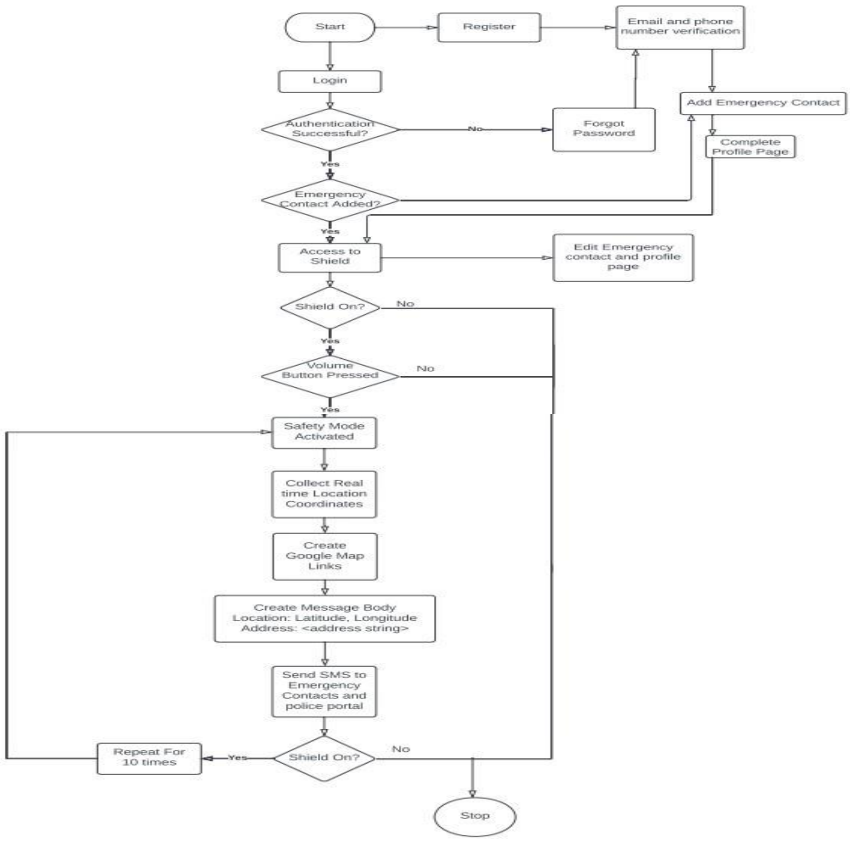
To create an application that functions and is free of cost, which can call and message to add contact as soon as the emergency button is pressed. Our application will send the location of the user with the help of Google Maps.

IV. PROPOSED APPROACH

According to our research, we found that several applications were created for safety purposes, but none of them were up to the mark. The graphics were either too bad or they were paid for, and a huge sum was asked for membership. Our approach is very basic and to be cost-free so that anybody can afford it, since even after paying the sum, the interface didn't work properly, which will cause a loss.

Suppose somebody trusted an application and, in the main time, the application gets all fuzzy and doesn't work. It will fail to fulfil its basic task, so we created a simple but proper working application that will register you. After you register, you have to log in. After logging in, you have to grant permission to the app and then add emergency contacts. As soon as you press the SOS red button in the app, the message will be sent to each number, and they will also receive a call from the user.

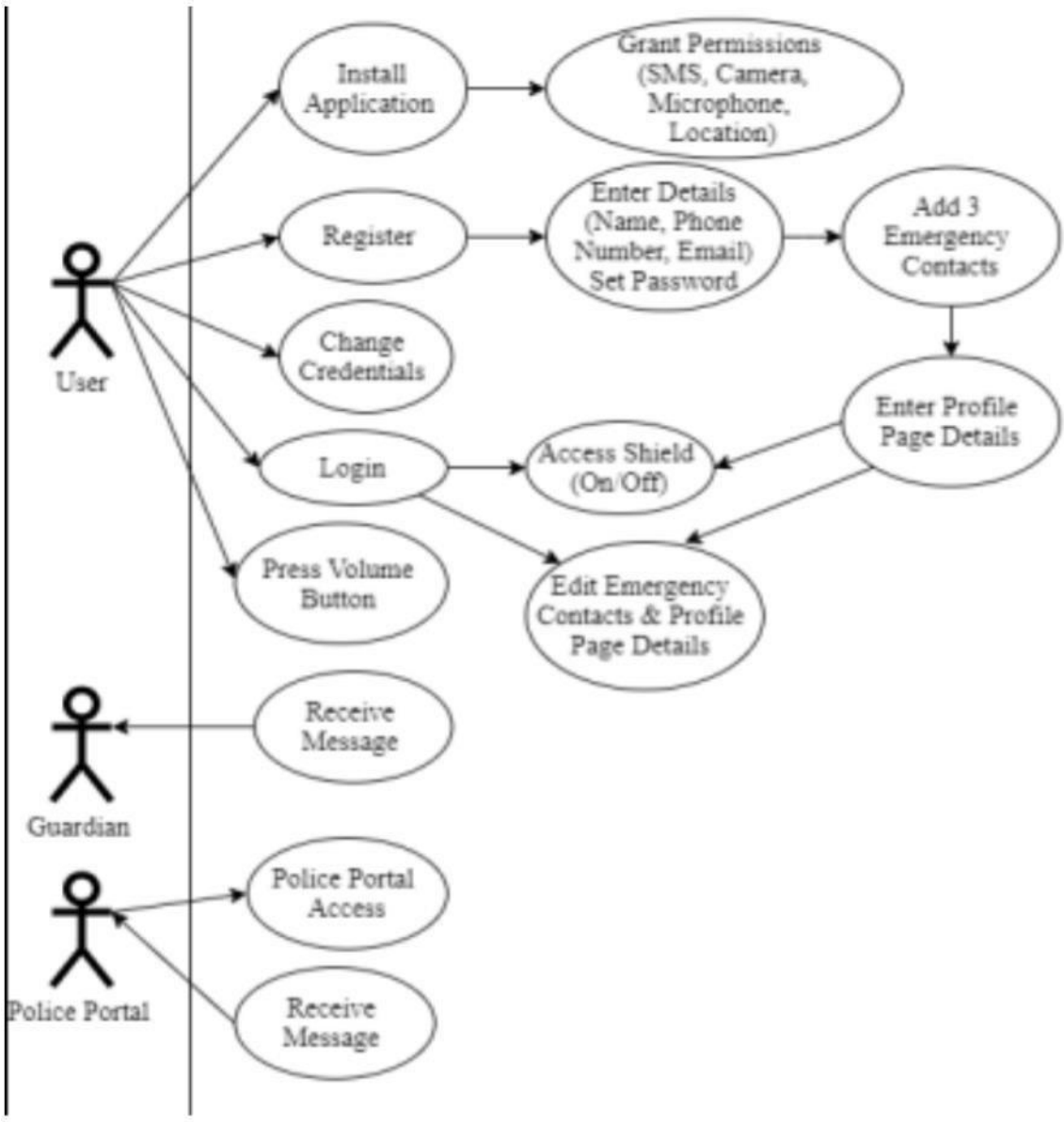
V. FLOW CHART



Incremental Phases	Activities performed in incremental phases
Requirement Analysis	• Requirement and specification of the software are collected
Design	• Some high-end function are designed during this stage
Code	• Coding of software is done during this stage
Test	• Once the system is deployed, it goes through the testing phase

- XML for frontend
- Java for backend
- SQL Lite for storage
- Android studio for development of project

VI. USE CASE DIAGRAM



VII. RESULT

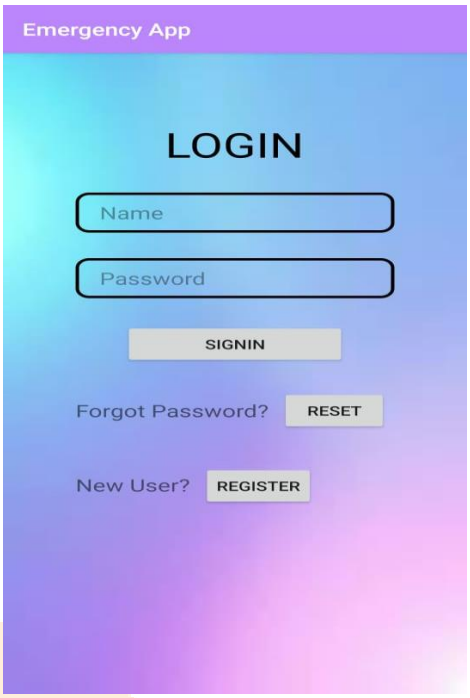


Figure 7.1: Screenshot of Login Page

This figure is a screenshot of our login page, which is the next page after the registration page. The user who is already registered can directly login into the application and start using it.

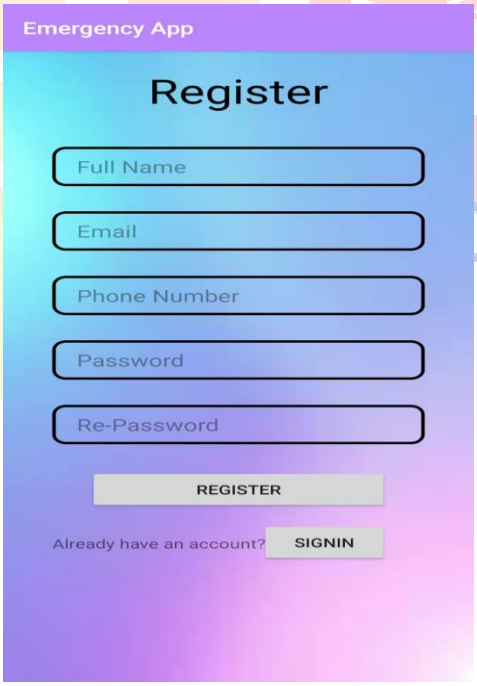


Figure 7.2: Screenshot of Register Page

In the figure, this is the first page of the application after downloading. A person who wants to use the application has to first register themselves, after which the above login page will open.

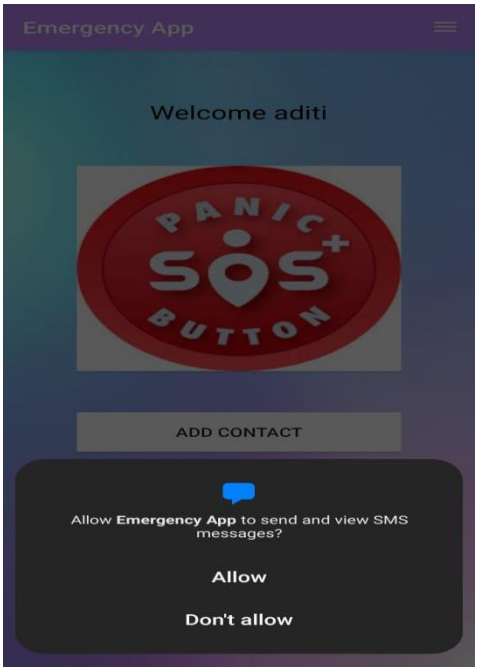


Figure 7.3: Screenshot of Access Page

In the figure, this is the access page of the application after login. A person who wants to use the application has to first give access, after which the app will continue.

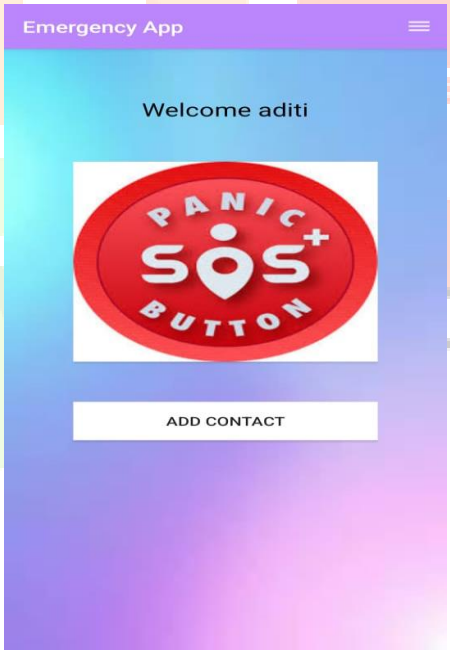


Figure 7.4: Screenshot of Welcome Page

S.O.S BUTTON: In the above figure, we see the page after logging in. We permit mobile. After that, we add contacts, which will get SMS and calls when we press the S.O.S button.

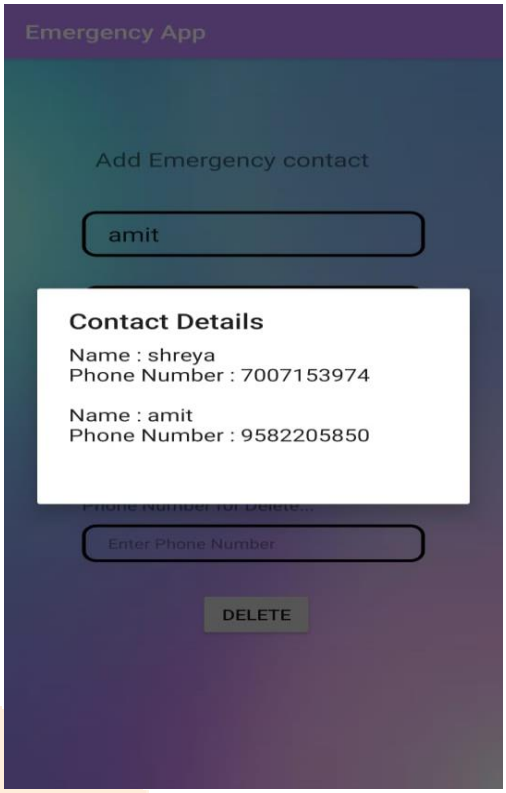


Figure 7.5: Screenshot of Contact Details

In the figure, this is the page of the contact details added by the user.

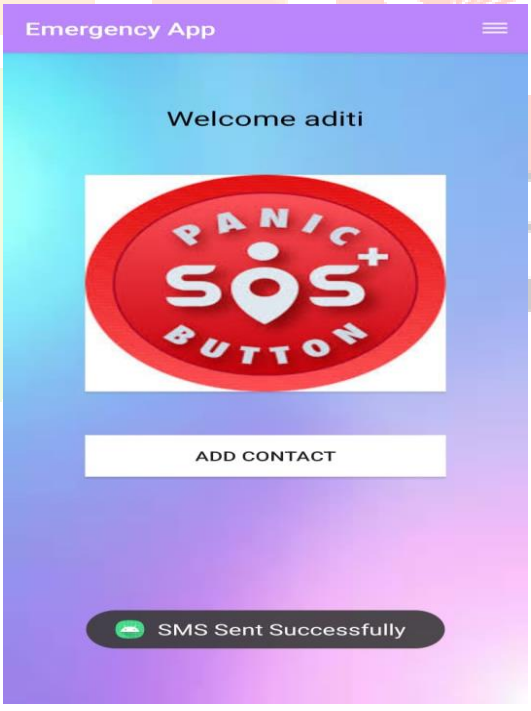


Figure 7.6: Screenshot of SMS sent

In the figure, the popup of SMS sent is shown.

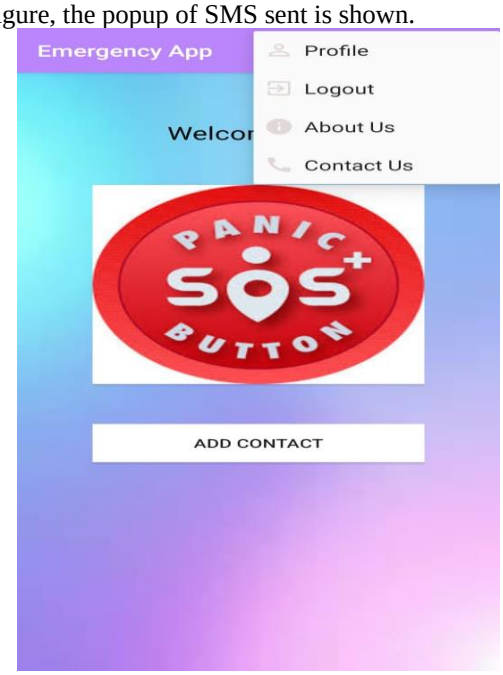


Figure 7.7: Screenshot of Menu Bar

In the figure, the menu bar is shown.

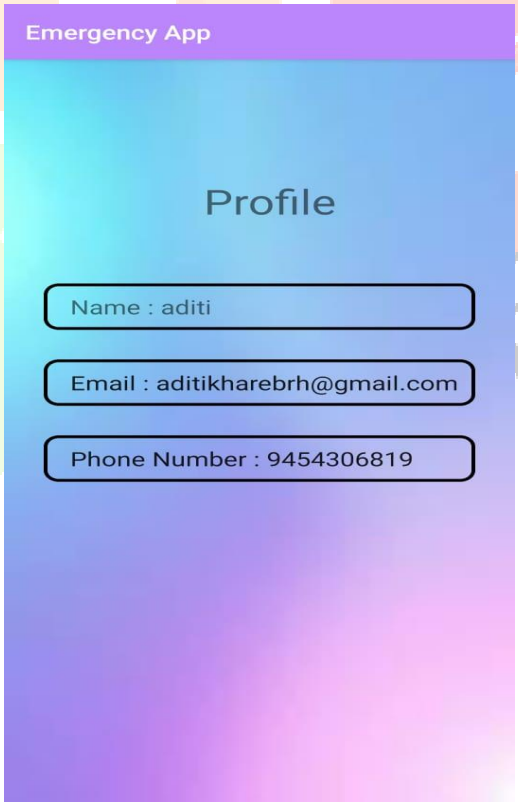


Figure 7.8: Screenshot of Profile Page

In the figure, the profile page is shown.

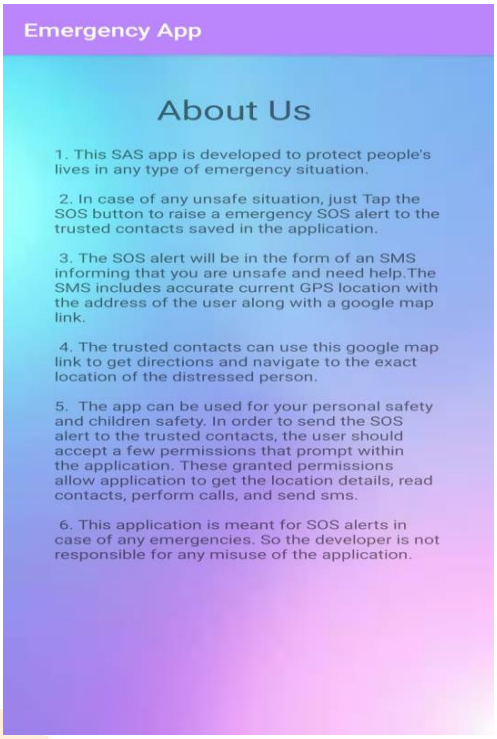


Figure 7.9: Screenshot of About US Page

In the figure, it includes all the details about the app.

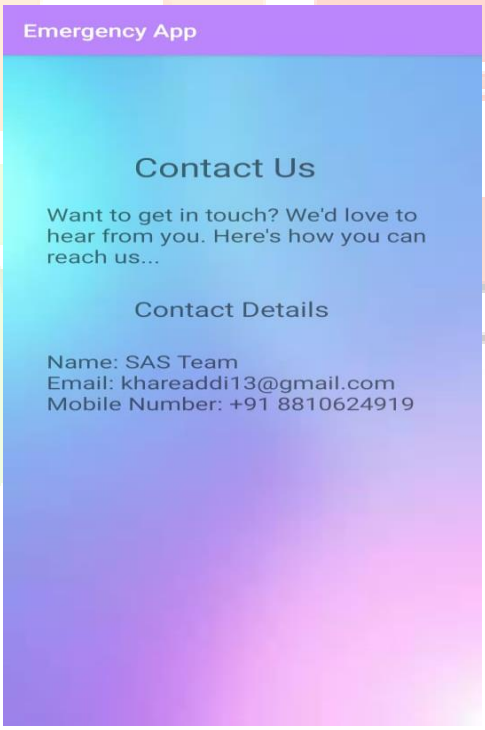


Figure 7.10: Screenshot of Contact US Page

The above image shows the contact details, which are also included in the application. It is included so if any user faces any kind of issue related to the application, they can contact them and get their issues resolved.

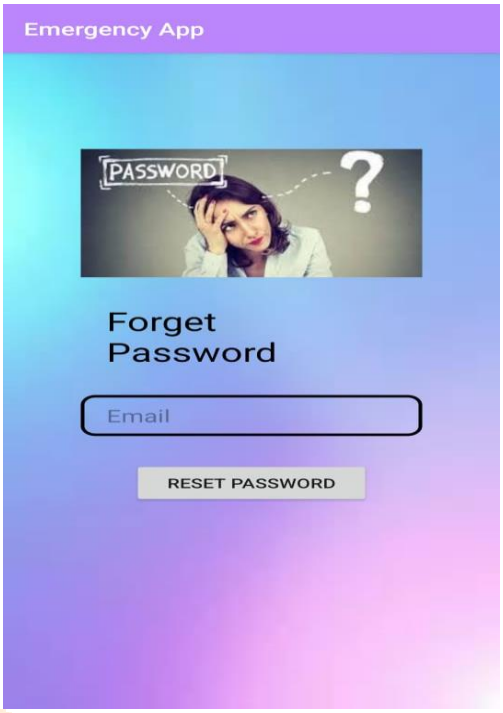


Figure 7.11: Screenshot of Forget Password

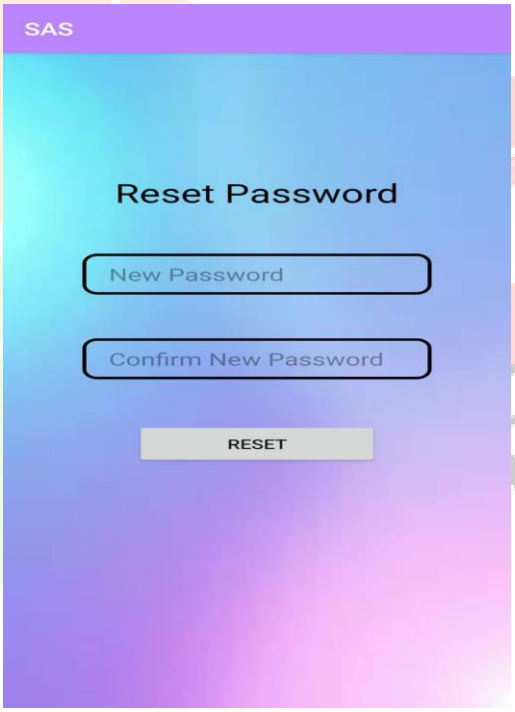


Figure 7.12: Screenshot of Reset Password

This page is after the login page if some user forgets their password, they can reset their password using this in case you want to change your password you can use this page to change your password to preserve your privacy.

• CONCLUSION

The project named "Contactless IOT Doorbell" has been designed with the domain as Internet of Things [8]. The basic concepts and working of IOT has been displayed in the running of the project. The project uses mainly an Arduino Board and C programming concept. Since, today, in a technologically enhancing environment, virus spread through contact issues is of utmost concern, this project shows how technology can be used to enhance that feature of people's homes [3]. A doorbell is constructed which has the feature to automatically detect a person when somebody is at the door with the help of Ultra sonic Sensor. It uses materials such as an Arduino Board, an Ultrasonic Sensor, a doorbell (any conventional electrical switch),

resistors and Servo Motor. This project enables users to stay safe from the virus which can be spread through contact.

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