



Women safety App and Security SMS Alert System

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Abstract: The SMS Alert System works in synergy with the app by sending automated SMS alerts containing the victim's location, time, and other critical data to trusted contacts and emergency services. This ensures that, even if the internet or app functionality fails, essential alerts are transmitted via SMS, a reliable communication method in areas with limited connectivity.

Keywords: Emergency Alerts, Real-time Location Sharing, Personal Safety, Threat Detection, Safe Zone.

I. INTRODUCTION

In today's world, ensuring the safety and security of women is of paramount importance. Despite various advancements in technology, women still face significant safety risks in public and private spaces, including harassment, violence, and assault. As such, there is a growing need for innovative solutions that empower women to take control of their personal safety. One such solution is the woman safety application, a mobile app designed to enhance the safety of women through technology. A woman safety app serves as a digital companion that provides users with a set of tools to stay safe, respond quickly to emergencies, and minimize risks in their daily lives. With the widespread adoption of smartphones and advancements in mobile technology, safety apps have become accessible, affordable, and user-friendly, making them an essential tool for women around the world.

II. RATIONALE

□ **Women's Safety Concerns:** Women in urban and rural areas face various safety risks, including harassment, violence, abduction, and other life-threatening situations. According to reports, incidents of assault and harassment are alarmingly high, with many women feeling vulnerable in public or even private spaces.

□ **Real-time Alerts:** The safety app ensures that women can immediately alert trusted contacts, authorities, or nearby help when they feel threatened. The app will help mitigate the delay in alerting others and expedite assistance by sending immediate alerts.

□ **Instant SMS Alerts:** In cases of network failure or app malfunction, the SMS alert system serves as a backup, ensuring that the safety message reaches emergency contacts or authorities even when internet connectivity is limited.

III. OBJECTIVES

The objective of this project is:

- Provide Immediate Assistance
- Empower Women
- Connect Women with Support Networks.

IV. SCOPE

The purpose of women safety apps and SMS alert systems is to provide extensive safety facilities for women, mix technology and real-time communication. The app involves location tracking, allowing users to share their real-time hideout with reliable contacts or emergency services. In the case of emergency, the one-touch SOS button sends an alert to predetermined contacts, while an SMS backup ensures that alerts are also sent to low connectivity areas. Geophanings features help users to live in safe areas, and self-defense resources strengthen users with tips and tutorials. Integration with local authorities enables quick communication in conditions of crisis, while privacy protection features ensure data security. Additionally, the app promotes community support by allowing users to send alert or warning to others in their surrounding area. With the event tracking and history, the system helps identify patterns for better preventive measures. Overall, the system enhances personal safety and provides a reliable, responsible solution in emergency situations.



V. LITERATURE REVIEW

The concept of woman safety applications has gained significant attention in recent years, as technological advancements and rising concerns about women's security converge. Studies and research on this topic highlight the potential of mobile technology to address safety issues and provide women with immediate solutions during distressing situations. According to recent literature, many woman safety apps focus on core functionalities like real-time location tracking, SOS alerts, and geo-fencing to help users stay safe in vulnerable situations. These applications often integrate GPS and mobile communication technologies, allowing users to send distress signals to pre-designated contacts or emergency services. Research has shown that such apps provide a sense of empowerment, helping women feel more in control of their safety while also fostering stronger connections with their support networks.

VI. NEED OF WORK

1. Emergency SOS: A panic button that sends alerts to emergency contacts, authorities, or nearby .
2. Friends/family.
3. Location Sharing: Real-time GPS tracking, allowing friends/family to monitor the user's location.

VII. PROBLEM STATEMENT

1. Limited access to emergency services and support .
2. Inadequate safety measures in public spaces.

VIII. PROPOSED METHODOLOGY

The development of the Women Safety App and SMS Alert System follows a structured and systematic approach, ensuring that the solution is user-friendly, reliable, and effective in enhancing women's safety. Implement core features such as real-time GPS location tracking, emergency button functionality, and integration with SMS APIs for alerts.

IX. SYSTEM ARCHITECTURE

The system architecture comprises a mobile app with real-time location tracking, an SOS alert mechanism, SMS-based emergency notifications, secure user authentication, cloud-based backend services, and data encryption for privacy protection.

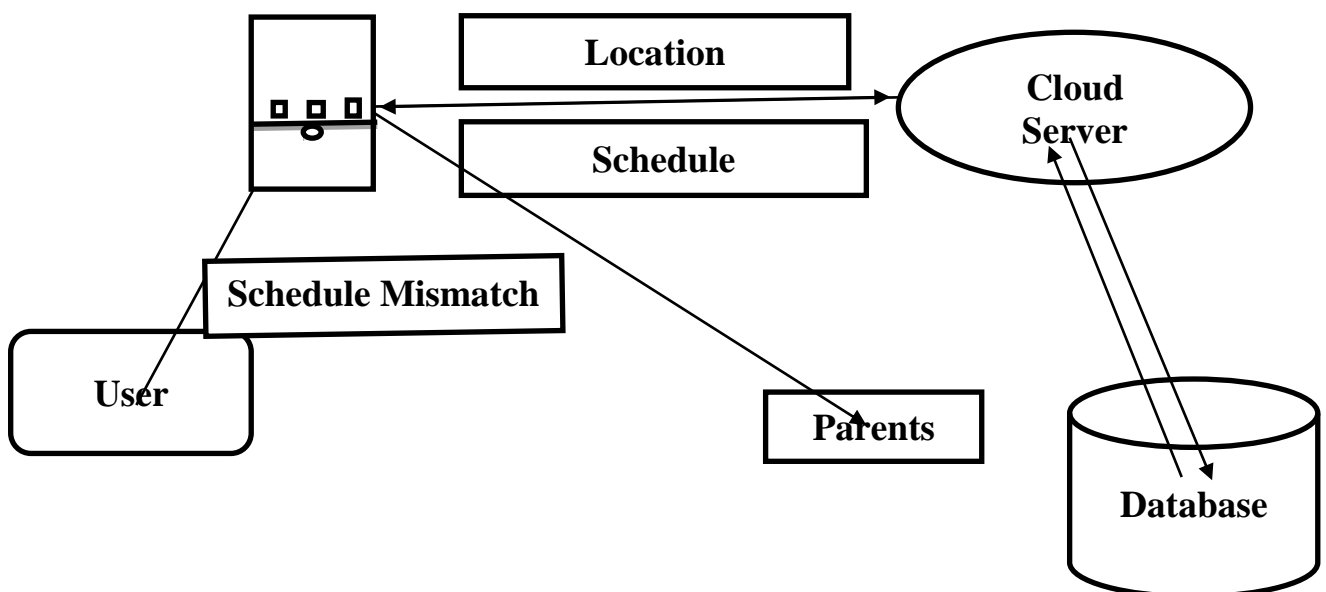


Fig:1 System Architecture



X. Design Methodology

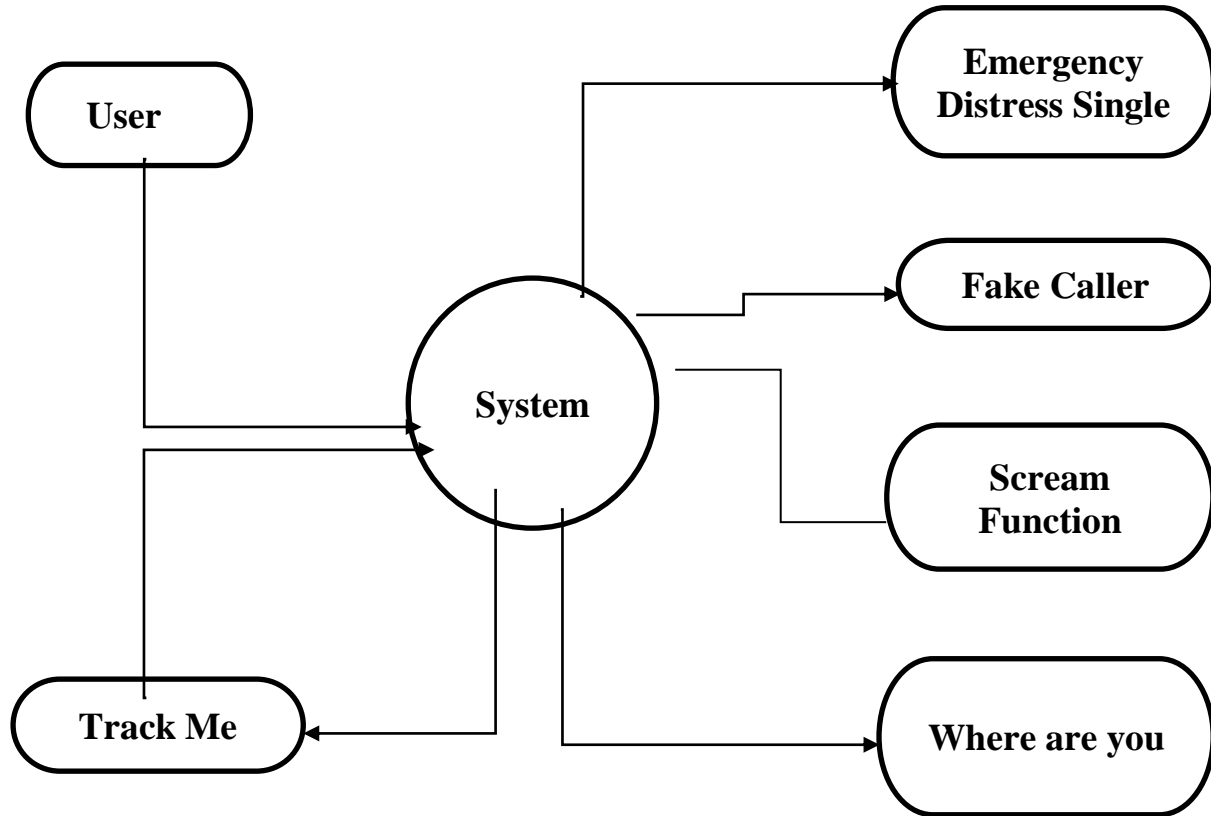


Fig:2 Data Flow Diagram

XI. MODULE DESCRIPTION



Fig. 3-Main page

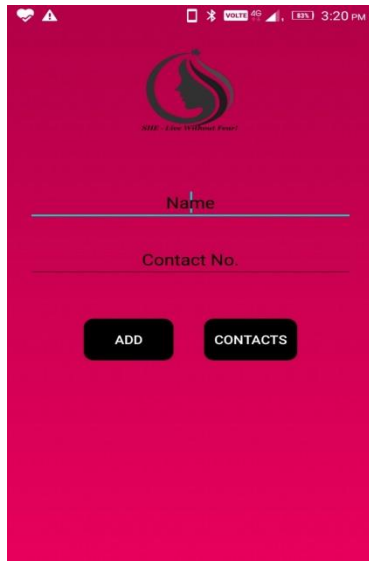


Fig. 4 – U

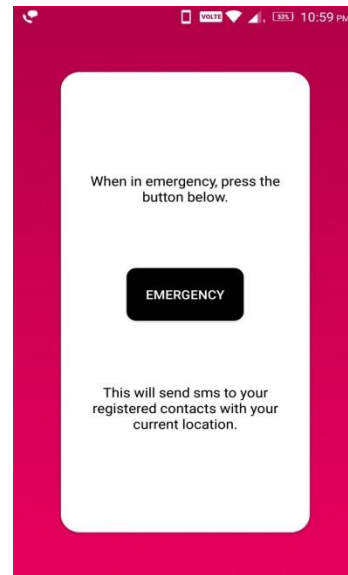


Fig.5-Emergency Button



Fig.6– User Helplines

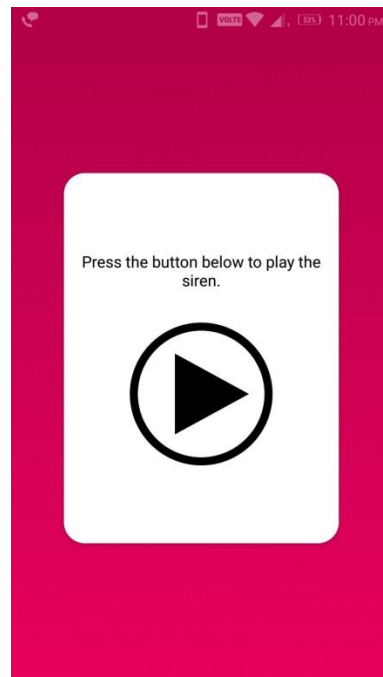


Fig.7 – Emergency Siren

1. Module Design of System:

The system module design includes user interface, real-time location tracking, emergency alert, SMS notification, geofencing, data security, and backend services.

2. Description of project module:

□ User Interface Module:

This module is responsible for the app's visual layout, user interactions, and navigation. It includes buttons for SOS alerts, real-time location sharing, and easy access to safety features like self-defense tips. The design focuses on simplicity and usability, especially during emergency situations.



□ Real-Time Location Tracking Module:

This module continuously tracks the user's location using GPS and shares it with trusted contacts, authorities, or emergency services in real-time. It ensures the safety of users by allowing their whereabouts to be monitored during travel or in case of distress.

XII. IMPLEMENTATION DETAILS

11.1 Hardware Requirements

Processor: Intel 3
Motherboard: Intel 915gvsr chipset board
Ram: 4 gb ddr2 ram
Hard disk drive: 160 gb

11.2 Software Requirements

- Operating System : Windows 10 Enterprise
- Front End : Java XML.
- Back End : MySqlite
- Other: Microsoft Word

XIII. CONCLUSION

Developing a woman safety application requires a balance between robust functionality and seamless user experience. By addressing the functional requirements, such as real-time location sharing, SOS alerts, and safety tools, alongside critical non-functional requirements, such as security, reliability, and performance, the application can effectively serve its purpose.

XIV. FUTURE SCOPE

- The future scope of a woman safety application is expansive, driven by technological advancements and the evolving needs of women in society. As we move toward a more connected and digitally integrated world, the potential for innovation in this space is vast. Here are several key areas for future development.
- In the future, the app could collaborate with global safety networks to provide cross-border alerts in case of emergencies, ensuring that users are always aware of potential risks no matter where they are.

REFERENCES

- [1]. "Transforming Women Safety with Information Technology: A Mobile Real-Time Intelligence"
This research proposes a real-time intelligent system for women's safety. It uses technologies such as machine learning and AI to provide features like live location sharing, safe route prediction, and evidence recording. These tools aim to address gaps in current safety systems and ensure justice for victims.