S - HER Enhanced Android App for Women Safety

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Abstract: Women's safety is a paramount and critical concern in today's society, demanding the development of effective technological solutions. Ensuring the safety and security of women is essential for promoting gender equality, personal well-being, and social progress. Women face various challenges and risks, including harassment, violence, discrimination, and unequal access to resources and opportunities. To address these issues, concerted efforts are being made to raise awareness, advocate for women's rights, and implement effective measures for women's safety. This includes education and awareness campaigns that aim to change societal attitudes and behaviors, promote respectful relationships, and challenge gender stereotypes and biases.

1.INTRODUCTION

Android application development has revolutionized the way we interact with technology, bringing a multitude of functionalities and services to our fingertips. Android Studio, the official IDE for Android development, offers a comprehensive set of tools and features that streamline the app creation process. It intuitive user interface, coupled with a vast array of built-in templates and code responsive applications. Android Studio also provides robust debugging and testing capabilities, ensuring the reliability and stability of the developed applications. Moreover, its seamless integration with the Android Software Development Kit (SDK) facilitates the utilization of cutting-edge APIs and libraries, enabling developers to harness the full potential of the Android platform. The safety and security of women remain crucial societal concerns. Women often face various forms of harassment, violence, and discrimination, both in public spaces and private domains. Snippets, enables developers to design visually appealing and promoting women's safety is not only a matter of personal well-being but also a fundamental aspect of gender equality. Addressing women's safety requires a multifaceted approach encompassing awareness campaigns, policy reforms, educational initiatives, and the development of technological solutions. By developing a woman safety application, this project aims to contribute to this ongoing effort. The application will provide women with tools to enhance their personal security, access emergency assistance, and foster a sense of empowerment in navigating their daily lives.

2.LITERATURE SURVEY

Women's safety is a global concern, and the increasing prevalence of violence against women has led to a growing demand for technological solutions to enhance personal security. Android applications specifically designed for women's safety have emerged as effective tools, utilizing features like GPS tracking, emergency alerts, and real-time communication to provide assistance in threatening situations. This literature survey explores the development, functionality, and impact of various women safety Android applications. The development of women safety applications on Android has evolved significantly over the years. Early applications primarily focused on emergency alert features, allowing users to send distress signals to predefined contacts. However, as technology advanced, developers began to incorporate additional functionalities such as GPS tracking, location sharing, and integration with wearable devices, enhancing the overall effectiveness of these applications.

[1]. ABHAYA: AN ANDROID APP FOR THE SAFETY OF WOMEN – This app focuses on enhancing women's safety through features like GPS tracking and emergency alerts. It offers a user-friendly interface for quick access to safety features. Drawbacks: It has limited functionality beyond emergency alerts and relies heavily on smartphones, which may exclude users without access to them.

[2]. S-ZONE: A SYSTEM FOR WOMEN SAFETY & SECURITY SYSTEM – This system integrates a mobile app with hardware components such as panic buttons. It includes real-time location tracking and alerts to family members. Drawbacks: The implementation can be costly due to the hardware and is dependent on network availability for proper functionality.

[3]. SHIELD: Personal Safety Application – SHIELD is designed to send emergency messages with location data and includes safety tips and resources.

[4]. Women Safety Android App – This is a straightforward app offering emergency alert features with voice command options for ease of use. Drawbacks: It offers limited features beyond basic alerts and is dependent on battery life and device accessibility, which can be problematic in emergencies.
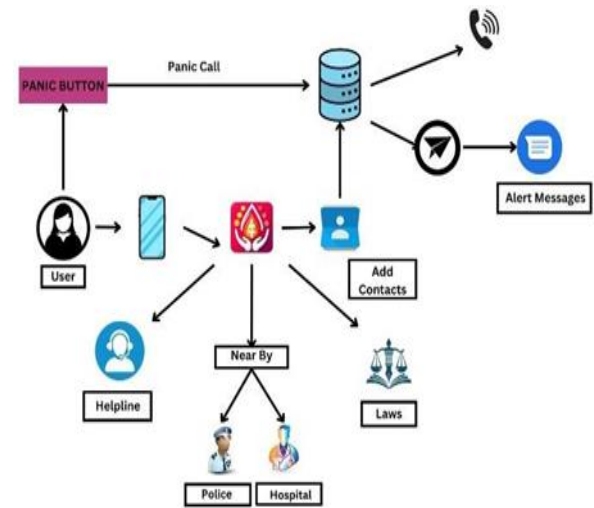
[5]. Women Safety Mobile App – The app provides safety alerts and emergency contact options, emphasizing user awareness and engagement through educational content. Drawbacks: It may have limited awareness campaigns, affecting its uptake, and it could lack offline functionality in areas with poor connectivity.

3.METHODOLOGY

The S-HER women safety application comprises several interconnected modules to ensure a comprehensive and user-friendly experience for safeguarding women during emergencies. The Main Activity Module serves as the entry point and home screen, providing navigation to all key features, such as Contact Management, SMS Alerts, Women's Laws, Self-Defense Videos, and the Panic Button. Each module has distinct purposes: the Laws Activity Module educates users on women's safety laws through an easy-to- read layout, while the Contact Activity Module allows users to manage emergency contacts using persistent storage and a dynamic RecyclerView. The Self-Defense Activity Module integrates a WebView for seamless access to instructional videos. The SMS Activity Module and Panic Button Activity Module empower users with SMS-based SOS alerts, integrating location tracking

for real-time assistance. Advanced features like the Shake Detection Module provide an intuitive safety mechanism by triggering the panic button automatically via gestures. Finally, the GPS Module ensures accurate location tracking, enabling swift responses in emergencies. Together, these modules create a robust system for women's safety, blending advanced technology with intuitive design.

4.ARCHITECTURE

5.RESULT

The S-HER Women Safety Application is a comprehensive Android app designed to enhance women's safety through an intuitive, user-friendly interface and advanced features. The app's home screen serves as a central hub, offering easy navigation to key functionalities such as emergency contact management, SOS alerts, self- defense videos, and women's safety laws. Users can manage emergency contacts dynamically using a RecyclerView, with data persistently stored via Shared Preferences. A dedicated panic button and SOS messaging feature enable instant distress alerts, including GPS location, to be sent to registered contacts with a single tap or shake gesture, leveraging Android's SmsManager and location services.
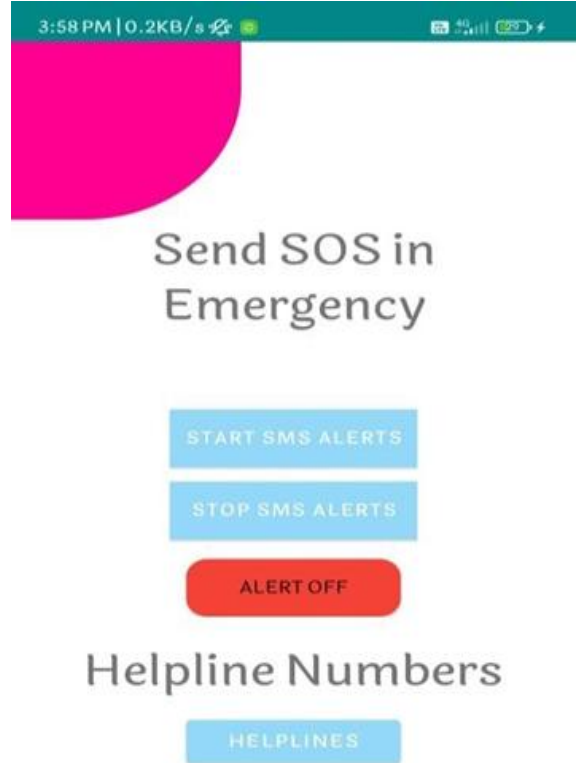
6.OUTPUTS

Fig: Start page

Fig: Alerts Toggles
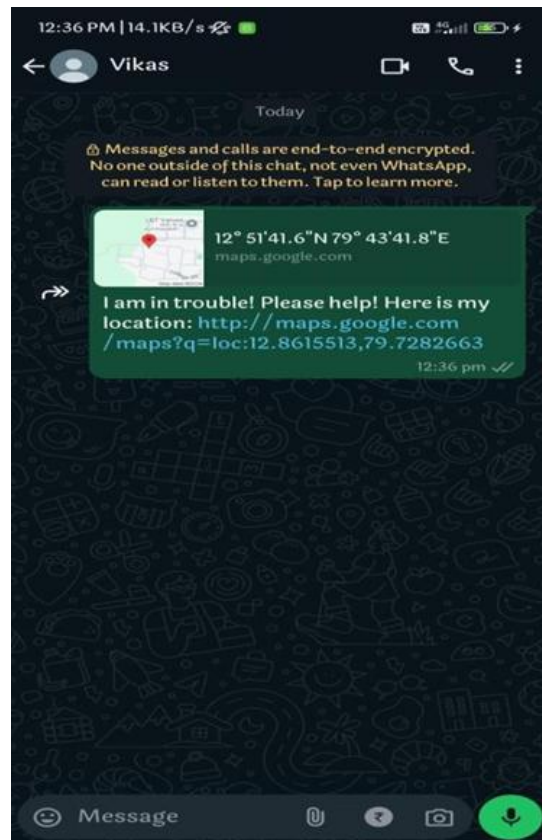

Fig: Home Screen
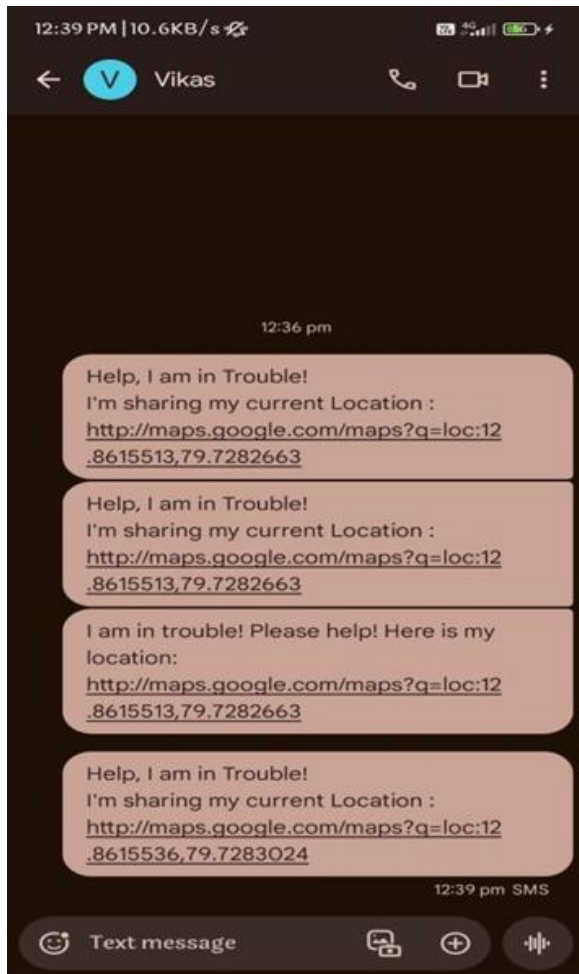

Fig: Alert message in WhatsApp

Fig: Alert Message in text

7.CONCLUSION

The development of the S-HER application has addressed the critical need for women's safety in today's society. By leveraging advanced technologies such as Android Studio, Java, and XML, S-HER offers a comprehensive solution to empower women and enhance their personal security and safety. The application incorporates features like a shake detector, panic button, SOS alerts, and location tracking to ensure prompt assistance during emergencies. Additionally, the integration of nearby police stations and hospitals, women safety laws, self-defense videos, and national helpline numbers provides users with valuable resources and information. The user- friendly interface and seamless functionalities make S-HER accessible and easy to navigate, further enhancing its effectiveness. The successful implementation of the project showcases the potential of technology in promoting women's safety and creating a safer environment. S-HER serves as a significant step forward in safeguarding women and raising awareness about their rights and well-being.

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