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"EMPOWER HER" Women Safety Application

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ABSTRACT: It is said, your security is in your own hands, and this is what "EMPOWER HER" women app enables you to do. There are times when you anticipate that help might be required e.g. while walking alone through a forlorn place. The app can come handy in situations like these."EMPOWER HER" is a Women safety app which allows the user to store up to Two immediate help numbers. The user is required to activate the application. Once activated the service will run continuously in the background. The moment the user shakes the device, the application raises a loud alarm and sends an emergency SMS containing the Location information along with nearby Police-Station information to the respective emergency mobile numbers configured for help.

I.INTRODUCTION:

"**EMPOWER HER"** application, your ultimate companion for personal safety and empowerment. In an era where technology empowers positive change, We Safe emerges as a beacon of security and support, dedicated to ensuring the well-being of women in every aspect of their lives. This documentation serves as your guide to understanding the features, functionalities, and the profound impact that We Safe can have on your safety."Empower Her" Women Safety Shake Detection App is a revolutionary mobile application designed specifically to address the safety concerns of women in a dynamic and responsive manner. At the core of its innovation lies a unique shake detection feature that sets it apart in the realm of personal safety apps. This cutting-edge technology allows users to trigger emergency alerts simply by shaking their mobile devices, providing a discreet yet swift way to call for assistance.The app goes beyond traditional safety measures by incorporating a real-time response system tied to shake detection. When a user initiates a shake, the app sends instant distress signals to predefined contacts or emergency services, ensuring a rapid and efficient response to potential threats. This intuitive shake detection feature not only adds an extra layer of security but also minimizes the need for overt actions in tense situations, enhancing user comfort and safety.In addition to its shake detection capabilities, "Empower Her" Women Safety App includes a suite of comprehensive features to empower women in various scenarios. These may include real-time location sharing through GPS technology, in-app calling and messaging functionalities, and access to self-defense resources. The app is designed to be user-friendly, making it accessible for individuals of all ages and technical backgrounds, further contributing to its effectiveness as a women's safety solutionBy combining cutting-edge shake detection technology with a holistic approach to personal safety, Empower Her Women Safety Shake Detection Apps.

II.PURPOSE:

A women's safety Android application aims to empower and enhance the safety of women by providing features such as real-time location tracking, emergency contacts, panic buttons, and safety tips. It serves to offer a sense of security and quick assistance in potentially unsafe situations, fostering a safer environment for women.

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III.OUTCOMES:

The outcomes of a women's safety Android application include increased personal security, quick access to help in emergencies, improved communication with trusted contacts, and a potential deterrent effect on perpetrators. These apps contribute to fostering a safer environment for women, promoting confidence and empowerment in their daily lives.

IV.LITERATURE REVIEW:

Recent years have witnessed a surge in the development of personal safety applications and devices. Existing technologies include dedicated safety apps, wearable gadgets, and IoT-based solutions. While these innovations have undoubtedly made strides in improving safety, they often require manual intervention or might lack integration with essential features like location-based services and communication.

A literature review on women's safety Android applications reveals a growing emphasis on leveraging technology to address safety concerns. Studies highlight the positive impact of such apps in providing real-time location tracking, emergency assistance, and communication features. Users often report increased feelings of security and empowerment. However, challenges like user adoption, false alarms, and privacy concerns are also discussed. Overall, the literature suggests that these applications play a crucial role in enhancing women's safety but require ongoing refinement to address emerging issues.

V.SYSTEM ANALYSIS:

1.EXISTING SYSTEM:

We Safe is an Android mobile application targeted towards women safety.
With this application an SMS message embedded with the current user
location can be sent to the provided emergency contacts just by shaking
the phone. Optionally it also locates nearby police stations on a map.

DISADVANTAGES:

- Usually you need more code on Java than Objective-C.
- Complex layouts and animations are harder to code in Android.
- Applications contains virus also present in Android Market
- A lot of “process” in the background that leads to the battery quickly drains.
- Advertisements will always be ads on display, either the top or bottom of the application.
- Low security and fake apps can be installed to steal your info from unknown resources
- High device fragmentation

2.PROPOSED SYSTEM

The proposed system will be implemented with the help of an android application. Which will alert the nearby people who have this application by sending alert messages to them and alert sound in the guardian mobile on shaking of victim mobile. Also sends messages and alert sound to the saved contacts in the application and police station. Which also shows the location of the victim with the help of a GPS tracker system. Which also makes sound in guardian mobile when his/her mobile is in silent mode.In this app we can also add as many contacts as we can.

ADVANTAGES

- This system plays a sound if the guardian cell is in silent mode.
- This system will send a message to all nearby cells which have that application.
- This system also send message to police station

3.PROBLEM STATEMENT;

Develop an Android app, "EMPOWER HER," aimed at enhancing women's safety by providing real-time location tracking, emergency assistance, and community support. The app should empower users to quickly share their location with trusted contacts, access a panic button for immediate help, and foster a community-driven safety network where users can report and receive alerts about potential safety concerns in their vicinity. The goal is to create a comprehensive and user-friendly solution that addresses the unique safety challenges faced by women, promoting a safer and more connected environment.

4.SYSTEM ARCHITECTURE:

The system design for the "EMPOWER HER" Women Safety App focuses on creating a robust and user-friendly application to address women's safety concerns. The app is designed to provide immediate assistance, real-time location tracking, and a supportive community environment.In terms of system architecture, the "EMPOWER HER" app consists of client-side components for iOS and Android platforms and server-side components including an application server and a database server. The client-side components ensure a user-friendly interface, while the server-side components manage user data, handle requests, and integrate with external services such as mapping and emergency services.

The database design includes tables for user profiles, location tracking, and community forum data. User data, including emergency contacts and security preferences, is securely stored. The location tracking table captures real-time location information with privacy features, and the community forum table facilitates user interaction and experience sharing.Security measures are a critical aspect of the system design. The app implements end-to-end encryption, secure authentication methods (biometric or password-based), and access control mechanisms. These measures protect user data during transmission and restrict access to sensitive functionalities, ensuring the privacy and security of users.

The app is modular, with distinct components for emergency SOS, real-time location tracking, in-app chat or call support, safe routes and locations, and community support. Each module serves a specific purpose, such as activating distress signals, displaying real-time locations, providing a secure communication channel, facilitating route planning, and fostering community interaction.The user interface (UI) design prioritizes user experience, featuring intuitive app screens for quick access to emergency features, user profile management, in-app support, and a community forum. The UI is designed to be user-friendly and accessible, ensuring that users can easily navigate the app's features, especially during distress situations.

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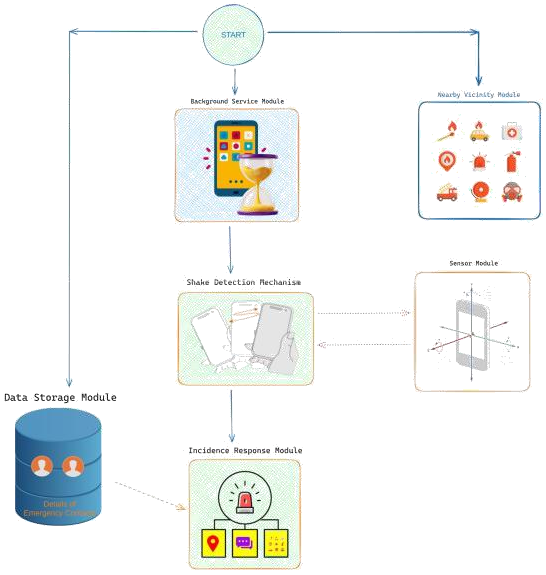

VI.IMPLEMENTATION:

The EmpowerHER women's safety Android application, the implementation can be thought of as a series of interconnected steps, each contributing to the overall functionality and user experience.

1. User Interface (UI):
Begin by designing a welcoming and intuitive user interface. This includes a main activity layout (activity_main.xml) with buttons to add emergency contacts. Consider the visual elements that will indicate the activation of safety features.

2. Shake Detection:
Now, let's delve into the mechanics of detecting shakes. Create a ShakeDetector class that listens for accelerometer sensor data to identify device shakes. Integrate this detector into your main activity (MainActivity.java) to respond to shake events.

3. Emergency Alarm:
Implement an AlarmHelper class using Android's AlarmManager. This component is responsible for triggering a loud alarm in response to a shake event. Ensure that the alarm works reliably and can be activated even when the device is in silent mode.

4. Emergency SMS Sending:
Move on to handling emergency communication. Develop an SMSSender class to manage the sending of SMS messages. Integrate this class into your main activity to send emergency SMS messages with location details to predefined contacts.

5. Location Tracking:
Consider the importance of location tracking for user safety. Develop a LocationTracker class that utilizes Android's LocationManager to obtain and update the device's location. Integrate this feature into your main activity to keep track of the user's whereabouts.

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6. Background Service:

To ensure the app functions discreetly, create a background service (BackgroundService.java). This service should be capable of monitoring shake events and location updates even when the app is running in the background. Register the service in your AndroidManifest.xml.

7. Permissions:

Acknowledge the need for permissions. Handle permission requests in your main activity to request necessary permissions from the user. This includes permissions for SMS sending, location tracking, and any other relevant permissions your app requires.

8. User Instructions:

Lastly, guide the users through the app. Provide clear instructions within your main activity on how to set up emergency contacts and use the safety features. Consider incorporating a tutorial or an onboarding process to enhance user understanding.

Throughout this lesson, keep in mind the significance of user privacy and security. Test the app thoroughly to ensure that it performs reliably in various scenarios. By following these steps, you are not only creating a functional safety application but also empowering users to take control of their security.

VII.CONCLUSION:

"EMPOWER HER" aspires to be a trailblazing Android application dedicated to women's safety. With features encompassing real-time location sharing, a responsive panic button, community-driven safety alerts, and a host of support resources, the app aims to empower and protect users in various scenarios. By fostering a connected and supportive community, providing valuable safety information, and continuously refining its functionality based on user feedback, "WE Safe" strives to redefine the landscape of women's safety apps. Through its innovative approach and commitment to user-centric design, the application seeks to contribute significantly to creating a safer and more secure environment for women, ultimately making a positive impact on their daily lives.

VIII.REFERENCES:

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