**Angels in the Dark: A Women's Safety Application**

**Abstract**

Women's safety remains a pressing concern in modern society. "Angels in the Dark" is a web-based application designed to provide immediate assistance in distressing situations. The app features an SOS button, voice-activated emergency alerts, live location sharing, emergency contacts, self-defense guidance, and a hidden distress trigger in a fake calculator or notepad. Additionally, it integrates real-time crime data to help users choose the safest travel routes. This report explores the development, functionality, and impact of this application in promoting women's security.

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**Introduction**

In today's world, ensuring the safety of women has become more important than ever. With increasing incidents of harassment and crime, it is crucial to develop technological solutions that empower women and provide them with immediate access to emergency help. "Angels in the Dark" is a web-based application designed to offer instant assistance in distressing situations. This platform incorporates emergency SOS alerts, live location tracking, emergency contact directories, self-defense guidance, and covert SOS triggers via a calculator or notepad interface. Additionally, it helps users determine the safest travel routes based on live crime data and features a voice-activated emergency alert system.

**Objectives of the Application**

The primary aim of "Angels in the Dark" is to create a user-friendly and secure platform that enables women to seek help in emergencies efficiently. The key objectives include:

* **Instant SOS Trigger:** A rapid-response button that instantly transmits live location data to nearby police stations and emergency contacts.
* **Voice-Activated SOS:** Users can simply say "Help me" to discreetly activate an SOS alert.
* **Hidden Safety Features:** The app integrates an emergency trigger within a fake calculator and notepad for secret distress calls.
* **Live Location Sharing:** Sends real-time location updates to authorities and trusted contacts.
* **Emergency Contact Directory:** Provides quick access to emergency services such as police, ambulance, and helpline numbers.
* **Self-Defense Awareness:** Offers useful self-defense tips to enhance personal safety.
* **Safe Route Mapping:** Displays the safest route based on live crime reports and integrates Google Maps for secure navigation.
* **Fake Incoming Calls:** A feature that allows users to receive fake police calls to deter potential threats.

**Features of the Application**

**1. SOS Button**

* The SOS button is the app’s most vital feature, allowing users to send an emergency alert with their real-time location.
* When activated, the user's location is instantly shared with the nearest police station and emergency contacts.
* A visual and audio confirmation lets the user know that the SOS request has been successfully sent.

**2. Voice-Activated Emergency Assistance**

* The app features a voice-activated SOS function, enabling users to call for help by simply saying "Help me."
* This is especially useful in situations where a user may not be able to physically press a button.
* The system continuously listens for the activation phrase and triggers the alert when detected.

**3. Hidden SOS Triggers (Calculator & Notepad)**

* To ensure discreet access to emergency help, the app includes a fake calculator and notepad feature.
* Users can activate an emergency alert by pressing specific keys within the calculator or by opening the notepad.
* This allows women to seek assistance in a way that does not alert potential threats.

**4. Emergency Contact Directory**

* A sidebar in the app contains a list of essential emergency numbers for quick access.
* Users can directly call the police (112), ambulance (100), or the women’s helpline (1091) from the interface.
* These contacts are displayed prominently to ensure ease of use.

**5. Safe Route Mapping with Google Maps Integration**

* Users can enter their starting location and destination to check for the safest travel route.
* The application integrates Google Maps to provide real-time navigation.
* It considers recent crime reports and suggests the most secure path based on live data.

**6. Self-Defense Guide**

* A dedicated section provides practical self-defense techniques to help women protect themselves in emergencies.
* The guide includes tips such as:
  + Targeting vulnerable areas (eyes, nose, throat, groin) for self-defense.
  + Using everyday objects like keys as defensive tools.
  + Staying aware of surroundings and trusting instincts.
  + Practicing basic escape techniques such as wrist grabs and palm strikes.

**Implementation of Features**

**Technologies Used**

* **HTML, CSS, JavaScript:** Used for designing and developing the frontend interface.
* **Geolocation API:** Facilitates real-time location tracking.
* **Google Maps API:** Enables safe route navigation.
* **SpeechRecognition API:** Powers the voice-activated SOS feature.
* **Fetch API:** Supports data transmission to emergency response centers.

**How the Application Works**

1. **User Interface:** Upon opening the app, users are greeted with a clean and simple layout.
2. **SOS Activation:** The user can activate the SOS alert via button press or voice command.
3. **Location Sharing:** The live location is instantly sent to emergency contacts and law enforcement.
4. **Emergency Directory:** Users can access emergency contacts from the sidebar.
5. **Safe Route Finder:** Users can input their travel details and get a safe route suggestion.
6. **Hidden Triggers:** The app includes a fake calculator and notepad for discreet distress calls.
7. **Fake Incoming Call:** Users can trigger a fake police call to deter threats.

**Future Scope and Updates**

* **AI-Powered Threat Prediction:** Implementing AI to analyze crime data and predict potential danger zones.
* **Blockchain Security:** Using blockchain for secure and tamper-proof emergency alerts.
* **Wearable Device Integration:** Connecting the application with smartwatches for easy emergency access.
* **Community Alert System:** Allowing users to report unsafe areas and receive crowd-sourced safety tips.
* **Offline Functionality:** Enabling SOS activation even without an internet connection.

**Conclusion**

"Angels in the Dark" is an essential safety tool for women, offering real-time protection in critical situations. With features like voice-activated SOS, live location tracking, safe route navigation, and hidden distress triggers, the app provides a well-rounded approach to personal security. The integration of emergency contacts and self-defense tips makes it an invaluable resource for individuals seeking enhanced safety. Future developments could include AI-based crime predictions and improved collaboration with law enforcement to further optimize security measures.