PANIC BUTTON FOR GIRLS SAFETY

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ABSTRACT

Panic Button for Girls' Safety is an initiating proactive response in light of increasing sentiments amongst women in urban society toward the safety aspects of surroundings. By indulging a discreet and easy access panicking button through this application, whenever this button is activated, it will issue real-time data on the location of the person to the designated contacts and local authority. The app further encompasses other functionalities, for instance, it is fitted with an audio recording facility and GPS tracking, a Safe Place Locator, whereby one can reach so many sources by the users. Including community support and emergency services in the Panic Button will lead to creating an environment safer for women, time saved through quick response in times of emergencies, and raise awareness on how to be safe. This is also a very important step towards making public places safer and more confident for girls and women.

I.   INTRODUCTION

Safety and security for everyone have become one of the very essential issues in the modern world, which is especially very essential for young girls. The solution that will be introduced here is the Panic Button for Girls' Safety, a proactive step toward fortifying the position of women as well as giving them confidence in their daily lives.

This is an innovative device used to instantly inform a friend, family, or authority about an emergency. The Panic Button can send distress signals, along with your location, by simple press that allows for rapid help in the time of greatest need.

Our mission is to make girls feel safer in their communities so they can move about with a confidence as they use technology towards reducing fear of harassment or danger, so they can focus on what truly matters: the complete and free living of their lives.

Join us in this necessary tool of raising awareness to ensure the safety and empowerment of all girls. We can create a safer world, where safety is a priority, and each woman is secure wherever she is.

II.   EXITING SYSTEM

• Mobile Apps: Many of the latest safety apps have incorporated the panic button feature to alert emergency contacts at an individual's exact location. Some of these apps further include features such as audio recording and live location tracking.

• Wearable Devices: Wearable technology, for example, smart jewelry or fitness bands, are now popularly packaged with a panic button feature. Products like InvisaWear and Amazfit help users discreetly send alerts via a quick tap of a button.

• Personal Safety Devices: The Haven or GuardMe are more personal devices with their individual safety goals. Most of these devices have panic buttons, high-pitched alarms, and GPS tracking. This way, prompts can be sent to the closest authorities or even significant contact numbers in case of emergencies.

• Community Initiatives for Safety: Even schools and local communities have developed systems where pupils can use a specific code or text line to alert security personnel in case of an emergency.

• Smart Home Integration: Some smart home systems, for instance, offer users a way to integrate panic buttons that might alert authorities or contacts with a single command, providing an added layer of security at home.

• Emergency Services: In some countries, there are established dedicated emergency numbers or systems that users can easily report incidents on, often integrating panic button functionalities within their platforms.

III. PROBLEM DEFINITION

The Panic Button for Girls' Safety Project aims to address the urgent need for a reliable emergency alert system specifically designed for women and girls who often face harassment and violence in public spaces. Many individuals experience feelings of vulnerability that can restrict their freedom and mobility. This project seeks to create an easily accessible panic button that allows users to quickly notify authorities or trusted contacts in an emergency, incorporating GPS technology for real-time location tracking. Ensuring user privacy and data security is crucial, as is providing education on the system's use. Stakeholders include local law enforcement, non-profit organizations, and technology partners. Challenges to overcome include ensuring widespread accessibility and building trust among users. Success will be measured by the number of effective interventions, user feedback, and a reduction in incidents of violence. Ultimately, this initiative aims to empower women and girls, fostering a safer environment in which they can live and move freely.

IV. PROPOSED WORK

❖ **Research and Needs Assessment**

• Surveys and Focus Groups: Conduct surveys and focus groups with potential users to understand their safety concerns, preferences, and technology familiarity.

• Stakeholder Interviews: Engage with local law enforcement, community organizations, and women's advocacy groups to gather insights on existing challenges and desired features.

❖ **System Design**

• Functional Specifications: Define the core functionalities of the panic button and app, including alert mechanisms, GPS tracking, and user interface design.

• Prototyping: Create wireframes and prototypes for the mobile app and physical button, incorporating user feedback from the research phase.

❖ **Technology Development**

• App Development: Develop the mobile application for both Android and iOS platforms, ensuring it is lightweight and user-friendly.

• Hardware Development: Design and manufacture the physical panic button, focusing on portability, durability, and ease of use.

❖ **Testing and Iteration**

• Usability Testing: Conduct testing sessions with target users to assess the app's functionality and the button's effectiveness, making iterative improvements based on feedback.

• Security Testing: Implement thorough security assessments to ensure data protection and privacy for users.

❖ **Implementation and Training**

• Pilot Program: Launch a pilot program in selected communities to monitor the system's performance and gather user feedback.

• Training Workshops: Organize workshops to educate users about the system, emphasizing how to use it effectively and report incidents.

❖ **Monitoring and Evaluation**

• Data Collection: Track usage statistics, response times, and incident reports to evaluate the system's effectiveness.

• User Feedback: Continuously collect user feedback to identify areas for improvement and ensure the system meets the evolving needs of users.

❖ **Community Engagement and Awareness**

• Awareness Campaigns: Develop marketing and outreach initiatives to promote the panic button system, ensuring widespread community awareness and engagement.

• Partnerships: Collaborate with local organizations, schools, and businesses to enhance outreach efforts and build a support network for users

V.   ARCHITECTURE
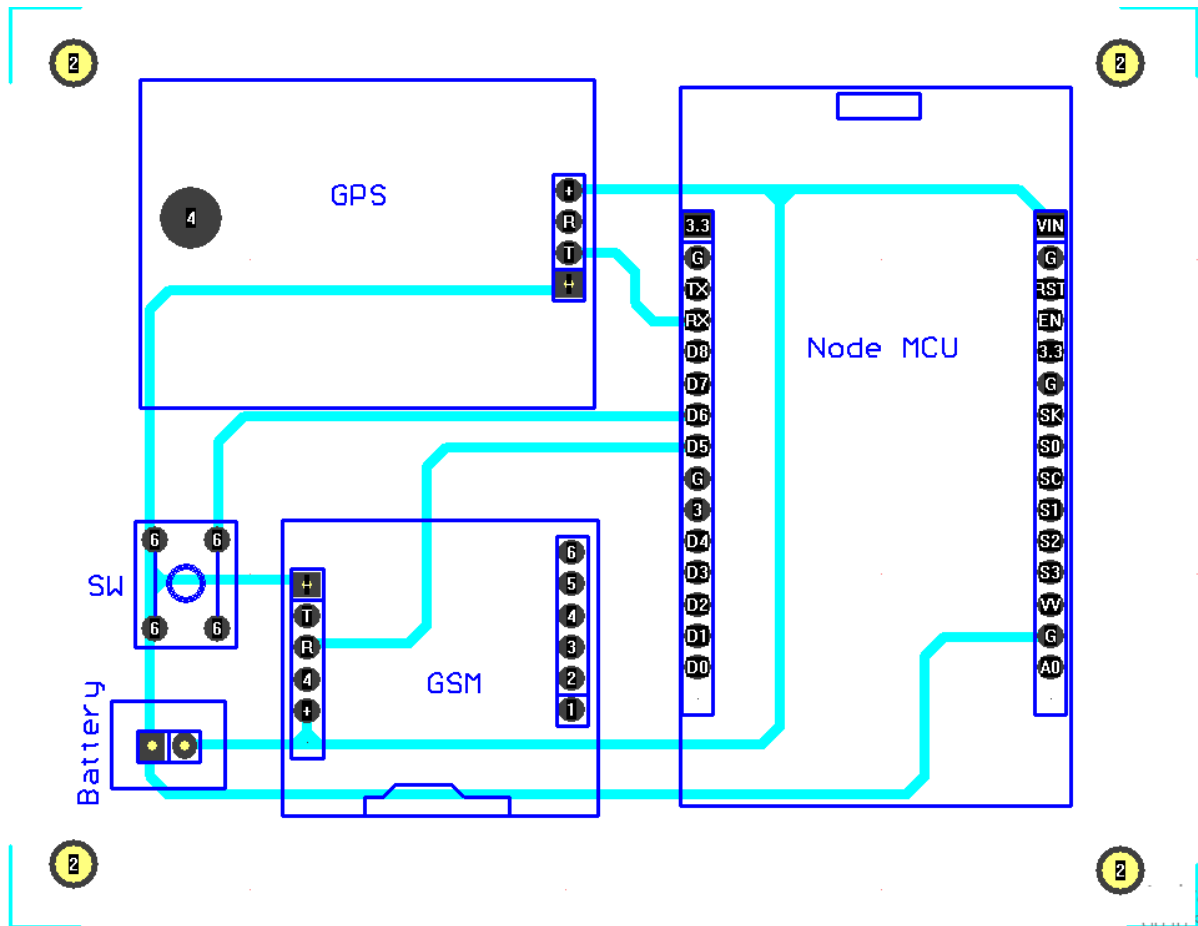
VI.   REQUIREMENTS

6.1 Hardware Requirement Node-MCU ESP8266 IoT Module NEO-6MV2 GPS

Active Buzzer Module

6.2 Software Requirement

1)   Since the aim is to demonstrate the working of the system on a small-scale and it should be cost-effective. We have used the Blynk App, which allows quick and user-friendly interfaces to build, control and monitor a hardware system from any iOS and Android device.

2)   Proteus Simulation Software is being used for the purpose of testing the sensors before actually testing it on the hardware.

3)   Arduino IDE is being used for the code development of Node MCU & GPS. Before interfacing with Blynk App to Node MCU, they were tested with Arduino.
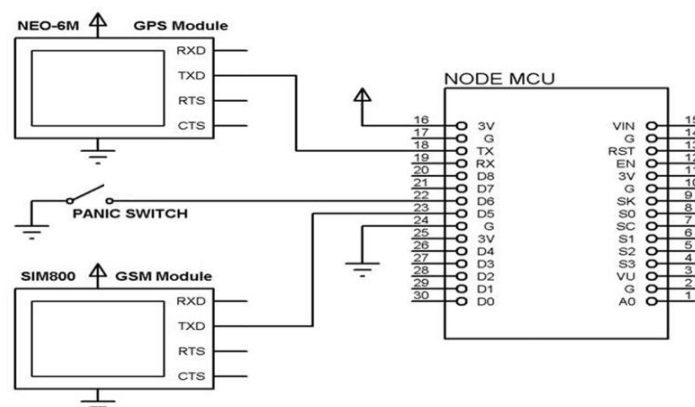
VII.   PROJECT ROADMAP (MONTH WISE)

Sr.no	Month	Work done	Percentage
1	June	We find the multiple topics and select one topic for mega project.	10%
2	July	Find the information about selected topic and also our guide for suggesting us some more information on topic and some corrections in collected information.	20%
3	August	We can starts implementing it on the software platform like implementation of project code using Arduino IOT 2.3.2.	30%
4	September	Using Arduino IOT 2.3.2 we completely created the code.	45%
5	October	Set up the hardware devices .	50%
6	November	Implement the remaining code by using Arduino IOT 2.3.2.	60%
7	December	Connect the software code with hardware.	75%
8	January	We use ubidots platform for location purpose	85%
9	February	Testing the device.	100%

VIII.   CONCLUSION

An IoT-based panic button is a game-changer when it comes to women's safety. In an emergency, a simple press of a button can instantly send alerts with real-time location details to family, friends, or authorities, ensuring help arrives as quickly as possible.

With technology constantly evolving—like wearable devices, AI-based threat detection, and smart city networks—this system can become even faster, smarter, and more reliable. More than just a gadget, it's a lifeline, giving women a greater sense of confidence and security wherever they go.

IX.   REFERENCES

[1]   https://www.google.com/search?q=project+for+panic+button+for+girls+safety&rlz=1C1CHZN_enIN1121IN1122

[2]   https://www.ijraset.com/research-paper/iot-based-emergency-button-for-women-safety