

SMART DEVICE FOR ENSURING WOMEN SAFETY USING ANDROID APPLICATION

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Abstract : A day whilst media publicizes greater of women's achievements rather than harassment, it's a feat achieved! Since we (humans) can't reply aptly in crucial situations, the want for a tool which routinely senses and rescues the sufferer is the undertaking of our concept on this paper. We suggest to have a microcontroller tool, which constantly communicates with Smart tele cell smart phone that has get entry to to the Bluetooth. The software is programmed and loaded with all the desired statistics which incorporates fall detection sensor. The software program or software has get entry to the GPS and Messaging offerings that's pre-programmed in one of these manner that every time it gets emergency signal, it is able to ship assist request in conjunction with the area co-ordinates to the household and the parents. From this tool we will take the on the spot movement at the situation.

Key Words – Sensors, Women Safety, Voice Recognition, arduino uno, accelerometer.

I. INTRODUCTION

The condition of womens in India right now is suffered numerous high quality adjustments during a last few thousand years. From identical status with guys in beyond via that the less factor of a medieval duration to the self-merchandising the identical right with the aid of using numerous reformers, the achievement of womens in India is been livelife. An elegant Indian women have adorned excessive offices in India in addition to that of the President, Prime Minister, Leader of the Opposition and Speaker of the Lok-Sabah. However, women in India nonetheless face social problems and are normally sufferers of abuse and violent crimes and, per a global ballot performed with the aid of using Thomson Reuters, India is that the "4th most hazardous country" inside the global for women, and consequently the worst country for women some of the G20. [A cluster of developing industrial Nations established on twentieth August 2003] countries. In India, each day quite thirty girls were dead and plenty of are suffering austere mental and physical trauma [1].

Day by day the women safety is becoming the common issue, such apps do exist, and they are equally smart to confiscate the victim's phone. Hence the strategy to switch to an independent hardware is focused in our project. We are introducing a tool which guarantees the taking care of girls. This enables to perceive shield and phone on sources to assist them out of risky situations.

The system consists of accelerometer, Bluetooth and panic switch. If the accelerometer result is abnormal then a popup message is send to women's family. Main cause of the gadget is to offer protection and safety. As being an impartial state girl's aren't secure even today. There need to be some powerful measures for the safety of the girl's. Nowadays there are many packages evolved for the girl's protection however most important disadvantage of this application is it requires preliminary interplay of girls and that state of time it's not possible. This approach specializes in a protection gadget this is designed to serve the intention of supplying protection to ladies just so they by no means feel helpless while dealing with such social challenges.

II. OBJECTIVE

Today with inside the modern-day global scenario, the top query in each female's mind, thinking about the ever rising growth of problems on ladies harassment in latest beyond is more often than not approximately her protection and security. The best idea haunting each female is while they may be capable of flow freely at the streets even in strange hours without annoying approximately their security. This paper indicates a brand newly attitude to apply generation for ladies protection. "As Indian Women's Are Harassed, Raped and murdered daily!" That's a manner past more numbers! We endorse a concept that adjustments the manner everyone thinks approximately ladies protection. A day while mass communication declares greater of ladies achievement as opposed to harassment, it's a feat Achieved! Since we (humans) can't reply aptly in essential conditions, the want for a tool which is automatically senses and rescues the sufferer is the project of our concept on this paper.

We endorse to have a microcontroller tool, which constantly communicates with Smart telecell smart phone that has get right of entry to to the Bluetooth. The utility is programming and loaded with all of the required records which incorporates fall detection sensor. The software program or utility has get right of entry to to GPS and Messaging offerings which is pre-programmed in the sort of manner that on every occasion it gets emergency signal, it can ship assist request in conjunction with the region co-ordinates to the spouse and children and the parents. From this tool we are able to take the instant motion at the situation.

III. LITERATURE SURVEY

Smart Security Solution for Women Based on Internet of Things (IOT)”

[1].This paper consciousness on the safety of girls. They are construct one clever band that's includes 3 kind sensors i.e. Pulse Rate Sensor, Temperature Sensor and Motion Sensor. This band is constantly speak with the clever phone. “An Autonomous Wireless Body vicinity Network Implementation in the direction of IOT connected Healthcare Application”

[2].This paper describes approximately wearable sensor nodes with the sun power harvesting. This paper includes statistics approximately numerous sensors that are used for the tracking of fitness situation of person. Also they're evolved one internet primarily based totally Smartphone software to show the sensor's node data “A Survey on Wearable sensor primarily based totally machine for fitness tracking and prognosis”

[3].In this paper they're construct one wearable fitness tracking machine that's useful to checking the fitness situation of patient. In this paper they offers statistics approximately sensors and operating variety of sensors and Bluetooth. “Smart women safety machine”

[4].In this paper they offers statistics approximately numerous modules like GSM shield(A900), Arduino Board, GPS tracking, Screaming alarm and strain Sensor. “Android Application for girl's safety machine”

[5].In this paper they may be evolved one android software that's beneficial as ladies safety purpose. Generally this provider may be begin with the aid of using and pressing the activating provider pin. By urgent volume key critical messages can be forwarded to the certain persons. “Design and Development of Women Self Defense Smart Watch Prototype”

[6].In the paper proposed concept of interplay among consumer and technologies. They are evolved one Smart Watch which speak with GPS device. Also they may be expand one device which include electric powered surprise generator module, screaming alarms module, voice reputation module is beneficial to ladies safety.

IV. PROPOSED METHOD

The proposed system consist of Arduino uno as a general purpose board ,having avr as a microcontroller, Gsm , gps, Bluetooth etc. the Bluetooth of the module is always connected with the android phone (app). The biggest advantage of this project is voice reorganization so if the girl will tell help then the sock generation circuit will get active and the current location is moved for a concerned person with the help of an gps and gsm. The second functionality of the project is to recognize the motion of the woman if she falls down then immediate location will be send automatically. The third functionality of the project is the panic switch.

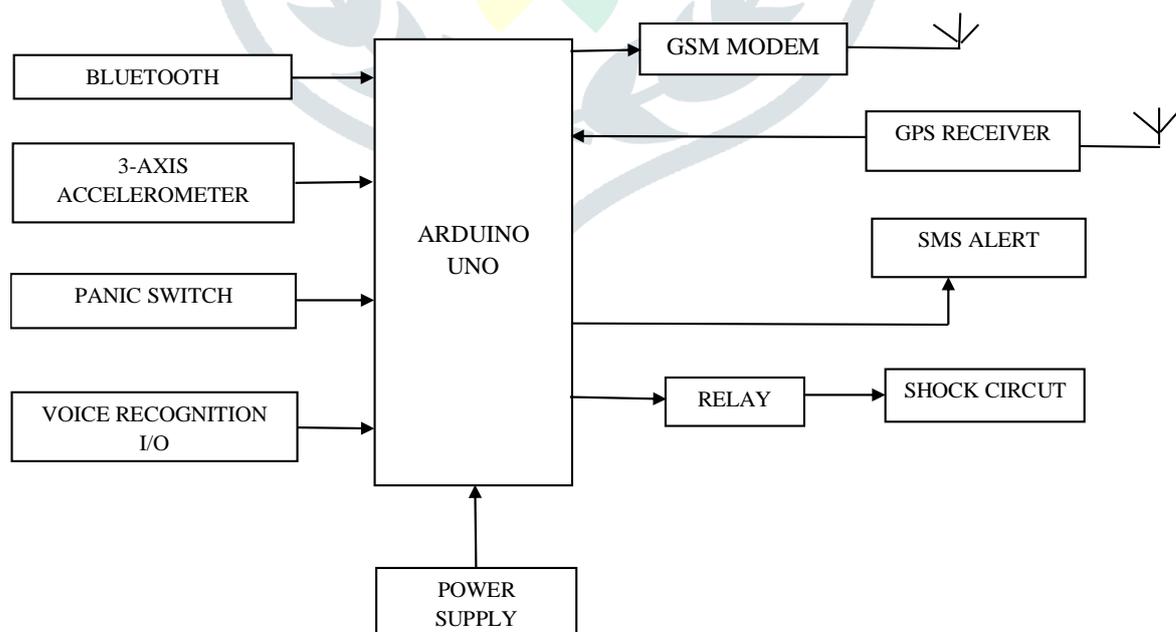


Fig 1: Proposed Method Block Diagram

4.1 Arduino Uno



Arduino is an open-source platform used for constructing electronics and electrical projects. The Arduino board contains a microcontroller (regularly mentioned as an Arduino board) and a chunk of software, or IDE that runs on the PC, helps to write and add code to the boards.

4.2 GSM



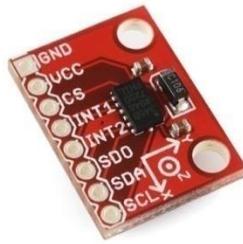
GSM is a cellular communication system; it stands for international gadget for cellular communication (GSM). The concept of GSM was advanced at Bell Laboratories in 1970. It is broadly used as a cellular communication gadget with worldwide coverage. GSM is an open and virtual cellular equipment used for transferring cell voices and records. It operates in the 850MHz, 900MHz, 1800MHz and 1900MHz frequency bands.

4.3 GPS



A "Global Positioning System" (GPS) tool receives signals to determine the present location of the tool in the world. These tools give information about latitude and longitude, and have the ability to estimate altitude, but this is not considered precise. These tools find their implementation in military, aviation, marine and consumer product applications.

4.4 Accelerometer Sensor.



An accelerometer is an electromechanical tool in an effort to calculate acceleration forces. These forces can be static, just like the steady pressure of gravity pulling on your feet, or they will be dynamic - as a result of transferring or vibrating the accelerometer. By measuring the quantity of static acceleration because of gravity, you may discover the attitude the tool is tilted at with according to the earth. By sensing the quantity of dynamic acceleration, you may examine the manner the tool is transferring.

4.5 Relay



A relay is a switch which will be operated electrically. Various principles are utilized to operate relay, electromagnet is one of the principles which will be utilized in most relays to activate a switching mechanism automatically. Relays will be utilized when it is required to manage a circuit through a less-power signal or when numerous circuits need to be controlled utilizing single signal.

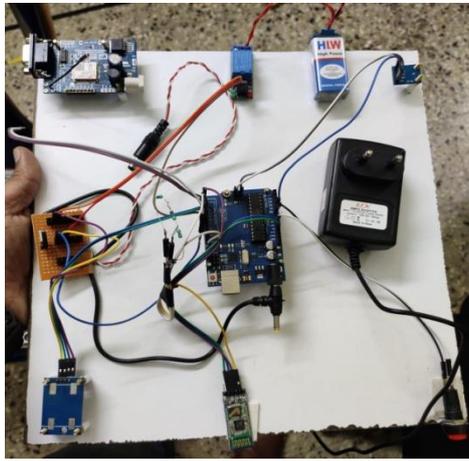
In order to produce less-lethal electric jolt during emergency circumstances to deter the assailant relay consists shock mechanism.

4.6 Advantages

- Women can pass everywhere with extra steady that it avoids the ladies rape.
- Culprits may be without problems observed and may be punished.
- It is environmental pleasant in nature.
- Facilitates easy asset recuperation and tracking.

V. IMPLEMENTATION RESULTS





VI. CONCLUSION

This is the “Women protection gadget that uses GPS and GSM” which may be very beneficial software specifically for girl’s protection. When we came to know we are in critical condition, an instance travelling on my own with inside the rickshaw/Cabs at mid night. Women can easily able to utilize the software. So that on one click we are able to ship our area to our own circle of relatives member’s. The audio to textual content additionally alerting the emergency contacts via way of means of sending the messages with in the area. This gadget can come out from the concern that’s scaring each female with inside for her protection and safety. The software that ship online in addition to offline SMS to specific emergency touch number.

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