ABSTRACT

The project titled as “DESIGN and IMPLEMENTATION of WOMEN AUSPICE SYSTEM with GPS TRACKING” which mainly focuses on safety of women. As this is 21st century where technology is growing rapidly day by day but still women are hesitant to step out of their houses at night times or at odd hours. Because, many things have got changed but the worry about their safety is still remained same. This project provides a wearable safety system to all the women. There are many android applications in the market for women safety but the thing is whenever she is in danger she may not able to operate mobile phones. By considering this as major problem designing a solution is the main motto of the project to provide safety for all the women who may or may not use android mobile phones. This safety device includes GPS, GSM, power supply, emergency push button, Buzzer

Keywords: Arduino UNO R3, GPS, GSM, Buzzer, Safety.

I. INTRODUCTION

In the current worldwide situation, the very first question arises in every women mind is, can I walk safely at night without worrying on the roads. This project provides a new way to protect herself from dangerous situation. In this project the main focused area is to give complete security so that they can move freely anywhere at any time. The above-mentioned project consists of different components and modules, namely GSM, GPS, Buzzer, Power supply, Arduino UNO R3. Now a days we can see many cases where women are facing body-shaming and other harassment issues irrespective of age, this is the time when these issues should be solved. This project is mainly focused on women safety where women feel safe. Nowadays, women are becoming competition for many and they are growing in each field, but the question is, are really women are safe? And the answer we get is a hard no. as a consequence the implementing of electronic wearable women safety system is built which consists of GPS, GSM, Buzzer, Power Supply, Arduino UNO R3 to control all of the above. In recent years many android based mobile application for women safety is already present in the market but, all women don’t have android phones and they don’t know how to use android phones, due to this they should not face the safety issues, so we came up with the thought of developing a project on women wearable safety system using Arduino UNO R3. Here, Arduino UNO R3 receives the signals from the Global Positioning System (GPS), module in which the current location information then Arduino UNO controller will make GSM (Global System for Mobile Communication) to send an alert Message to the numbers which are already provided. There is also a buzzer to make noise so that she can take help from neighbor. So that she can be saved from an attack. By this way buzzer can be used as an alerting device.

1.1 Problem Statement

Whenever there is any critical situation and a women is in danger they become weak and they cannot protect themselves and cannot operate their mobile phone. Also, they cannot send the message or make a call to their parents and neighbours or police station to send the location at the risky situation.

II. METHODOLOGY

In this project we have used Arduino UNO R3 microcontroller which is the main part and controls the other components. This module has total 40 pins. Here, we have made use of 2 push button in that the first is used to ON/OFF of the safety system and the second button is used to ON the buzzer. When the first button is clicked at that moment of time the circuit will be ON, which means the microcontroller is on. This will activate the other
modules like, GPS, GSM. This GSM module will send the location of the women who is in danger to the numbers which are already defined the numbers of the police station, women's parents and neighbors. The sending location consists of parameters like latitude, longitude and with the help of GSM an alert messages is sent called "HELP ME, I AM IN DANGER". In this time if she presses 2nd button this will be connected to buzzer when she clicks on the 2nd switch the buzzer will be on, which make noise, this noise will get the attention of the nearby people so that she can take help from them. By this way this project can be proposed.

Fig 1: Block Diagram of Women Auspice System

The block diagram consists of the following blocks.

**GPS Module**

The Global Positioning system (GPS) is used to find the location. The current location consists of parameter like longitude and latitude. It shows the accurate location which shows details of the location namely street name, nearby junction and many more. This is directly connected to microcontroller it also shows the weather, day and night anywhere on the earth.

**GSM Module**

The Global System for Mobile Communication (GSM). It is an open and digital cellular technology. GSM uses a variation of time division multiple access (TDMA). TDMA, GSM and code-division multiple access (CDMA). GSM digitalize and compresses obtained data, then it sends it to a channel with two different streams of user data, both streams pass in its own time slot. GSM operates at 900MHz or 1800 MHz frequency band.

**Buzzer**

A Buzzer is an electronic device, usually buzzers are also known as speakers it is a tiny speaker that can connect directly to an Arduino. The buzzer produce noise. When the buzzer module activates it continuously gives out siren which helps to grab the attention from nearby people.

**LCD Display**

A 16x2 LCD is a basic module used to show the message or output. These modules are most popular over seven different sections and different multi segment LEDs. LCDs area unit economical; simply programmable and don't have any limitation of displaying special & even custom characters (unlike in seven segments). The command register will Store the command instructions given to The LCD. An instruction is given to the LCD to do a predefined task like starting it, screen clearing, to set the cursor position and to control the display.
III. RESULTS AND DISCUSSION

1. By implementing this project, we can able to provide effective wearable security for women.
2. It can also implement for men’s and children with specific modification.
3. There will be a power supply to activate all the components like GPS, GSM, buzzer and push button. By pressing one switch all the components will be activated.
4. At this moment after switching on the power supply GPS already started to record the location from geo satellites which are 20000km away from earth.
5. Whenever women is in danger, if she presses the pushbutton, the buzzer will make sound for specific time intervals. Which will helps to gain the attention of passing by people and can get help from them to avoid any emergency situation.
6. Then GSM will send messages to pre-registered mobile numbers with the txt “HELP! !! I am in DANGER, My Location is at Lat: and Long:"

**Fig 3:** Electronic wearable safety system and hardware circuit

**Fig 4:** prototype and GSM sending alert message to registered mobile number with location coordinates

**IV. CONCLUSION**

The proposed design will help the girl when she is in danger zone. She can make rescue of herself in danger situations. And this circuit will use to remove or decrease the tension of girl when she walks alone in night hour also, so that she will never feel helpless at any situation and can protect her by herself. The culprits can be find as early as possible because with help of GPS and GSM the location can directly send to police station and can catch easily with single press of power supply switch can activate all the components. If there is an emergency situation by pressing push button buzzer will be activated which gains attention of nearby people to take help from them. GPS will record the location of the victim and GSM will send the message to the pre-registered mobile number with an alert message which includes the location coordinates.

**ACKNOWLEDGEMENTS**

We would like to place on record my deep sense of gratitude to Dr. MADHAVI M Department of Electronics and Communication Engineering, **PES Institute of Technology & Management, Shivamogga** for his generous guidance, help and useful suggestions. We are extremely thankful to the management of PES Institute of Technology & Management, Shivamogga for providing us infrastructural facilities to work in, without which this
work would not have been possible. Finally, I am thankful to my parents and friends, who helped me in one way or the other throughout my project work.

V. REFERENCES


