

Design and Implementation for Women Safety Device Based on Android Application with Electric Shock

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ABSTRACT: In these days women are facing lot of problems in public places of harassment or misbehave by gents. We are developing a smart watch or electric device for reduce the problems of girls. In that watch, User can press the given button to send message to police station through GPS and GSM using Android application and also implemented our project with hardware using microcontroller, wireless device, buzzer and sensors. User implemented shock in smart watch to get electric shock towards the victim. It will very useful to come out from crucial or emergency situations.

KEYWORDS: Electric shock generator, GPS, GSM, Smart watch, Screaming Alarm, Voice Recognition

I. INTRODUCTION

Women are slightly scared about to sustain in new places. Physical harassments are major issues across the country. In this age of technology, mobile phone is one of these gadgets that almost everyone like and uses to keep in touch with family and friends. All they need is a device that can be carried everywhere easily. The atrocities against the women can be now brought to an end with the helping of women safety device. In this project, Women can use to responding and intimate to their parents or relatives by using the pressing the button on smart watch. It has the ability to help women with technologies that are embed into a compact device. However, girls in India still face social challenges and are typically victims of abuse and violent crimes and, per a world poll conducted by Thomson Reuters, In India, each day quite thirty girls were dead and plenty of are suffering austere mental and physical trauma. This method focuses on a security system that's designed alone to serve the aim of providing security to girls in order that they ne'er feel helpless whereas facing such social challenges. The system consists of assorted modules like GCM, Microcontroller, GPS, screaming alarm, a collection of pressure sensors for activation and country" within the world for girls, and therefore the worst country for girls among the surrounding countries.

II. RELATED WORK

It is an all-in-one system. Hence no need to carry multiple devices GPS implemented for the purpose of tracking the women when user presses the appeared button to sends the messages. It also contains record voice recognition to find victim. In one paper, voice keyword app is used for recognizing the user. Exact latitude and longitude of the user can be tracked. But the major drawback is, sometimes the message will not be sent successfully if the network has some problem. In another paper, situation recognizing app is used for analysing the situation of the user using a called IPROB.

III. PROPOSED SYSTEM

To develop a system for android users for keeping track through several applications. This application can track and rescue women who are all in trouble by using GPS of Android application to send the message to the registered contact numbers and police station. The root device which uses 3G/2G data connection for tracking the location of the victim through GPS. Electric shock is also implemented in smart watch. User can easily overcome the problem. The sensing module ADXL sensor is used to sense the position of user, piezoelectric sensor is used to detect the user are in conscious are unconscious monitoring.

A. AVR 8Bit Microcontroller

Atmel 8 bit AVR RISC microcontroller which operates at low power, have a combination of 8KB programmable flash memory, SRAM presented of 1KB, 512K of EEPROM and also 6 channel or 8 channel of 10 bit can be A/D convertor. This is also supports 16 MIPS and 16 MHz operating in range between 2.7V-5.5V. The compiler automatically selects a mixture of 16 bit and 32 bit instruction RISC is used for the purpose of Registers in 32×8 . This microcontroller can also useful for Fully Static Operation. In Advanced RISC chip has 2 cycles Multiplier.

B. High Endurance Non-volatile Memory segments

It can be self-programmable for 8Kbytes in Flash program memory. In Memory segments has 512 bytes of EEPROM as well 1Kbyte of internal SRAM. Write/Erase Cycles: 10,000 Flash/100,000 EEPROM. Data retention: 20 years at 85°C/100 years at 25°C. It also implemented Optional Boot Code with their Independent Lock Bits.

If Power is on in this microcontroller and it can Reset and also detect their programmable Brown. It has Internal Calibrated by RC Oscillator. This microcontroller can found the interrupt sources occur in both Internal and External. It has implemented Five sleep modes such as ADC Noise Reduction, Idle, Power save and power down.

C. LCD Display

LCD display is used in this project for displaying the current status. It can be connected with the AVR Controller to update the status. It can allow 2 lines with 16 characters in this display. So it also called as 16x2 LCD.



Fig.1 LCD

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D. ADXL(TILT SENSOR)

ADXL Tilt sensor can produce electric signal and it will varies in angular movement of the signal. These are also used to find or determine the measurement of slope, it also tilt within the certain limited of the motion.

E. Block Diagram

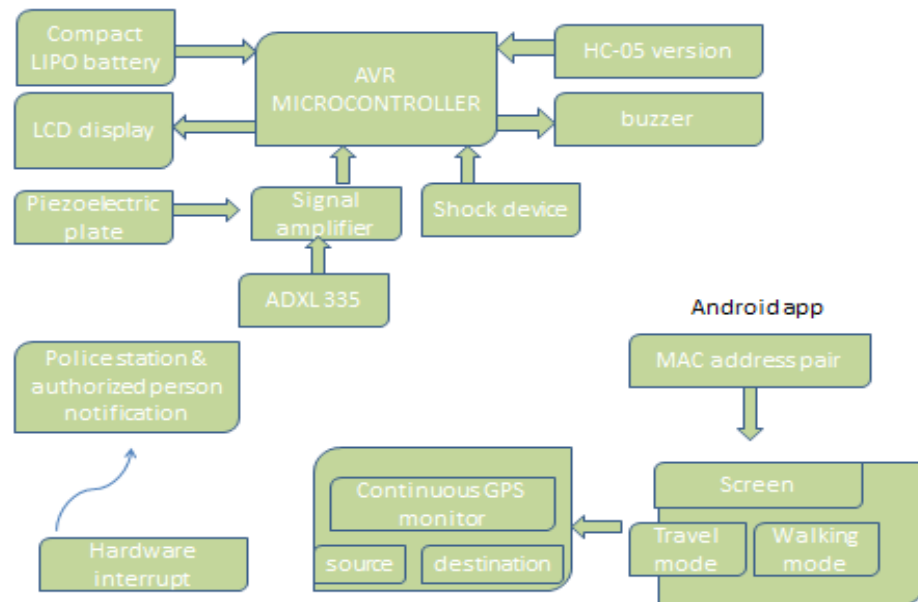


Fig.2 Block Diagram

The Compact LIPO battery acts as a power supply for AVR Microcontroller. HC-05 Version reads and sends signals to the microcontroller. The LCD displays the status of the microcontroller. Electric shock is generated when the microcontroller sense information to the device. If the device has been fallen down, buzzer has created a sound.

IV. CONCLUSION

In this project, a low cost women tracking system using GPS and GPRS of GCM network, suitable for wide range of applications all over the world. The combination of the GPS and GPRS provides continuous and real time tracking. The cost is much lower compared to SMS based tracking systems. Free Google map and the use of HTTP protocol as data sending method reduces the monthly bundle cost for the individual user and also for the small business owner. It is expected that the full implementation of the proposed system would ultimately replace the traditional and costly SMS based tracking systems. Tracking System using GPS and GCM.

V. RESULT

When the switch is pressed, the emergency message is passed to nearest police station through mobile and the location of the user can be tracked. Further, the user can generate a electric shock by pressing a emergency key to protect themselves from the attackers.

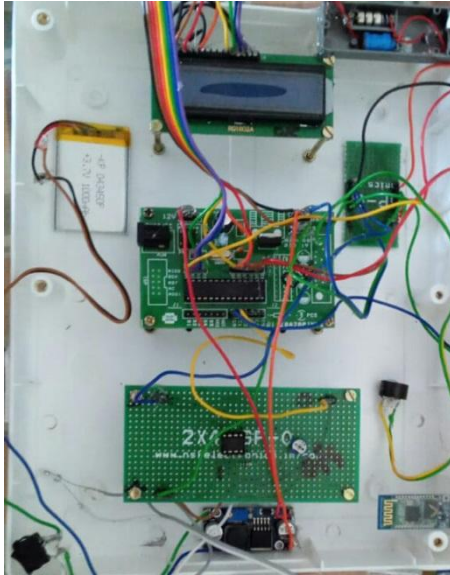


Fig:3 View Of The Circuit

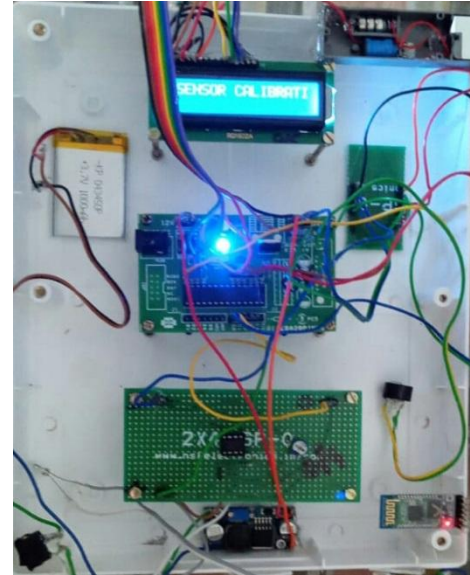


Fig:4 Output Of The Project

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