

A Security Solution for Women Using Smart Device

¹ Sreeram.V, ² P.Venkatesan, ³ Y.Nagaraju
^{1,2}nd Year-M.Tech, ² Associate Professor, ³ senior technical officers,
^{1,2,3} Department of ECE,
^{1,2} SCSVMV, Enathur, Kanchipuram-631561.
^{1,3} CDAC, Hyderabad-500005,

Abstract — In today's world female are much less tightly closed and have many issues related to their safety purpose. They have to endure among a variety of hard situations and have to show themselves every time in all crucial conditions. So, for their safety and security purpose authorities has provided security via policies and rules to the society. Although there are many present structures for security cause want of advanced smart security gadget is increased. In order to overcome such problems clever security gadget for ladies is implemented.

This paper describes about protected and secured electronic system for girls which consists of an stm controller and sensors such as sound sensor temperature sensor pulse charge sensor. When the sensor crosses the threshold restriction the system receives automatically activated and traces the vicinity of the victim with the aid of using GPS module. By the use of GSM module the sufferer place is sent via the registered phone number.

Index Terms - GSM, GPS, Temperature sensor, Pulse rate sensor, and Touch sensor.

I.INTRODUCTION

In latest date, ladies face bodily harassment in public places, colleges and at places of work or while travelling. Most instances of physical harassment take region when women are by myself or whilst travelling. Women feel insecure to step outdoor their house. An advanced gadget can be constructed that can discover the place and fitness circumstance of man or woman that will enable us to take action hence based on digital gadgets like GPS receiver, GSM, pulse charge sensor, flex sensor, MEMS accelerometer, body temperature sensor. We can make use of quantity of sensors to precisely discover the real time state of affairs of the ladies in crucial abusive situations.

II.PROBLEM IDENTIFIED

At any emergency situation human beings get panicked and in that situation, they can also no longer be able to function their smart applications, and cannot without delay defend the attacker and defend themselves. The proposed machine can be beneficial for female safety purpose. It consists of a wearable protection gadget having sensors and an emergency button which when activated sends an alert message with area information to the victim's family to close by police station.

III.PROPOSED SYSTEM

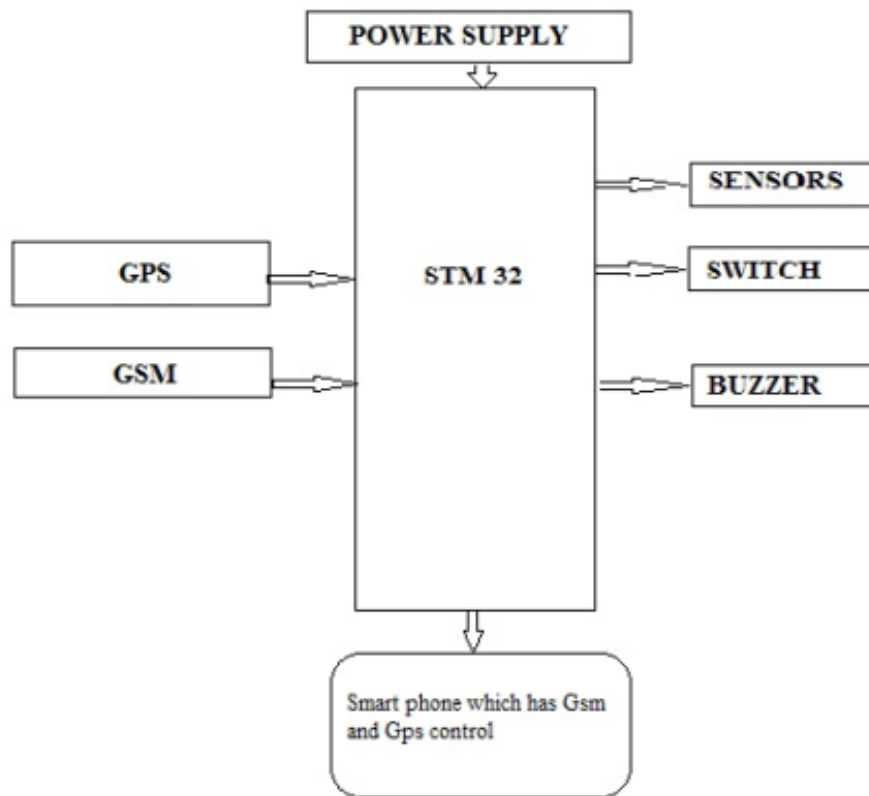


Fig 1: Proposed System

IV.COMPONENTS DESCRIPTION

1. Power Supply:

Each and every gadget output to be given with a power, however in this we are the use of a grant of 5V-2A which will be given to Raspberry pi which will act as a electricity furnish for different aspects when they are interfaced with it.



Fig 2: Power supply

2. STM32Microcontroller :

The STM32F103C8T6 is based on the arm cortex M3 presents the foundation for constructing a extensive vary of embedded structures for simple battery powered dongles to complex related systems. This component family consists of dozens of wonderful configurations presenting large ranging picks in reminiscence sizes, accessible peripherals, performance, and power.



Fig 3: STM32F103C8T6

3. GPS:

It can be interfaced with ordinary 5V Microcontrollers with the assist of the in constructed 3V5V converter. The interfacing is made easier with the assist of low pin count. The 4 Pins are 5V, TX, RX, and GND. This standalone 5V GPS Module does no longer require external components. It consists of inside RTC Back up battery and can be at once linked to USART of the microcontroller. The modern date, time, longitude, latitude, altitude, speed, and journey direction heading among different data, are provided by the module and can be used in a many functions along with navigation, fleet management, monitoring systems, mapping and robotics



Fig 4: GPS

4. *Pulse rate Sensor:*

Pulse charge sensor is used to detect the pulse fee of a person. It activates the system when the regular pulse fee increased beyond the fixed threshold price i.e. larger than a hundred beats per minute.



Fig 5: Pulse rate Sensor

5. *Temperature Sensor:*

It performs a essential role in human fitness condition. The ordinary temperature of human body is 25 to 45 tiers Celsius. If it goes past forty five diploma Celsius then the sensor activates this machine.



Fig 6: Temperature Sensor

6. Pressure Sensor:

The Pressure sensor particularly works when an object or an individual gets in a physical contact these sensors are extra touchy and are frequently in a position to respond in another way to distinct kinds of touch such as tapping, swiping and pinching.



Fig 7: PRESSURE SENSOR

7. GSM:

GSM is a digital mobile telephony system. It operates at either the 900MHz or 1800MHz frequency band. SIM900 can suit almost all the house necessities in the M2M application with dimensions of 24mm x 24mm x 3 mm.



Fig 8: GSM Module

8. BUZZER MODULE

When the module activates, it continually gives out siren which helps to clutch the interest of the nearby public.



Fig 9: BUZZER

V.FLOW CHART

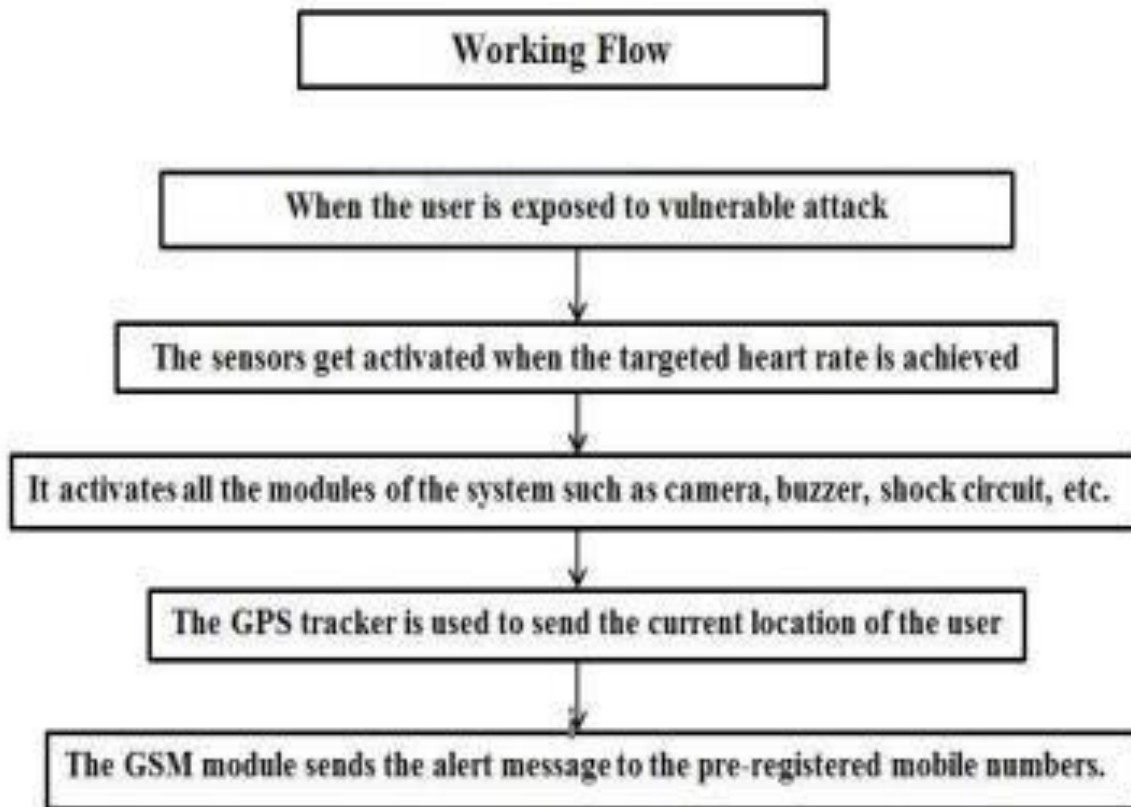


Fig 10: FLOW CHART

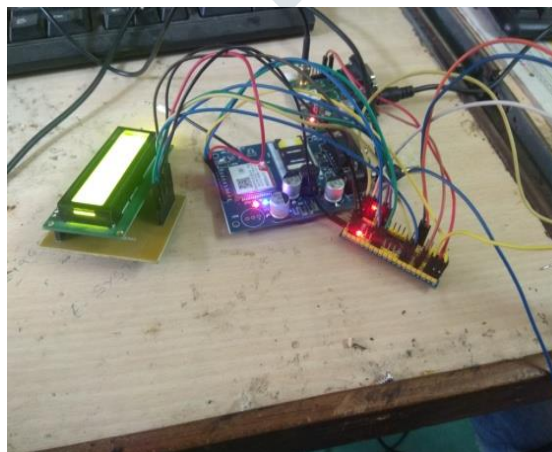
VI.WORKING

The device can be activated in two ways:

1. Manual Switch(Button)
2. Auto Mode(Using sensors)

When it receives activated an alert message is generated along with the modern-day area of the victim, with the assist of GPS module. This message is forwarded to the victim's household and the closest police station the use of the GSM module. At the same time the digital camera begins shooting the images. this will be beneficial as the proofs and assist the police to discover the culprits. The buzzer produces an extraordinarily worrying and loud sound which will grasp the attention of nearby human beings and distract the attacker.

VII.RESULTS



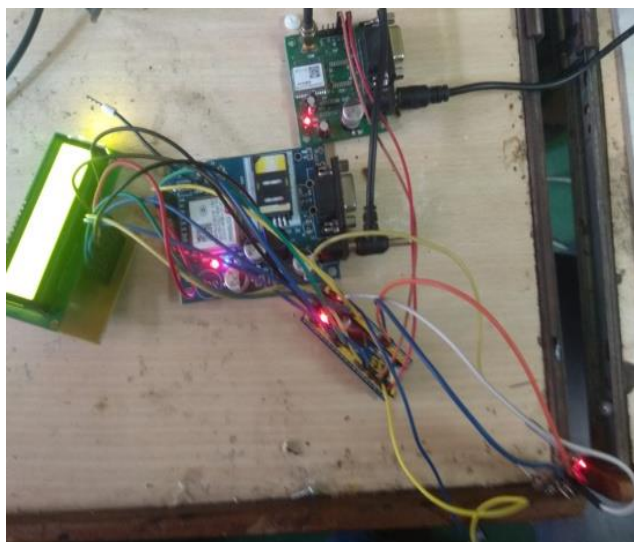


Fig 11: MESSAGE RECEIVED THROUGH GSM

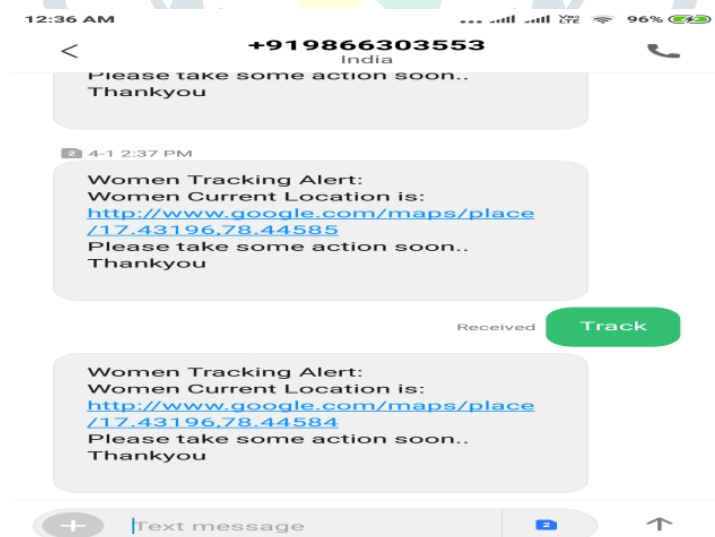


Fig 12: SMS ALERT

VIII.CONCLUSION

The proposed design deals with the critical issues faced by the women in the near past and will help to solve them with technical sound equipments and ideas. This system overcome the fear that scares of every women in the country about her safety and security.

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