Security System Solution For Women

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Abstract: Nowadays women are facing numerous critical problems regarding on their security. The attacks on the women are increasing rapidly. This is due to the lack of eye-watch on the victim's surrounding areas. In this paper, the proposed design induces a wrist band to the women which has pressure switch. When the victim uses the switch, immediately the entire system which is connected to Raspberry pi will active to get the coordinates of women location using GPS and send the messages using GSM to the close police headquarters and the filtered telephone numbers. In this system, the cam is also incorporated with the processor, to capture the image of the attacker for the further evidence. The system consists of a buzzer to call for help. This system can make a difference to the women to defeat their situation going out.

Keywords: Raspberry, Micro – processor, Buzzer, GSM and GPS.

I. INTRODUCTION

Women in India-a superior portion of Indian culture. We come crosswise over numerous incidents towards the women regarding to rape, attack, inappropriate behaviour, assaults, abuse of women in houses, savagery against women in remote regions and so on. Thus to provide safety for women is important. Our major solution towards this proposed design is to solve the impact of incidents happening around women The main reports on women from all over India being beaten, killed are find crosswise over us for a long time and we know about it. We have

powerful police administrations, working helpline number are accessible, and numerous of officially created applications by means of advanced mobile phones for women security right now accessible. Despite this fact, till today women are still subjected to the critical incidents. Now it is a high time to solve and make a system for long reliable use.

This proposed system can surely change the condition immediately and it is low in cost and easy to alert the situation.

II. LITERATURE SURVEY

[1] The Author had mentioned the current scenario that women has very less security in the present world. The application had Human behaviour system where with the help of GPS service system to gather the location and check the women condition after the attack.

[2] In this paper the proposed design is made in the band where the GPS is used to track the victim and get the information stored in the cloud services.

[3] In this system the victim is using watch and that detect the heart beat condition of the women, if the attack occurs. Immediately through GPS and GSM.the location and messages are sent to the emergency contacts.

III. EXISTING SYSTEMS

The existing systems available in the society are

A) **SHE (society Harnessing Equipment):** This system is an embedded device which activates at the garment when the victim needs. It can generate 3800Kv to the attacker but will not harm victim. This device will help the victim to escape [4].

B) **Smart Belt:** This system is a portable device resembles the belt. This device has Arduino IDE, screaming alarm and pressure sensor. This device will generate the sirens to call out for help [5].

C) **AESHS (Advanced Electronics system for Human Safety).** This is a device to track the location of the victim via GPS.

D) **Vith U**: This app is created by Gumrah aired on the channel [V] for the safety of the women. This system is completely android based and by click the power button twice, the location is sent to the emergency contacts.

IV. BLOCK DIAGRAM:

The Block diagram of smart security solution for women is given below in Fig.1
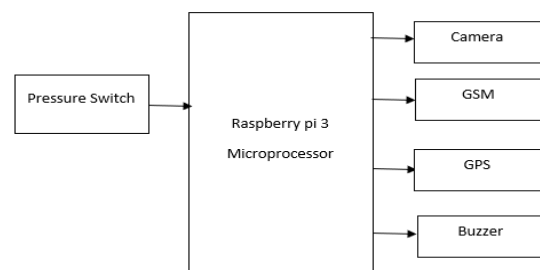

Fig.1. Shows the Block diagram

V. PROPOSED DESIGN

The proposed design of the system initiates when the pressure switch as a input is pressed by the victim which is incorporated in the wrist band, immediately the system gets activated and send the victim Geo-coordinates of the victim location to the emergency contacts. This system is supported with the Raspberry pi Microprocessor, acts as heart of the system and with the support of Global positioning system (GPS) and Global system for Mobile (GSM), the location and messages are sent. The system is also added with the camera to take the screen shot of the attacker when the system gets activated. The buzzer is also incorporated in the system to call out for help.
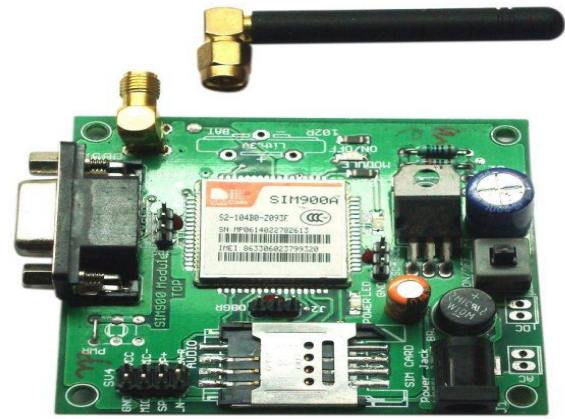
VI. HARDWARE AND SOFTWARE CO-DESIGN

The hardware and software specifications are mentioned in the following design

A. Raspberry pi 3

The Raspberry Pi is a credit card sized chip like computer which is developed by the Pi foundation, United Kingdom to promote the basic computer teaching in the school level for the kids. The Pi 3 has the Broadcom2837 processor acts heart of the system. Here, the GPIO 40 pins are wisely utilised in the proposed design. The overview of the Raspberry pi 3 is shown in the Figure.2.

Fig.2. Overview of Raspberry pi 3

B. GSM SIM900A

The GSM modem is used to utilise as an mobile phone which accepts the SIM Card in its hardware device and operates over the subscription. The devices can be used to send and receive messages, call option, internet facilities are provided by the 'Attention' – AT Command. When the device gets activated, the GSM modem immediately communicate over the network to send the messages. GSM SIThe module used in the device is shown in the Figure.3.

Fig.3. GSM SIM900A

C. GPS

The GPS module is used to transmit the data to the RS232 and receive the data from the satellite. This GPS can be used to send the latitude, Longitude and altitude in the serial interface. The application used with the GPS is numerous and most likely used for tracking, navigation and mapping. In this system. In this system, the GPS shown in Fig.4. is used to track the location and send to the emergency contacts through GSM.
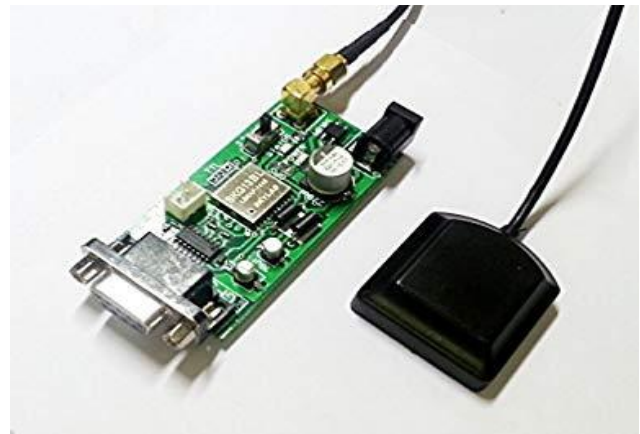

Fig.4. GPS Module

D. Additional Features

The additional webcam is added to the Raspberry pi to capture the attacker identity and send the image to the raspberry pi server by using the motion software and the electromagnetic 3V buzzer is connected to the raspberry pi and acts an output to call out for help in the emergency conditions that occur to the victim.

The software used in the system is Python IDLE. The complete hardware is coded with the python script in its shell. The Python IDLE is the integrated development environment for python with the default language of python. These packages are installed with the Raspbian at the installation stage.
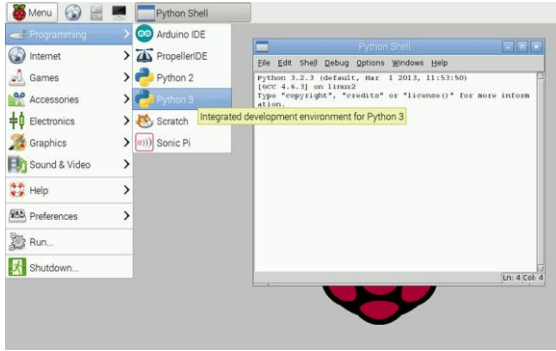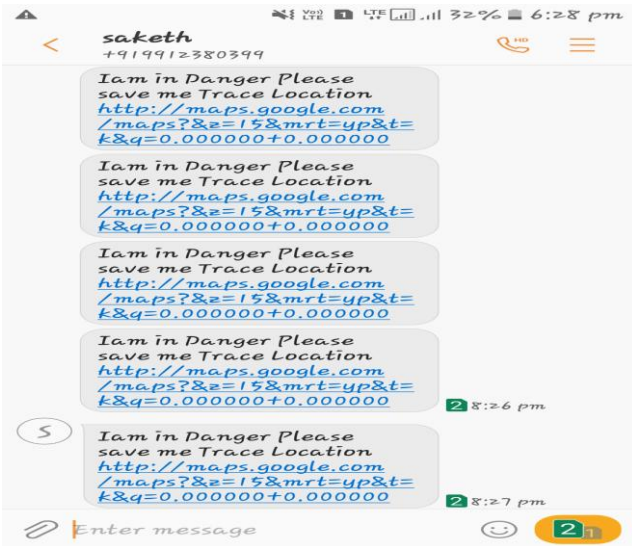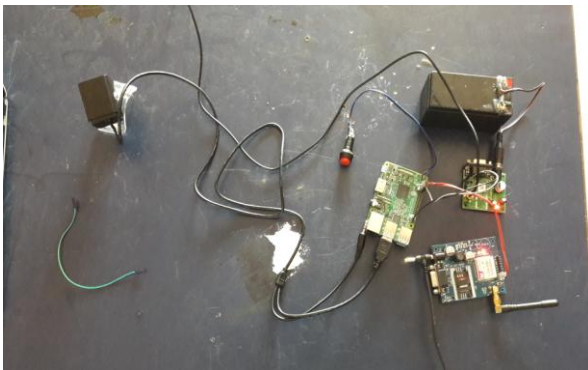
Fig.4. Python IDLE in Pi Home

VII. SYSTEM RESULTS

The results of the proposed design are shown in the Fig.6 and 7.

VIII. CONCLUSION

This proposed design of the paper is about dealing the critical situation that occur to the women in a smart way. The present days useful technologies are completely applied in the design such as screaming alarm, image capturing, sending SMS to the emergency contact. This system is fully organised and gets activated completely which will help the victim to escape in safety wise and provide required security for further used to catch the attacker.

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