Pic Based Women Security And Self Defence System-[FILLE]

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Abstract- *Women safety plays a challenging task in our society. Since from couple of years when weused to read newspapers we often read about the increasing rate of violence against women. We planned to make a device with Low cost, Wearable, Fast and efficient. This paper describes about safe and secured electronic system for women. The violence against the women can be brought to an end with the help of our product "FILLE". This device is a security system specially designed for women in distress. We can record video for further investigation and can give an alert message to pre-set contacts with instant location for every 2 minutes.It comprises of PIC controller, wrist band, Microphone, Motion sensor, Webcam, Buzzer, Tear gas mechanism, LCD, GSM and GPS are used in this project. . Here Tear gas mechanism is imposed for self - defense purpose. This action enables us to get help instantaneously from the Police as well as Public in the near radius who can reach the victim with great accuracy.*

Keywords- PIC controller,wristband, Microphone, Motion sensors, Webcam, Buzzer, Tear gas mechanism, LCD, GSM Module and GPS Location

I. INTRODUCTION

Since last few decades the status of women in India has been going through lot of changes. To remain part of fast life women also works a lot to survive and supports their family. They work at different places like BPO"s, call center,IT firms, and so many places like it. But even today women are still facing many social challenges in India and are often victims to violent crimes.This paper describes about safe and secured electronic system for women. This device is a security system specially designed for women in distress.It comprises of PIC controller, wrist band, pressure switch, Microphone, Webcam, Buzzer, LCD, GSM and GPS are used in this project.When the input is enables the message (HELP ME)and current location will send to emergency contacts through GSM.

1.1EXISTING SYSTEM:

In existing system, pressure button is the only input. When the button is pressed, the device needs to be connected with smart phone through BLE. Thedevice communicates with smart phone through a specially designed application that acts an interface between the device and the phone. The data directed by the smart band such as the pulse rate, temperature of the body along withthe motion of the body is continuously monitored by the application which is pre-installed in the phone.From phone the message will be send to predefined numbers who are considered for emergency contact. Figure 1.1 shows the block diagram of existing system.
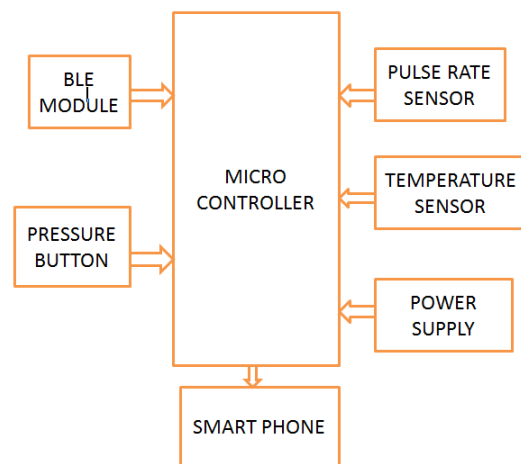

Figure 1.1 Existing System

1.1.1Drawbacks in Existing System:

- C/C++ Language.
- Expensive.
- No live streaming video.
- No self-defense.
- Need to connect with smart phone.

1.2 PROPOSED SYSTEM:

The proposed system is to design a portable device which resembles a band on wrist. It consists of Pressure

switch, PIC controller, Microphone, Webcam, GSM modem, GPS receiver, Tear gas, and LCD.

II.WORKING

When the Pressure switch is pressed, the device will get activated automatically with in a fraction of milliseconds. Immediately the location of the victim will be tracked and messages will be sent to emergency contacts. The screaming alarm unit will be activated and will produce siren sound to call out for help. Tear gas is applied to harm the attacker which may help the victim to escape. Video will be captured by webcam and it is used for further investigation to detect the face of the attacker along with the surrounding environment. The same process will happen if motion sensor or microphone gets activate when it exceed its threshold level. Here we are using PIC microcontroller(PIC 16F877A) which has high performance and also low cost, easy to interface with analog input without any external circuit.Figure 2.1 shows the block diagram of proposed system
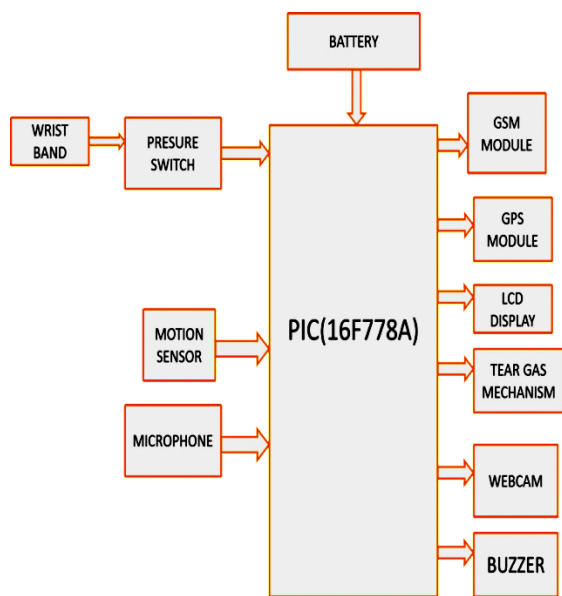

Figure 2.1 Proposed systems

i) Pressure switch: It is used to activate the device. Figure 2.1.1 Pressure switch.

Figure 2.1.1 Pressure switch

ii) Motion Sensor: It is used to determine the motion of the persons. It is act as another input in our device.

iii) Microphone: Microphone detects and captures the voice of the women. It also activates the system as like pressure switch. Figure 2.1.2 shows Microphone.

Figure 2.1.2 Microphone.

iv) GPS Module:GPS(Global Positioning System). It orbits the earth and makes it possible for people with ground receivers to pinpoint their geographic location. Figure 2.1.3 showsGPS Module.

Figure 2.2.3 GPS Module

v) Tear gas mechanism: The irritation may be caused by a chemical reaction with the sulfhydryl group of enzymes.The results of exposure are coughing, sneezing, and tearing. Figure 2.1.4 showsTear gas mechanism.

Figure 2.1.4 Tear gas mechanism

vi) Webcam: Small camera will be attached to the wrist band .It records the actual happenings of the event

vii) Buzzer: An electrical device that makes a buzzing noise and is used for signaling.

viii) LCD display: Liquid-Crystal Display (LCD). It is a flat-panel display or electronically modulated optical device. Figure 2.1.5 shows LCD display
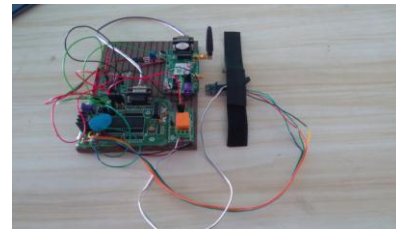

Figure 2.1.5 LCD display.

ix) GSM Module: Global System for Mobile Communications.It is a chip or circuit that will be used to

establish communication between a mobile device and a system. These module consist of a GSM module or GSM modem. Figure 2.1.6 shows GSM Module.
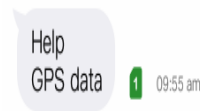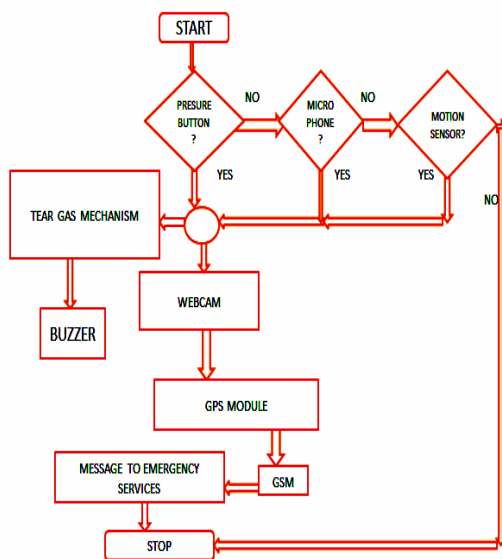

Figure 2.1.6 GSM Module.

1.2.1 Flow Chart For Proposed System:

HARDWARE REQUIRED:

- PIC Micro controller(16F877A)
- Microphone
- Gyro sensor(BMG160)
- GSM module
- GPS module(G702-001UB)
- LCD display

SOFTWARE REQUIRED:

Embedded programing language.

HARDWARE SETUP:

RESULT:

ADVANTAGES:

- Records video
- Tear gas mechanism
- PIC controller
- Alternatives are more
- Accuracy is more
- Efficiency is higher
- Cost effective
- Wireless connectivity

APPLICATIONS:

- It is used for safety of women.
- It can also be used for child tracking during school time.
- Can be used for the safety of elderly aged people.

III. CONCLUSION

Being safe and secure is the demand of the day. Our effort behind this project is to design and fabricate a gadget which is so compact in itself that provide advantage of personal security system. This design deals with most of the critical issues faced by women and it also help them to be secure.

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