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ELECTRIC JACKET FOR WOMEN SAFETY

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***Abstract*— Today in the present global scenario, a woman's word of security and safe life is a tough reality to happen, because women's sexual abuse has become a mainstream news in our everyday routine life. We should create a society in which women can travel openly and even at odd hours not of fear. While there are many rules and laws present, they are insufficient to provide the women in society with the full degree of security, safe and stable life. When the technology advances every day, it is a solution to other problems. And why can't we use these to create a stable and prosperous women's community. This project composed of components such as GSM, GPS, shock circuit, camera, module Raspberry pi-3.**

***Keywords*— Raspberry PI, Camera, GSM, GPS, email, Electric shock, Mobile**

I. INTRODUCTION

In recent years, acts of a violence and assault against women are rising. With the escalation of female employees in industries and other sectors of the commercial market, it is now- coming to a necessity for females to travel at late hours and visit distant and isolated locations as a part of their work. However, the exponential increase in assault and violence against women in the past few years is posing a threat to the growth and development of women. Protection isn't the only measure that can suffice against this increasing abuse. A security solution that creates a sense of safety among women needs to be developed. In instances of attack, it is largely reported that women's are immobilized. Therefore there is a need of a simpler safety solution that can be activated as simply as by pressing a switch and can instantly send alerts to the relatives of the victim. This project focuses on a security system that is designed uniquely to serve the purpose of providing security and safety to women. The objective of research work is to create a portable safety device for women, which provides following facilities 1. Alerts family and friends by sending emergency message 2. Captures the images/video of the attacker to maintain a proof for legal actions.

II. LITERATURE SURVEY

In this [1] paper such device is designed which is a portable one which can be activated as per the requirement of the individual which will locate the victim using GPS and with the help of GSM emergency messages can be sent to the respective locations as per the design. The gadget provides an alarm system, call for help, and electric shock to get rid of the attacker.

This paper [2] suggests a new perspective to use technology to protect women. The system contains a normal belt which when gets activated, tracks the location of the victim using GPS (Global Positioning System) and sends emergency messages using GSM (Global System for Mobile communication), to the three emergency contacts and the police control room.

This paper [3] describes a GPS and GSM based vehicle tracking and women employee security system that provides the combination of GPS device and specialized software to track the location of the vehicle as well as provide messages and alerts with an emergency button trigger. The information of vehicle position provided by the device can

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danger and share the location. With this personal safety app, you'll never walk alone. The personal safety application needs the name and number of the person who is to be contacted in times of emergency. Users can add multiple people's mobile numbers in the emergency contacts list. These are the people who will receive notifications in case of an emergency. All it needs is the user's action to trigger an SOS button provided and it shoots messages as fast as the device can manage.

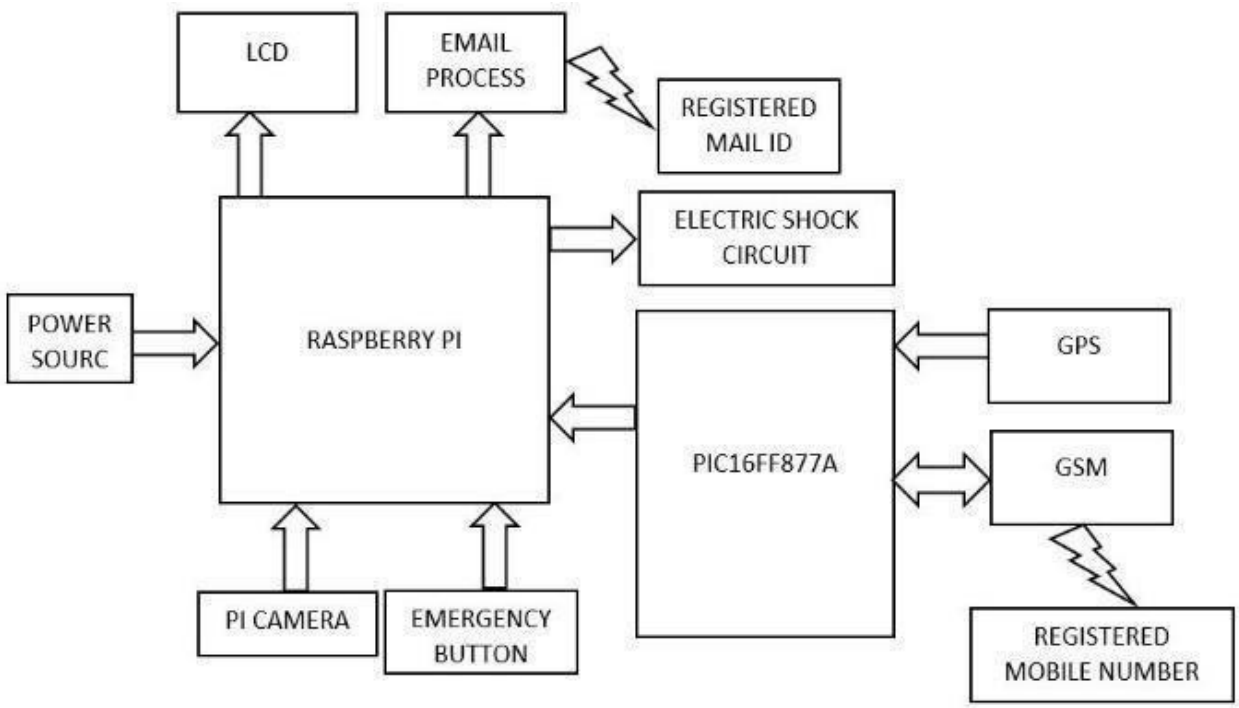
III. EXISTING SYSTEMS

In existing system for women which comprises of an Arduino controller and sensors such as temperature LM35, flex sensor, MEMS accelerometer, pulse rate sensor, sound sensor. A buzzer, LCD, GSM and GPS are used. When the women is in threat, the device senses the body parameters like heartbeat rate, change in temperature, the movement of victim by flex sensor, MEMS accelerometer and the voice of the victim is sensed by sound sensor. When the sensor crosses the threshold limit the device gets activated and traces the location of the victim using the GPS module. By using the GSM module the victim's location is sent to the registered contact number.

IV. PROPOSED SYSTEMS

It is proposed to women safety using Raspberry Pi. .If a women is subjected to attack by an adversary, then a switch has to be pressed manually by her. This switch will trigger the controller (raspberry pi) to capture the image of the attacker and transmit to registered mail id to maintain a proof for legal actions. Current location of the women will send as a emergency message to registered mobile number with the help of GPS and GSM modules and the most important thing of this project is shock circuit is also embedded in the wearable jacket. It provides electric shock to the attacker when he try to abuse her.

Block diagram of Electric Jacket for Women Safety



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V. METHODOLOGY

Raspberry Pi

The Raspberry Pi board comes equipped with an SD card. This slot permits us to insert an SD card and that can use it as our devices. The SD card is the main storage device for a raspberry pi board like as hard disk of a personal computer. The Raspbian operating system is loaded on to the raspberry pi board. It also has onboard memory between 256MB the various components on the Raspberry Pi board.

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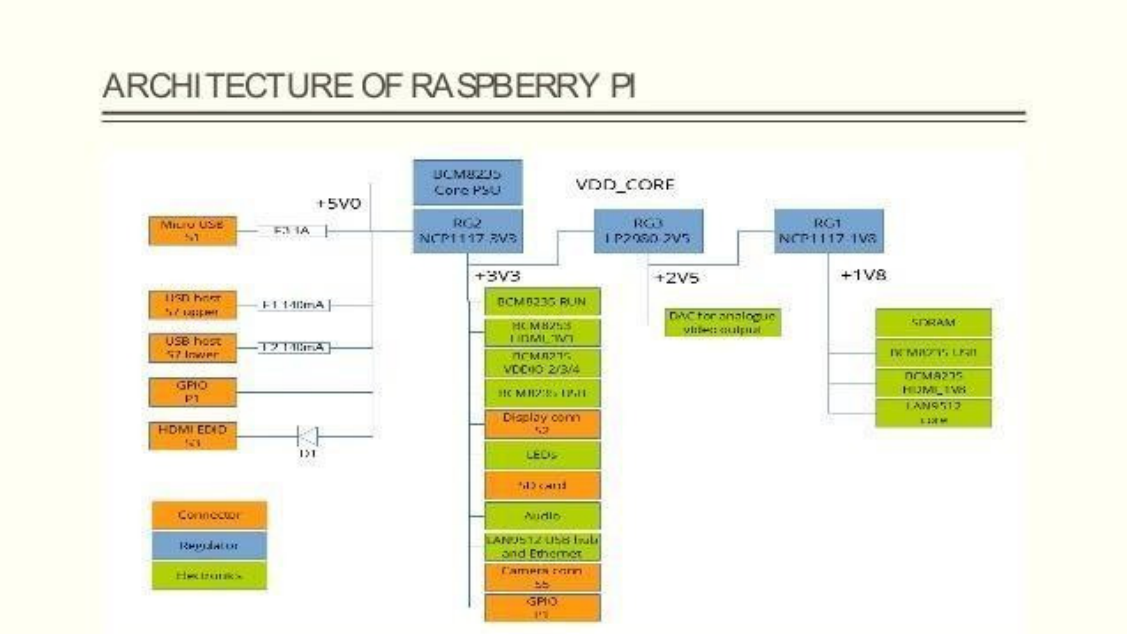
has credit card size, which can be used for many tasks as the normal computer does, like spreadsheets, games, wordprocessing and also to play HD video.

Architecture of Raspberry Pi



Architecture of Raspberry Pi

Power Supply

This is a 5v Micro USB power connector into which you can plug your compatible device.

GSM

Global Mobile Communications Systems stands for GSM. It has been used for mobile Communication voice and information Service as a wireless cellular technology. GSM is that the foremost generally accepted traditional. GSM can even become a circuit-changed system divided into eight twenty-five rate-slots for each 200 kHz channel.GSM works in many parts of the planet on 900 megacycles a second and 1800 megacycles a second on mobile communication bands. Roaming is to be used in another GSM network via your GSM telephone number.Transmission lines that are designed to carry electromagnetic waves whose wavelengths are shorter than or comparable to the length of the line [8].GSM compresses the data and then transfers it via a channel of two completely different user data sources, each in its own time frame.

GSM Module

GPS

The Global Positioning System (GPS) technology may be navigation system mainly based on satellites. To military, civilian and business users around the world, the system provides essential information, which is free of

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charge for anyone with GPS receivers. GPS acts on a receptor everywhere in the weather conditions to measure the 2nd location (Level and Length) and the track movements on the signal with a minimum of three satellites. It interfaces with Raspberry Pi via USB port, typically has 45mA and compatible protocol NMEA-0183 protocol. Theoperation of this varies from -40oC to 85oC, and the area unit of latitude and large circular values is derived from NMEA. work with the microcontroller of higher voltage more than 2.8V default. Apart from, the board also

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supports A-GPS technique which is called mobile positioning and gets the position by the mobile network. Thisfeature makes it a tracker module.

GPS Module

PI CAMERA

Raspberry pi camera module is a camera module which is used in this document. The camera module on the Raspberry Pi plug in to the CSI connector. A simple picture of the image or 1080p HD video recording at 30 fps. A dedicated 15-pin Camera Serial Interface (CSI), designed specifically for cameras interface, is connected to the Raspberry Pi through the camera module. The CSI bus provides high data rates and only transmits data of pixels to the BCM2835 processor.

Pi camera

VI .RESULT

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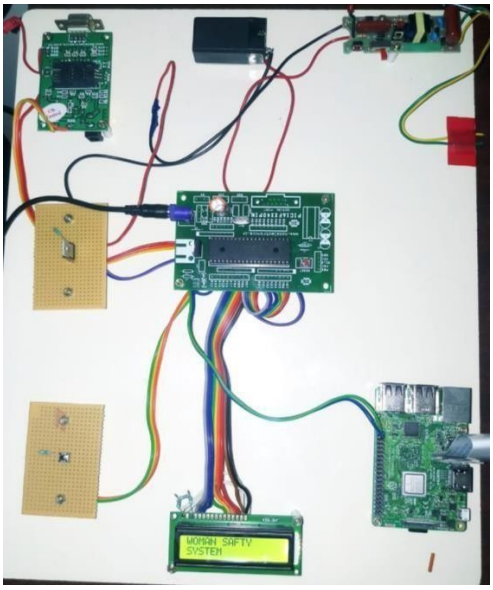

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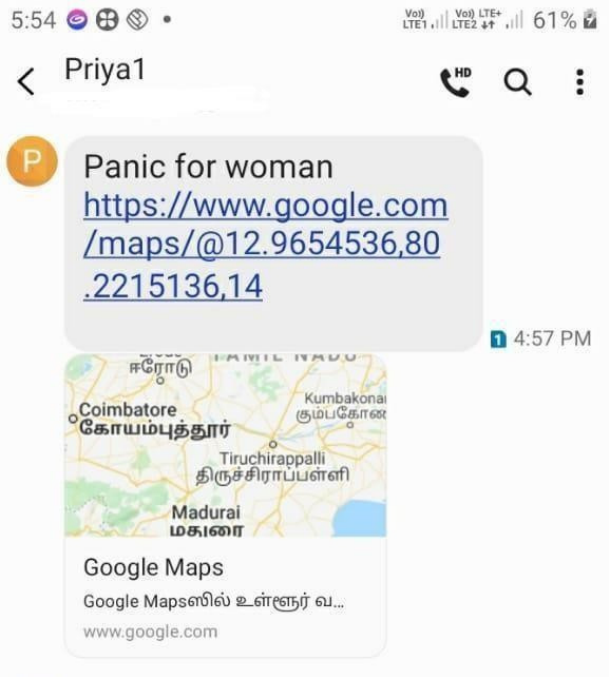
Hardware implementation



Location sending using GSM

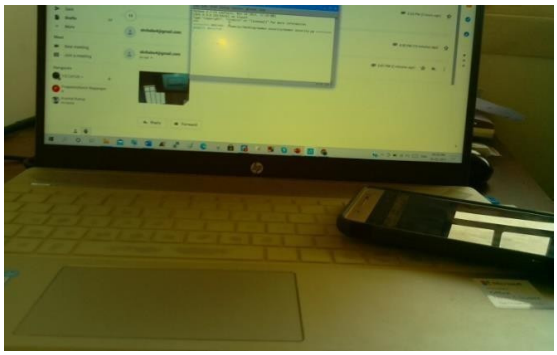


Image sending via email

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Output for shock

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VII. CONCLUSION

This type of idea plays an important role towards providing the fastest way of safety for women. The proposed design will deal with critical issues faced by women in the recent past and will help to solve them through using safety devices. This work was focused to help women, feel them safer and prevent the occurrence of rape, harassment and other dangerous situations. The project would aid in enhancing the safety and security of all despondent and badgered women and children.

It can be concluded that the system helps to support gender equality by providing a safe environment to women in the society, and allows them to work till late nights. Anyone before doing any crime against the women will be deterred and it helps to reduce the crime rate against the women.

VIII. REFERENCES

1. Dr. Sridhar Mandapati, Sravya Pamidi, Sriharitha Am- bit, “A Mobile Based Women Safety Application (I Safe Apps)”, IOSR Journal of Computer Engineering (IOSR- JCE): Jan – Feb. 2015.

2.Jijesh J. J, Suraj S, D. R. Bolla, Sridhar N K and Dinesh Prasanna A, "A method for the personal safety in a real scenario," 2016 International Conference on Computation System and Information Technology for Sustainable Solutions (CSITSS), Bangalore, 2016, pp. 440-444.

3. Madhura Mahajan, KTV Reddy, Manita Rajput “Design and Implementation of a Rescue System for Safety of Women”, Dept. of Electronics & Telecommunication Fr.C. Rodrigues Institute of Technology Vashi, Navi Mumbai, India, 2016 (IEEE).

4. Prof. Basavaraj Chougula, Archana Naik, Monika Monu, Priya Patil and Priyanka Das, “SMART GIRLS SECURITY SYSTEM”, International Journal of Application or Innovation in Engineering & Management (IJAIEM), Volume 3, Issue 4, April 2014, pp. 281-284.

5. Poonam Bhilare, Akshay Mohite, Dhanashri Kamble, Swapnil Makode and Rasika Kahane, “Women Employee Security System using GPS and GSM Based Vehicle Tracking”, an international journal for research in emerging science and technology, volume-2, issue-1, January-2015.