

# Design and Implementation of Women Safety System Based On IOT Technology

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**Abstract**–Today in the current overall circumstance, women are managing various issues like women provocation. We propose to have a device which is the consolidation of various devices, gear incorporates a wearable that ceaselessly talks with sensible phone that moves toward the web. This paper covers edifying bits of knowledge concerning the arrangement and execution.

The contraption includes a microcontroller(TTGO T-CALL ESP32 SIM800L(GSM and IOT module included)),GPS module(Neo-6M),Shock Generator circuit, Buzzer and Vibrating Sensor. In this undertaking, when a lady perceives risk she needs to hold tight the trigger of the gadget. Right when the contraption is impelled, it tracks the current locale utilizing GPS(Global Positioning System) and sends crisis message utilizing GSM(Global System for Mobile correspondence) to the enrolled flexible number and close by police base camp. IoT module is utilized to follow the district consistently and update into the site page. Deaden Generator circuit will pass on non-deadly electric shock in crisis conditions to see the attacker, signal is utilized as an alarm to alert the close by individuals so they might get a handle on that somebody is stuck between a rock and a hard place and vibrating sensor will send the continue to go district on the off chance that if the gadget gets deserted. The fundamental benefit of this undertaking is that this gadget can be passed on any spot since it is nearly nothing.

**Key Words:** TTGO-CALLESP32SIM800L,GPS, Vibration Sensor, Buzzer.

## I. INTRODUCTION:

Women wherever on the world are defying and shockingly presented to shady genuine incitement. Security for women is at this point a critical issue as the amount of infringement and incitement over women and young women is growing day – by - day. In this season of advancement, mobile phone is one of the gadgets that almost everyone like and uses to keep in touch with friends and family. All they need is a contraption that can be passed on any place with no issue.

This proposed project deals with a quick responding, cost confirmation structure for an individual and especially for women using which a woman in misery can call for help just with the press of a catch on this insightful gadget. Self Protection module for women prosperity with region following It can help women with propels that are introduced into a more modest device. It can help women with advancements that are introduced.

It is extraordinarily planned for women security and protection. It has a control button that will be used by women to instruct nearby police when they are in a tough situation. This system directly gets related with the satellite through GPS when impelled. By then the region is traveled through the GSM, it in like manner contains a daze framework to make non-lethal electric shock in emergency conditions to forestall the aggressor.

## II. LITERATUREREVIEW:

➤ Wireless IoT based Solution for Women Safety inRuralAreas:-This proposes a system, by making a far off association using IoT advancement with an advantageous device for making the concerned experts mindful of hinder any debacle. Women will be given a reference point device involving a help button. In the event that there ought to emerge an event of any emergency, the aide information will show up at the central stations and an alert will be set off at the unquestionable spots of the town.

➤ Smart Wearable Device for Women Safety UsingIOT:-This proposes a system, by making a far off association using IoT development with an advantageous device for making the concerned experts mindful of hinder any catastrophe. Women will be given a reference point contraption involving a help button. On the off chance that there ought to emerge an event of any emergency, the aide information will show up at the central stations and an alert will be set off at the obvious spots of the town.

- IOT Based Women Security: A Contemplation:-These devices can deliver shouting caution or produce electric shocks to the attacker.

### III. DESIGN METHODOLOGY:



Fig1: Block Diagram

In the above figure of square outline we can see various squares such a microcontroller (TTGO T-CALL ESP32 SIM800L(GSM and IOT module included)),GPS module(Neo-6M),Shock Generator circuit, Buzzer and Vibrating Sensor. The TTGO T-Call Esp32 Sim800L it has included IOT module and GSM.

#### 3.1PROJECT FLOW:

First switch on the force supply. At the point when crisis switch is squeezed. The GPS will follow the current area and send it as SMS to the enrolled versatile number through GSM. IOT module update the casualty area on Webpage. Hand-off will be on and the shock generator circuit is turned on by means of transfer. Ringer will be turned on.

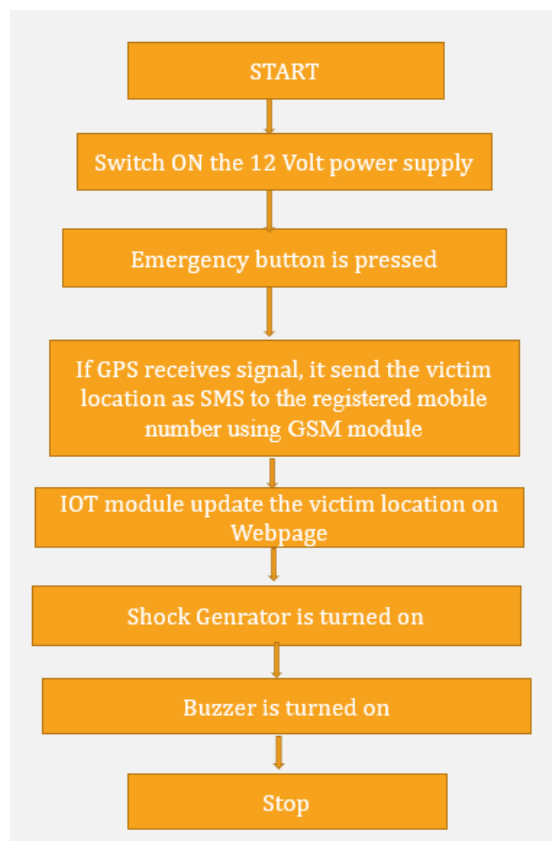


Fig2:Projectflow

#### IV. WORKING PRINCIPLE:

##### 4.1 CIRCUIT DIAGRAM:

From the fig given underneath we have construct the circuit outline on proteus programming. We are send the current area through the GSM to enlisted portable number and through IOT module to on a site page . In this circuit chart we have utilized GPS module to figuring the current scope and longitude upsides of the person in question. We have additionally utilized GSM module to send the area through the SMS to enlisted portable number. Hand-off is utilized to turn on the shock generator circuit. Ringer is on when crisis switch is squeezed.

We have given 5V force supply to the circuit.

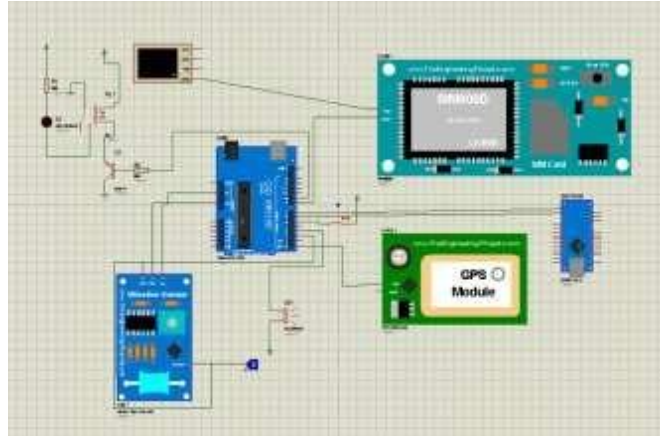


Fig3:CircuitDiagram

**TTGOT-CALLESP32SIM800L:-**The TTGO T-Call is new ESP32 Development board that joins a SIM800L GSM/GPRS module. In our venture it is utilized to send the SMS through the GSM to enrolled versatile number and IOT module to refresh the area on website page.

**GPS module(Neo-6M):-** In our venture we use GPS module to follow the casualty area. This module ascertain the current longitude and scope worth of the person in question.

**VibrationSensor:-**At the point when Circuit is surrendered vibration sensor distinguish the vibration and give the sign to the Controller to send the last area to the versatile number.

**Relay:-**A Relay is an electrically worked switch, in our venture it is utilized to turn on the shock generator circuit. We utilize 5v hand-off to turn on the shock generator circuit.



Fig4: RELAY

**Buzzer:-**Buzzer is utilized for to alarm individuals in the encompassing. A ringer is add sound highlights to our undertaking. A bell is a sound flagging gadget which might be piezoelectric or electromechanical.



## **V. SELECTION OF COMPONENTS:**

- ▶ TTGO-T-CALL-ESP32-SIM800L
  - ▶ Vibration Sensor
  - ▶ GPS Module
  - ▶ Buzzer
  - ▶ Emergency Switch
  - ▶ Relay
  - ▶ Resistors, Capacitors
  - ▶ Coppercladboard (PCB)
- Software used:
- ▶ Proteus (CKT DIAG)
  - ▶ EasyEDA (PCB LAYOUT)
  - ▶ Embedded C (ESP8266)
  - ▶ AVR C (MAIN PROG)

## **VI. APPLICATION:**

1. This system furthermore used for prosperity of youths.
2. This System Can be used for the security of more seasoned developed people.
3. It might be use for the prosperity of really tried people.
4. It can be use as a legitimate verification of bad behavior with cautious region information for arraignment.
5. It can be used for those people who are stayed at home alone.

## **VII. RESULT ANALYSIS:-**

This paper has introduced as far as anyone is concerned about Women wellbeing framework gadget present from one side of the planet to the other. The ideal result of the undertaking is accomplished according to the client necessity. We additionally found out about the working of different instruments. This incorporates the working of Microcontroller TTGO T-CALL ESP32 SIM800L, GPS Module, Vibration Sensor, Relay, Emergency Switch, Buzzer.

## **VIII. CONCLUSION:**

From this idea we reason that, the Design and Implementation Of Women Safety System Based On IOT Technology is in fact achievable to the people groups. It depends on TTGO T-CALL ESP32 SIM800L regulator offer support. It gives the right area of the person in question and is useful for ladies who is in the difficulty.

Execution of this framework is to have a sense of safety to ladies in any time anyplace.

## **REFERENCES:**

- [1]. A.H. ANSARI, BALSARF PRATIKSHA P, MAGHADE TEJAL R, YELMAME SNEHAL M, "WOMEN SECURITY SYSTEM USING GSM & GPS", INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH IN SCIENCE, ENGINEERING AND TECHNOLOGY", VOL.6, ISSUE 3, MARCH 2017.
- [2]. B.VIJAYLAKSHMI, RENUKA.S, POOJA CHENNUR, SHARANGOWDA.PATIL "SELF DEFENSE SYSTEM FOR WOMEN SAFETY WITH LOCATION TRACKING AND SMS ALERTING THROUGH GSM NETWORK". IJRET EISSN:2319-1163|PISSN:23217308.
- [3]. GEETHAPRATYUSHAMIRIYALA, P.V.V.N.D.P SUNIL, RAMYASREEYADLAPALLI,VASANTHA RAMA LAKSHMI PASAM,TEJAWIKONDAPALLI,ANUSHAMIRIYALA,"SMART INTELLIGENT SECURITY SYSTEM FOR WOMEN", INTERNATIONAL JOURNAL OF ELECTRONICS AND COMMUNICATION ENGINEERING & TECHNOLOGY(IJECET), VOLUME 7, ISSUE 2, MARCH-APRIL 2016.
- [4]. RASHATALAL HAMMED, OMAR ABDULWAHABEMOHAMAD, NICOLAETAPUS,"HEALTH

- MONITORING SYSTEM BASED ON WEARABLE SENSORS AND CLOUD PLATFORM”, 20TH INTERNATIONAL CONFERENCE ON SYSTEM THEORY, CONTROL AND COMPUTING (ICTSCC), 2016.
- [5]. S. VAHINI, N. VIJAYKUMAR, "Productive TRACKING FOR WOMEN SAFETY AND SECURITY USING IOT", INTERNATIONAL JOURNAL OF ADVANCED RESEARCH IN COMPUTER SCIENCE, VOLUME 8, NO.,9, NOVEMBER-DECEMBER 2017.
- [6]. TRUPTIRAJENDRASHIMPI, "Following AND SECURITY SYSTEM FOR WOMEN'S USING GPS and GSM, INTERNATIONAL RESEARCH JOURNAL OF ENGINEERING AND TECHNOLOGY (IRJET), VOLUME: 04 ISSUE:07 JULY-2017.
- [7]. AZHAGURAMYAA V R, SANGAMITHRA D, SINDHJA B, "RFID BASED SECURITY SYSTEM FOR WOMEN", INTERNATIONAL JOURNAL OF SCIENTIFIC and ENGINEERING RESEARCH VOLUME 8 ISSUE 5, MAY-2017.