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# WOMEN'S SAFETY MONITORING SYSTEM

C.GAYATHRI<sup>1</sup>, Dr. A.V. SENTHIL KUMAR<sup>2</sup>

<sup>1</sup>PG and Research Department of Computer Applications, Hindusthan College of Arts and Science,  
Coimbatore, India

[csgayathri997@gmail.com](mailto:csgayathri997@gmail.com)

<sup>2</sup>Professor and Director, PG and Research Department of Computer Applications, Hindusthan College of  
Arts and Science

Coimbatore, India

[avsenthilkumar@yahoo.com](mailto:avsenthilkumar@yahoo.com)

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**Abstract:** - Women's safety is a very important issue due to rising crimes against women these days. To help resolve this issue we propose a GPS based women's safety system that has dual security feature. This system can be turned on by a woman in case she even thinks she would be in trouble. It is useful because once an incident occurs with a woman she may or may not get the chance to press the emergency button. In a button press alerting system, in case a woman is hit on the head from behind, she may never get the chance to press panic button and no one will know she is in trouble. This device is to be turned on in advance by a woman in case she is walking on a lonely road or some dark alley or any remote area. In this case even if someone hits the woman or the woman falls down and get unconscious, she does not need to do anything, the system does not get her finger scan in 1 minute and it automatically starts the dual security.

**KEYWORDS:** Android, Product details.

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## 1. INTRODUCTION

Our system solves this problem. This device is to be turned on in advance by a woman in case she is walking on a lonely road or some dark alley or any remote area. Only the woman authenticated to the devices can start the system by fingerprint scan. Once started the devices requires the woman to constantly scan her finger on the system every 1 minute, else the system now sends her location to the authorized personnel number through SMS message as a security measure and also sounds a buzzer continuously so that nearby people may realize the situation. In this case even if someone

hits the woman or the woman falls down and get unconscious, she does not need to do anything, the system does not get her finger scan in 1 minute and it automatically starts the dual security feature. This device will prove to be very useful in saving lives as well as preventing atrocities against women.

The device uses GPS sensor along with a GSM modem, LCD display, LEDS and microcontroller based circuit to achieve this system.

## 2. MODULE DESCRIPTION

- Iot Device
- Pulse rate sensor
- Temperature sensor
- Node MCU
- Power Supply
- Buzzer
- LCD
- Button

## SOFTWARE SPECIFICATION

- Embedded C Compiler
- Arduino

## 2.1 MODULE DESCRIPTION

### Database

A database is simply a collection of used data just like phone book. MySQL database include such objects as tables, queries, forms, and more.

### Tables

In MySQL tables are collection of similar data. With all tables can be organized differently, and contain mostly different information- but they should all be in the same database file. For instance we may have a database file called video store. Containing tables named members, tapes, reservations and so on. These tables are stored in the same database file because they are often used together to create reports to help to fill out on screen forms.

### Relational database

MySQL is a relational database. Relational databases tools like access can help us manage information in three important ways.

- Reduce redundancy
- Facilitate the sharing of information
- Keep data accurate

## **Fields**

Fields are places in a table where we store individual chunks of information.

## **Primary key and other indexed fields**

MySQL use key fields and indexing to help speed many database operations. We can tell MySQL, which should be key fields, or MySQL can assign them automatically.

## **Controls and objects**

Queries are access objects us display, print and use our data. They can be things like field labels that we drag around when designing reports. Or they can be pictures, or titles for reports, or boxes containing the results of calculations.

## **Queries and dynasts**

Queries are request to information. When access responds with its list of data, that response constitutes a dynast. A dynamic set of data meeting our query criteria. Because of the way access is designed, dynasts are updated even after we have made our query.

## **Forms**

Forms are on screen arrangement that make it easy to enter and read data. We can also print the forms if we want to. We can design form our self, or let the access auto form feature.

## **Reports**

Reports are paper copies of dynasts. We can also print reports to disk, if we like. Access helps us to create the reports. There are even wizards for complex printouts.

## **Properties**

Properties are the specification we assigned to parts of our database design. We can define properties for fields, forms, controls and most other access objects.

# **3. EXISTING SYSTEM AND PROPOSED SYSTEM**

## **3.1 EXISTING SYSTEM**

There are few already created devices and products in market that are related to our research.

Following are the few examples of the existing systems/devices:-

- 1. ROAR (Athena)
- 2. Foot wear chip

## **DRAW BACKS OF EXISTING DEVICES**

There existed a chip that was stuck to the footwear and was used to send the alerts. The other research showed up with the smart band that was used to generate the SOS signals along with the personal health information and based on that the alert was generated. All the devices were used to sense the health parameters and positions of the body and accordingly, the alerts and SOS signals were sent to the contacts fed.

## **3.2 PROPOSED SYSTEM**

We have developed a prototype that is a smart device that can be worn by any individual on their wrists. The band is always active, the victim needs to tap on the screen twice when she feels the need of it or she feels someone is abusing her. After tapping on the button, the device will start sending the current latitudinal and longitudinal co-ordinates to the near ICE contacts and the police control room. All sensor reading continuously and send to web server via IOT device. In this system we use, Arduino UNO acts as main controller which continuously get data from sensor.

### **ADVANTAGES OF PROPOSED SYSTEM**

- By providing the communication between farmer and consumer the middle man inference can be reduced.
- This will results in great profit for the farmers and also consumers.
- Stock update and item request reports details are easily prepared.
- The burden of the manual work is reduced because of the computerization of the system.

## **4. SYSTEM INPUT OUTPUT IMPLEMENTATION**

### **4.1 INPUT DESIGN**

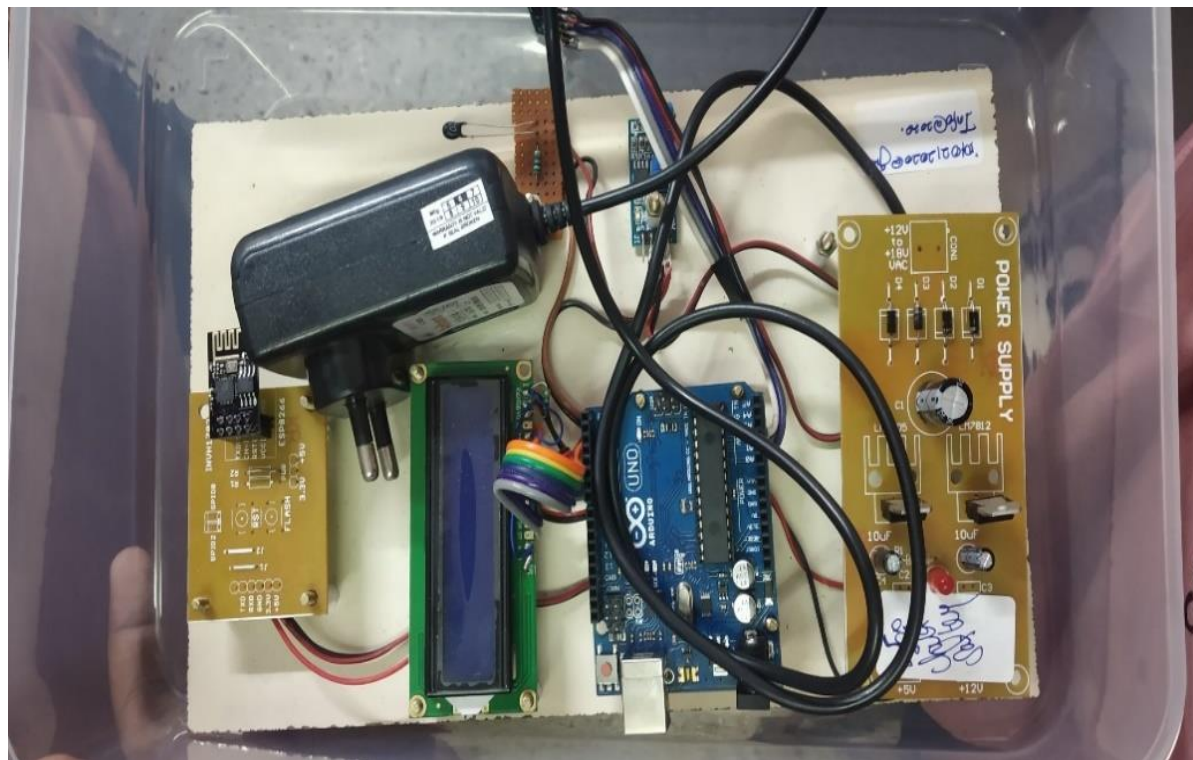
Input design is one of the most expensive phases of the operation of computerized system and is often the major problem of a system. A large number of problems with the system can usually be traced back to fault input design and method. Needless to say, therefore that the input data is the life block of a system and has to be analyzed and designed with the most consideration.

The decisions made during the input design are:

- To provide cost effective method of input.
- To achieve the highest possible level of accuracy.
- To ensure that input is understood by the user.

System analysts decide the following input design details like, what data item to input, what medium to use, how the data should be arranged or coded data items and transaction needing validations to detect errors and at last the dialogue to guide users in providing input. Input data of a system may not be necessarily a raw data captured in the system form scratch. These can also be

the output of another system or sub-system. The design of input covers all phases of input from the certain of initial data to actual entering the data to the system for processing.



**Figure 1 .Input System**

## 4.2 OUTPUT DESIGN

Output design generally refers to the results and information that are generated by the system. For many end-users, output is the main reason for developing the system and the basis on which they evaluate the usefulness of the application.

The objective of a system finds its shape in terms of output. The analysis of the objective of a system leads to determination of outputs. Outputs of a system can take various forms. The most common are reports, screens displays printed form, graphical drawing etc. the outputs vary in terms of their contents, frequency, timing and format. The users of the output, its purpose and sequence of details to be printed are all considered. When designing output, the system analyst must accomplish things like, to determine what information to be present, to decide whether to display or print the information and select the output medium to distribute the output to intended recipients. Internal outputs are those, whose destination is within the organization. It is to be carefully designed, as they are the user's main interface with the system. Interactive outputs are those, which the user uses in communication directly with the computer.

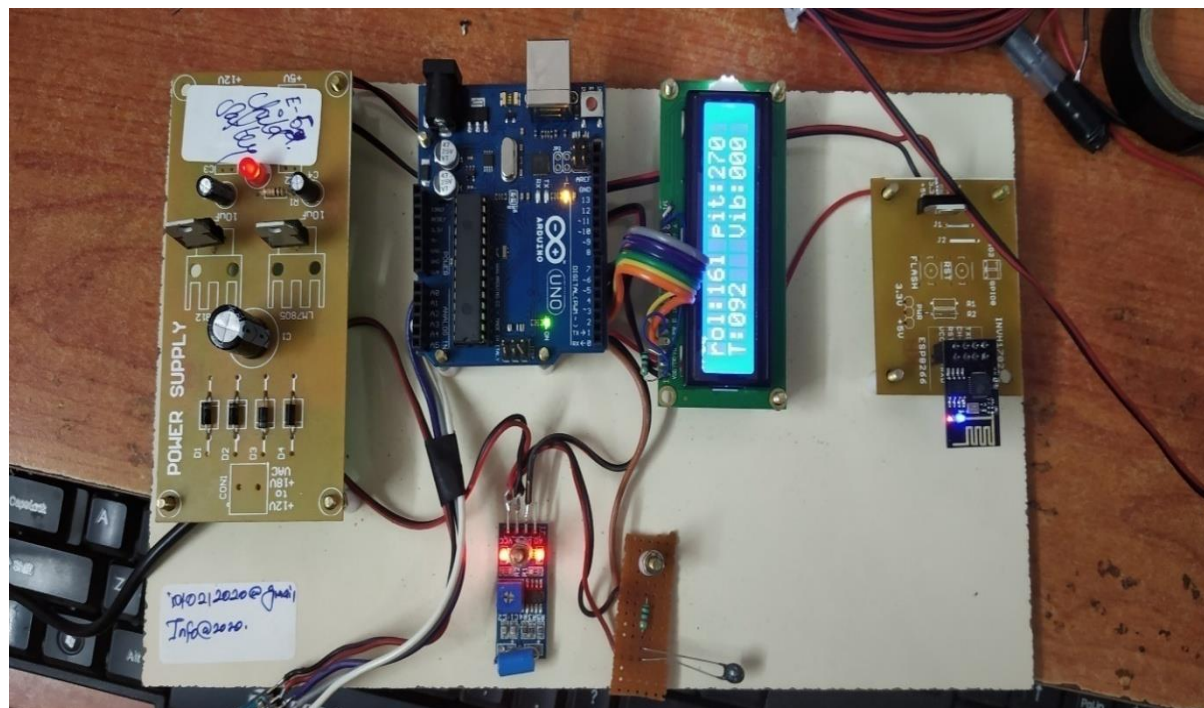


Figure 2 .Output system

## 5. CONCLUSION

The occurrence of threats to women leads to increase in number of security devices and applications. This research shows the various factors which have been used in applications and smart devices developed for women safety. In this paper, the various techniques used so far for the sake of women safety against the fraudulent people have been discussed. Also a brief explanation about the devices and components used in these techniques are also provided.

## REFERENCES

### Book Reference

- [1] Internet of things (<http://en.wikipedia.org/wiki/Internet-of-Things>)
- [2] CoiNet Technology solutions LLP, LPC2148 ARTIST Instruction manual
- [3] Digital.csic.es/bitstream/10261/127788/7/D-C-%20Arduino%20uno
- [4] ESP8266 802.11bgn Smart Device/Expressifsystems/October 2013
- [5] Nishant Bhardwaj and Nitish Aggarwal “Design and Development of - Suraksha”i IEEE International Journal of Information & Computation Technology, Volume 4,
- [6] Thingspeak ([www.Thingspeak.co.in](http://www.Thingspeak.co.in))
- [7] Dantu Sai Prashanth, Gautam Patel, Dr.B.Bharathi “Research and Development of a mobile based child safety application with realtime Database and data-stream network” IEEE International Conference on circuits power And computing technologies, ISBN 978-1- 5090-4967- 7, 2018.