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Prevention of theft

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ABSTRACT

This system contains PIR sensors to detect intruders (obstacle), GSM Module for communicating with user's Phone and automatic air freshener (filled with Diethyl Ether) for making the intruder faint. The whole system is controlled by Arduino. The system collects all information from PIR sensors, the process that information and sends call and SMS to corresponding GSM mobile phone number by using a GSM modem and gas will be released from the automatic air freshener. If PIR sensors detect any obstacle in a covered area then a signal send to Arduino, which activates GSM, make a call and SMS to the homeowner mobile phone using the GSM Module and from automatic air freshener a gas (Diethyl Ether) will be released to faint the intruder(20 Minutes approximately).

Keywords— *Arduino, PIR sensor, GSM module 900A, Diethyl ether*

1. INTRODUCTION

Securing a home is an indispensable task because of the burglary incidents. The conventional design of home security systems typically monitors only the property and lacks physical control aspects of the house itself. In today's context, it is common to leave the house unattended as people are busy catching up with their tight daily schedule. Therefore, most people have chosen the home security system as the most reliable way to protect their home. All the body generates some heat energy in the form of infrared which is invisible to human eyes. But, it can be detected by the electronic sensor.

PIR sensors are widely applied in wireless residential security systems, home alarms systems, and many more security circuits as motion detector sensors. A typical PIR sensor detects the Infrared Red (IR) waves from the human body and so it is also known as 'human sensor'. This system is very simple. And the working of this system is very simple as well. In this system PIR sensor used for sensing and Arduino is used for controlling purpose, a GSM module which is used for SMS and calling purpose and automatic air freshener used for releasing fainting gas (Diethyl Ether). When anybody comes in a range of PIR sensor, the sensor sends an analog (logic) signal to Arduino and it takes control and performs a given task.

2. HARDWARE USED

- Arduino nano.
- GSM Module 900A.
- PIR Sensor.
- Automatic air freshener (Diethyl ether).
- Bread Board.
- LED.

3. SOFTWARE USED

- Arduino 1.8.7

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4. EXISTING SYSTEM

GSM Based Home Security System Using PIR Sensor: This system contains PIR sensors to detect an obstacle, GSM Module for communicating with GSM Phone. The whole system is controlled by the open-source microcontroller. The system collects all information from PIR sensors, a process that information and sends the call to the corresponding GSM mobile phone number by using a GSM modem. If PIR sensors detect any obstacle in the covered area then a signal sent to the microcontroller, the controller activates GSM and make a call and SMS to the homeowner mobile phone using the GSM Module.

4.1 Disadvantages of existing system

- Security level is low because it can only detect the intruders.
- Prevention technique is inefficient because through this system intruders can't be stopped.
- It lacks in Accuracy and Efficiency.

5. PROPOSED SYSTEM

The main objective is to provide a solution for burglary incidents so, in this system contains PIR sensors to detect intruders(obstacle), GSM Module for communicating with user's Phone and automatic air freshener(filled with Diethyl Ether) for making the intruder faint. The whole system is controlled by Arduino. The system collects all information from PIR sensors, a process that information and sends call and SMS to corresponding GSM mobile phone number by using a GSM modem and gas will be released from the automatic air freshener. If PIR sensors detect any obstacle in the covered area then a signal send to Arduino, which activates GSM, make a call and SMS to the homeowner mobile phone using the GSM Module and from automatic air freshener a gas (Diethyl Ether) will be released to faint the intruder(20 Minutes approx).

5.1 Advantages of proposed system

- The security level of this system is much better than the Existing system because in this Intruders can be stopped.
- Low power consumption.
- The Efficiency of the system is more because Arduino is used and it can stop the intruders being escaped.

6. BLOCK DIAGRAM

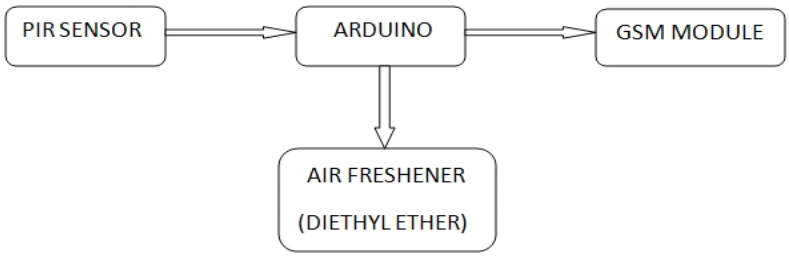


Fig. 1: Block diagram of the proposed system

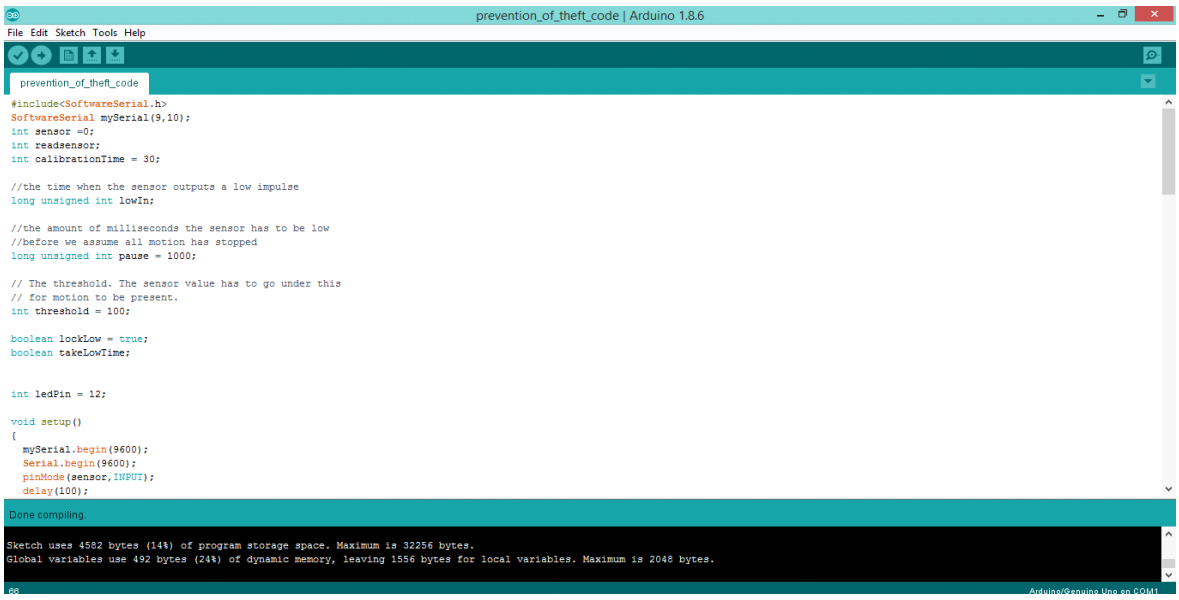
7. MODULES

7.1 Circuit design: This module includes the creation of circuit design between the Arduino, etc ie, with Hardware components.

7.2 Enabling connection: This module includes the process of making the connection between the components using the circuit.

7.3 Enabling its functionalities: This module includes the process getting input from the sensors and producing the desired output mechanism with the help of a software system (Including Testing).

7.4 Source code: Embedded C language is used.



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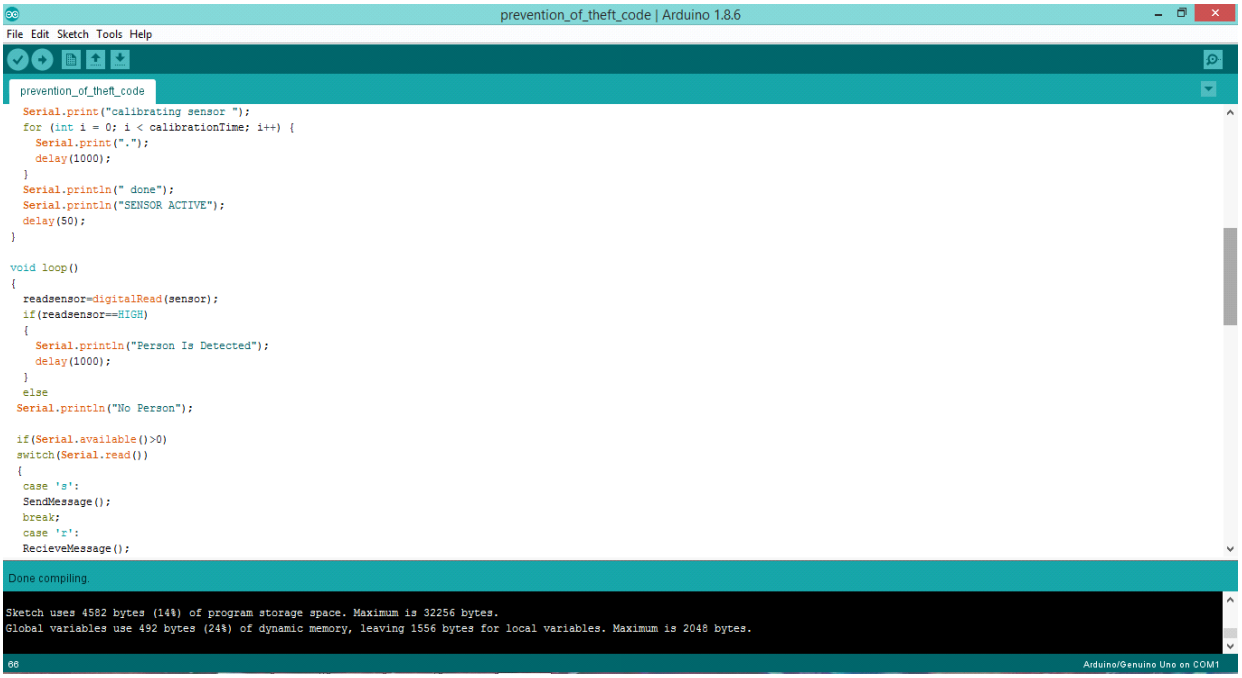

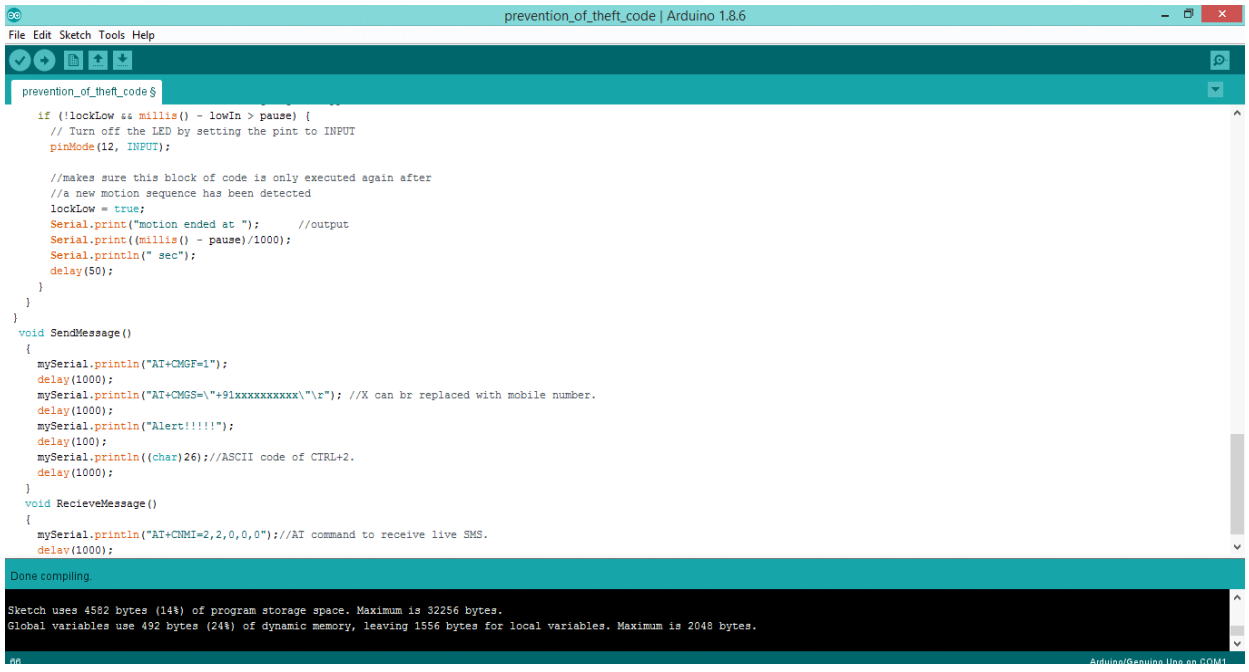

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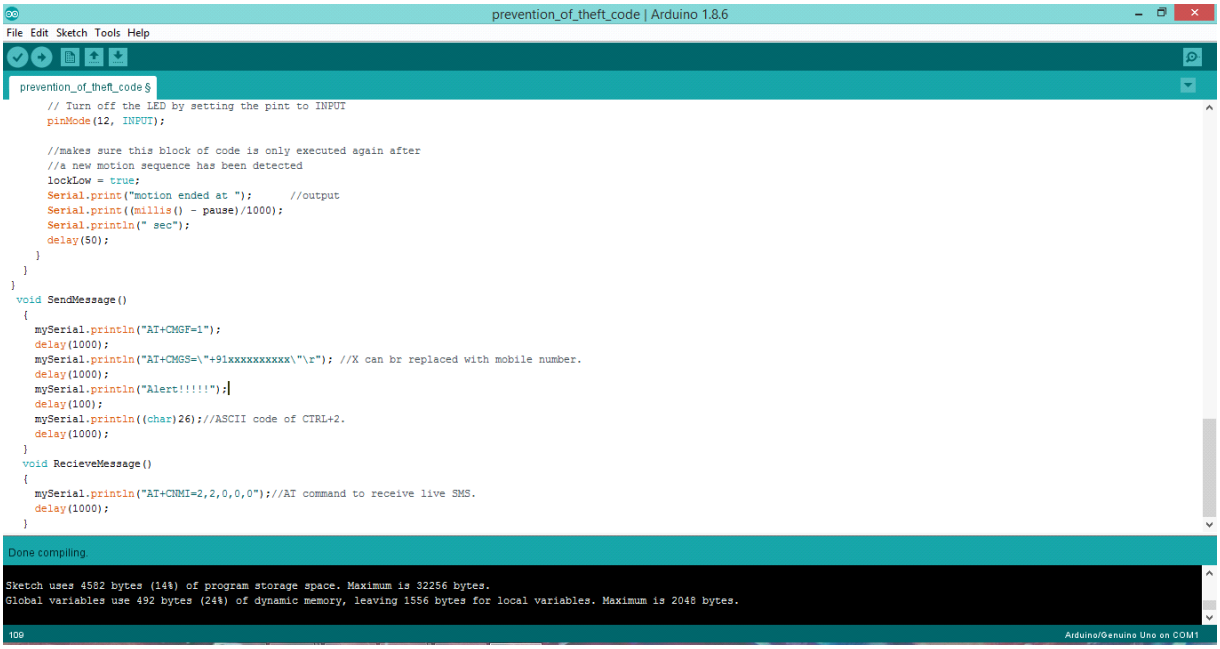

Fig. 2: The source code for the proposed system

8. CONCLUSION

From this project we conclude that the method of using in the prevention of burglary incidents is efficient and accurate, technologically feasible, thus reduces the burglary incidents (robbery-crime).

9. REFERENCES

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