VEHICLE THEFT CONTROL SYSTEM USING MSP430G2553

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ABSTRACT

KEYWORDS:;

MSP430G2553
Controller,GSM,security.

With the advancements in the Technology rapid use of automobiles has become a crucial part of our day to day life. Not only the developments in the technology increased parllely the hazards are also in large number with respect to security and maintenance issues of the vehicles. So as to overcome these issues this paper suggests a theft controller system and describes its specific working methods.

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1. INTRODUCTION TO ANTI THEFT VEHICLE CONTROL SYSTEM:

In today's world almost every common man owns a vehicle. Vehicle theft is a common issue which everyone faces in insecure parking places. This is a major problem which seemingly little being done about it. Several underlying problems have led to increase in vehicle theft, to the lack of vehicle parking structures. The safety of

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the public vehicle is extremely essential. Current security systems have certain vulnerabilities.

GSM technology is employed to make vehicle theft almost impossible. Global System of mobile communication is a globally accepted standard for digital cellular communication. Owner of the vehicle uses Subscriber Identity Module (SIM) inserted within his cell phone to send messages to GSM modem which is a part of vehicle theft prevention system that is attached to vehicle.

The challenges of successful vehicle monitoring and controlling systems involve the efficient and specific designs. The applications of car engine status monitoring and control system can be widely found in the fields of transporting environments. The main application of the system is to monitor and control the car engine to which the sensors are connected, giving the information about the car engine. Car engine status monitoring and control system is also a process in which it is aimed to obtain the best safety for any vehicle more accurately and effectively.

RESEARCH METHOD

There are many existing models that execute Vehicle theft control system. The literature survey constitutes of the existing models that show the extent of implementation and the scope of the present models that incorporates.

1. Theft control system for automobiles using GSM and GPS, Vasuri Kavya , D.Koteshswar rao, Volume VII /Issue 3 / OCT 2016.
   Remark: This complete system is designed taking in consideration the low range vehicles to provide them extreme security.
2. GSM Based Vehicle Theft Control System, BeulahPW Ruby, Volume 7, Issue 4, April 2018, ISSN: 2278-7798
   Remark: This system could not prove to provide complete security and accessibility of the vehicle in case of theft.
3. Embedded Technology for vehicle cabin safety Monitoring and Alerating system, V. Ramya, B.Palaniappan,Vol.2,No.2,April-2012.
   Remark: This prototype can also be used at Home; Educational and working institutions for monitoring the indoor air quality which intern enhance the quality of working environment.
4. Adaptive Flow Orientation Based Feature Extraction in Finger prints Images. N.Ratha, S.Chen,A.K.Jain Pattern Recognition, Vol.28,PP.1657-1672,November 1995.

Remark: They have proposed a new method for robust feature extraction from fingerprint images based on ridge flow orientation.

4. Anti-theft Control system design using Embedded system. Vinoth kumarSadagopan, IEEE 2011 Remark: Modest attempt is made to bring in a low cost and effective vehicle theft control system.

5. Advanced Vehicle Security System with Theft Control and Accident Notification. Prof.R.P. Chaudhari, Vol. 5, Issue 7,July2016.
   Remark: In case of car theft, owner gives a missed call to the GSM module. GSM module will send the message and location to the recipient mobile number.

6. Anti-theft Tracking System for Automobiles(Auto GSM), G.S. Prasanth Ganesh B. BalajiT.A. Srinivasa Varadhan, 2011 IEEE International Conference on Anti-Counter fieting, Security and Identification, Xiamen, 2011,pp.17-19.
   Remark: A modest effort in improving the anti-theft security system for vehicles has been done.

Project Design

The implementation of the project design can be divided in two parts.

- Hardware implementation

- Firmware implementation

Testing the schematic design over the breadboard using the various IC's to find if the design meets the objective, carrying out the PCB layout of the schematic tested on breadboard, finally preparing the board and testing the designed hardware.
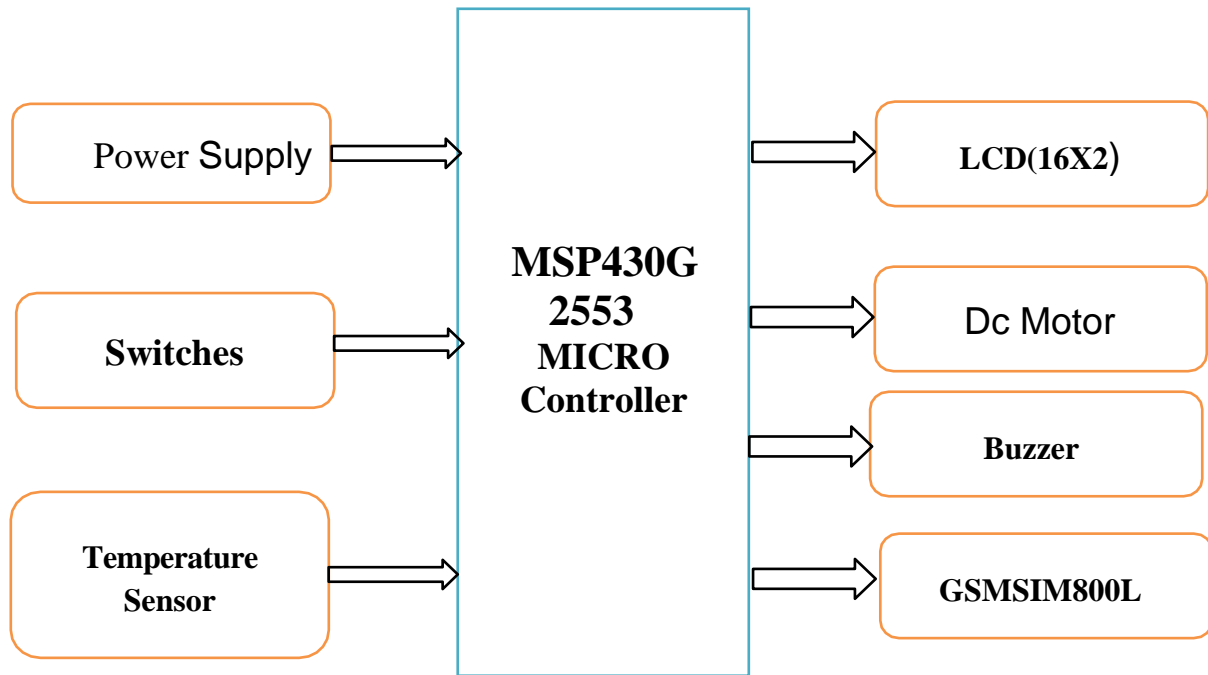
Fig: Block diagram of vehicle theft control system

The firmware part deals in programming the microcontroller. In the present work, we have used the ENERGIA software development tool to write and compile the source code, which is written in the C language. The project design and principle are explained in this chapter using the block diagram and circuit diagram. The block diagram discusses about the required components of the design.

Firmware Implementation

Installation:

Step-by-step instructions for setting up the Energia IDE and running your first Sketch on a Texas Instruments LaunchPad board.
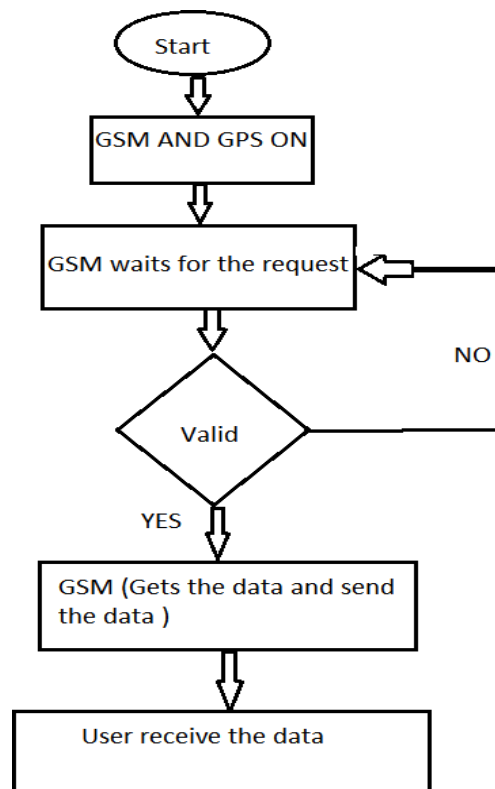
- Windows
- Mac OS X
- Linux

Figure: Program flow chart of the tracking system

3.RESULTS AND ANALYSIS

A modest effort in improving the anti-theft security system for vehicles has been done successfully. Hence, this helps in improving the safety and the accessibility of the vehicle. This project is designed by using MSP430 controller along with temperature sensor, GSM module, DC motor, LCD. GSM module's working was tested using the hyper terminal software. Program was compiled using Energia compiler. All these modules were integrated and tested again for different input conditions. Results obtained were as expected
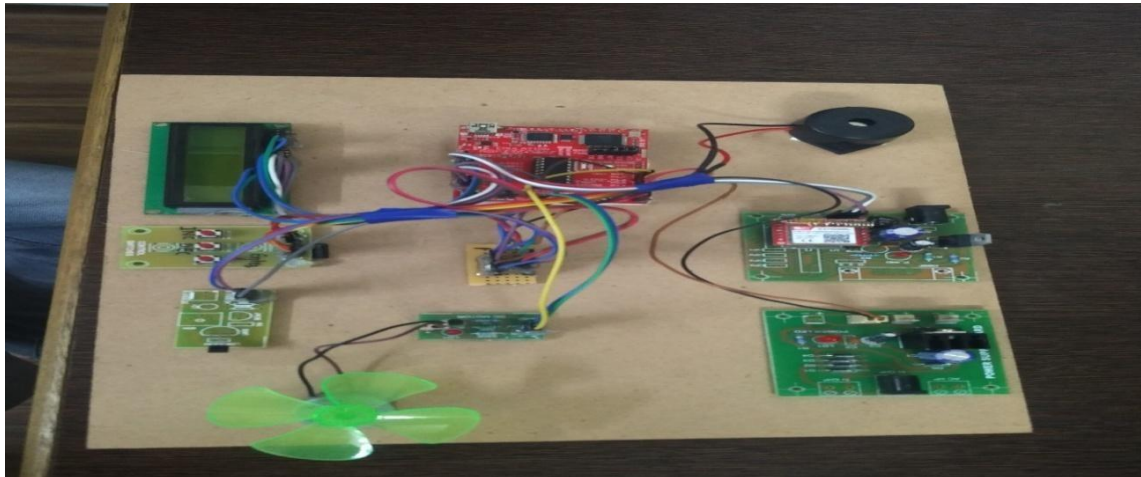

Fig: Kit Photo

Fig: Result

The one time password show in the figure which is used to start the vehicle after entering the pin**.** The value of car engine temperature is continuously sensed by the sensor LM35. When the engine temperature is greater than 45degree (when the thresold value is set to 45degree) Vehicle stops automatically.

4. CONCLUSION

The proposed system is faster and efficient vehicle security system. The demand for auto-guard systems for protecting the vehicle from theft and loss is increasing day by day. The proposed system will be an intellectual system to meet this demand.

5. REFERENCES

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