PASSWORD BASED SECURITY LOCK SYSTEM

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ABSTRACT

The necessity of a low cost electronic home security system designed in co-ordination with other security measures is always there in our society to reduce the risk of home intrusion. Keeping this problem in mind, we are working on a project on automatic password based door lock system. We want to utilize the electronic technology to build an integrated and fully customized home security system at a reasonable cost. We hope this project will be useful in keeping thieves, dacoits and other sort of dangers at bay.

KEYWORD:Motor, Microcontroller, LCD, Keypad

1. INTRODUCTION

In day to day life security of any object or place is plays a major role. This project has considered about that and created a secure access for a door which needs a password to open the door. Using keypad it enters a password to the system and if it is entered correctly door is open by motor which is used to rotate the handle of the door lock. It will give three attempts to enter the password when it is entered incorrectly at the first time. Some features like adding new users and changing old password are configure by the keypad. LCD module is used to display messages to the user.Now a day's most of the systems are automated in order to face new challenges and present day requirements to achieve good results. Automated systems have less manual operations, so that the flexibility, reliabilities are high and accurate. Hence every field prefers automated control systems, especially in the field of electronics.

The goal of the project is to develop a unique system through mobile technology which can control various units of the houses, industries, and also provides a security system. The various appliances can be utilized by managing them remotely by using GSM technology, which enables the user to remotely control the operations of the appliances. Just by pressing keypad of remote telephone the user can perform ON/OFF operations on the appliances.The project also exhibits low cost home security system which is widely employed in our daily life. This system is designed to prevent the opening of the door by unauthorized persons. The structure of home security system contains a matrix key pad, the door latch opener and a GSM modem for the security dial up interfaced to the microcontroller. The keypad interfaced to the controller is used as the password entry system to open/close the door. As soon as the user enters the correct password, the door lock opens. If the password entered is incorrect, then a security alarm is rung and at the same time it enables the security dial-up through the

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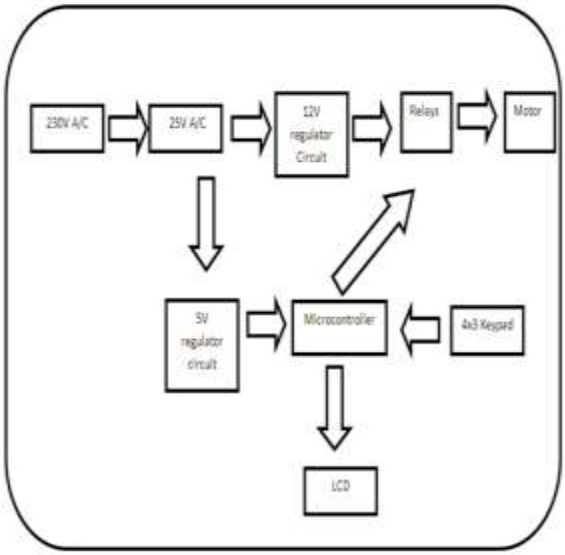
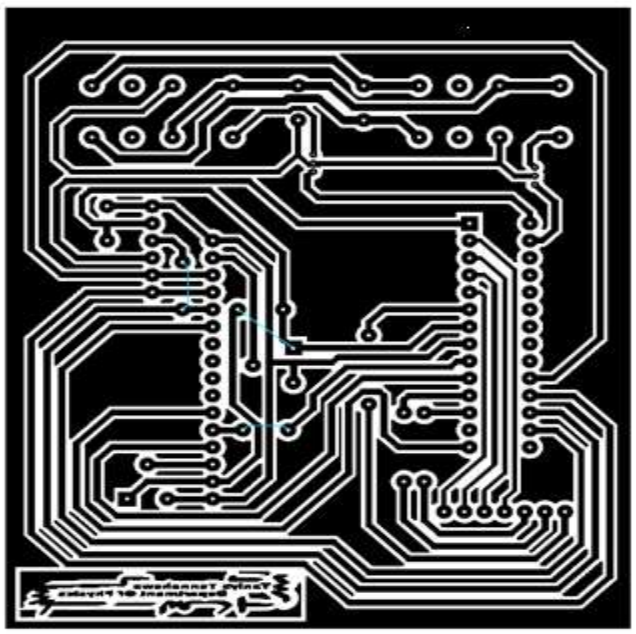
GSM modem interfaced to the microcontroller. The GSM modemuses the UART interface to the controller. When the unauthorized person gives an invalid password then the controller uses the modem to inform the owner.

2. MATERIALS AND METHODS

Basically to construct this device it is used as Tmega 8 microcontroller, 4×3 number keypad, 16×2 characterLCD module, vehicle center lock motor and power



BLOCK DIAGRAM



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3.SOFTWARE DESIGN :

The basic concept of software design is it should scan the pressed key values by the microcontroller and according to that signal change of the port D it return which key has pressed and check whether that entered 4 digit password and stored password in the EEPROM are matching. If they will match motor is activated and door is opened.

4.RESULT AND ANALYSIS

- When it is entered a 4 digit password by the user it will display on LCD as "****". Therefore anyone else can't see what the user enters.
- If it is the correct password, LCD displaying a message "Well come" and the door will be opened.
- After 1minuts time door is locked automatically.
- If it is entered password incorrectly LCD displaying "password error"
- If it is a wrong password user received another 3attempts to enter the correct one. If he couldn't enter password correctly by these attempts he have to wait 3 minutes time more to re logged in to the system.
- After opening the door if user wants to change his password, after pressing "0" key and giving user id user can change his password.
- If user wants to add more people to the system after opening the door pressing "#" key, user can add more users. System will give user id to each password.
- 10 users can be added to this system.
- When it make any mistake while entering the password user can delete it by using "*" k

5. CONCLUSION

A House Security System by using Artificial Neural Network can be developed successfully by the above suggested methods. It is known that as the number of hidden neurons increases, the training time and number of epochs to train the network increases proportionately. This problem was removed by embedding a local adaptive technique, Resilience BPN, for which the training time is very short. We proved that BPN is a better method as compared to cryptography and has been employed in our problem to recall the relationship of User ID and Password that had been registered, as ANN acts as a "brain" in itself once trained. Hence, it could be used to replace the verification table used in the conventional system. We also witnessed how MATLAB can be effectively used to implement the security system as it has simpler training, adaptation and simulation methods. There is a socket in the modem to insert the sim card to use the GSM network. The destination mobile number and the password are stored in the EEPROM of the controller.

6.REFERANCE

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