

For more Project details visit:

<http://www.projectsof8051.com/password-based-door-locking-system/>

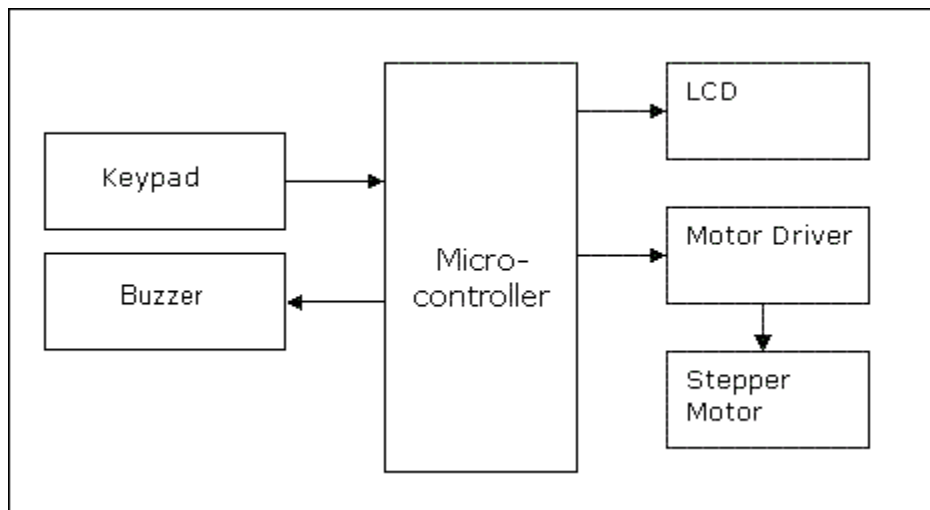
| Code | Project Title |
|------|-----------------------------|
| 1105 | Password Based Door Locking |

Synopsis for Password Based Door Locking System

1. Introduction

Many times we forgot to carry the key of our home. Or sometimes we come out of our home and door latch closes by mistake. In these cases it is really difficult to get inside the house. This project is designed to solve this purpose. Main concept behind this project is of a door-latch opening using a password entered through keypad. As well as turning on the Buzzer when password is entered wrong for multiple times. User can change this password anytime he/she wish using a keypad.

2. Block Diagram



3. Block Diagram Description

It mainly consists of following blocks

1. Microcontroller: This is the CPU (central processing unit) of our project. We are going to use a microcontroller of 8051 family. The various functions of microcontroller are like:

I. Reading the digital input from Keypad

II. Sending this data to LCD so that the person operating this project should read the password

III. Sensing the password using keypad and to check whether it is a correct password or a wrong password and rotate the stepper motor if the password entered is a correct password.

IV. Sending the data to the computer using serial port. This data consist of the status of entered password (Correct/wrong)

2. LCD: We are going to use 16x2 alphanumeric Liquid Crystal Display (LCD) which means it can display alphabets along with numbers on 2 lines each containing 16 characters.

3. Buzzer: We are going to use a buzzer to indicate the wrong password to open the door.

4. Keypad: User will enter the password using the keypad. Various keys of keypad are as following,

I. 0 to 9

II. Enter

III. Escape

Application and Advantage:

1. Can be used in various rooms like seminar hall, conference room, and study rooms in college.
2. The project (password detector) can be used to automate the door locking process, so the user need not to carry the door lock keys along with him, he can just remember the password and use it later to open the door

Future Development:

1. We can send this data to a remote location using mobile or internet
2. We can implement other related modules like fire sensor, wind sensor.