

PASSWORD BASED DOOR LOCKING

DESCRIPTION:

This project is used to develop the security system for opening and closing the door using password system. Security is prime concern in our day-to-day life. Everyone wants to be as much as secure as to be possible. An access control systems forms a vital link in a security chain. The micro controller based digital lock presented here is an access control system that allows only authorized persons to access a restricted area. This system is best suitable for corporate offices, ATMs and home security.

The main idea is to provide security for every home by implementing security system for doors using microcontroller. This project uses automated password system for opening and closing door. In this project we are going to use keypad to enter the security lock. Here microcontroller place major role which is nothing but decision of door opening. Here predefined password is stored in microcontroller. Microcontroller takes password inputs form keypad input and when input matches with the stored password the DC motor is operated for a limited time to unlatch the solenoid-operated lock so the door can be open. At the end of preset delay, the DC gear motor is operated in reverse direction and the door gets locked again. When we enter a wrong password through keypad then a message stating that it is a “wrong password” will be displayed on LCD and buzzer will be on.

This project uses regulated 5V, 500mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Full wave bridge rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Micro controller : AT89x series

Crystal : 11.0592 MHz

LCD : HD44780

Keypad

Buzzer

L293D

DC Motor

Power supply

Transformer : 12V step down

Filter : 1000uf/25V

Voltage Regulator : 7805, 7812

SOFTWARE:

Keil IDE

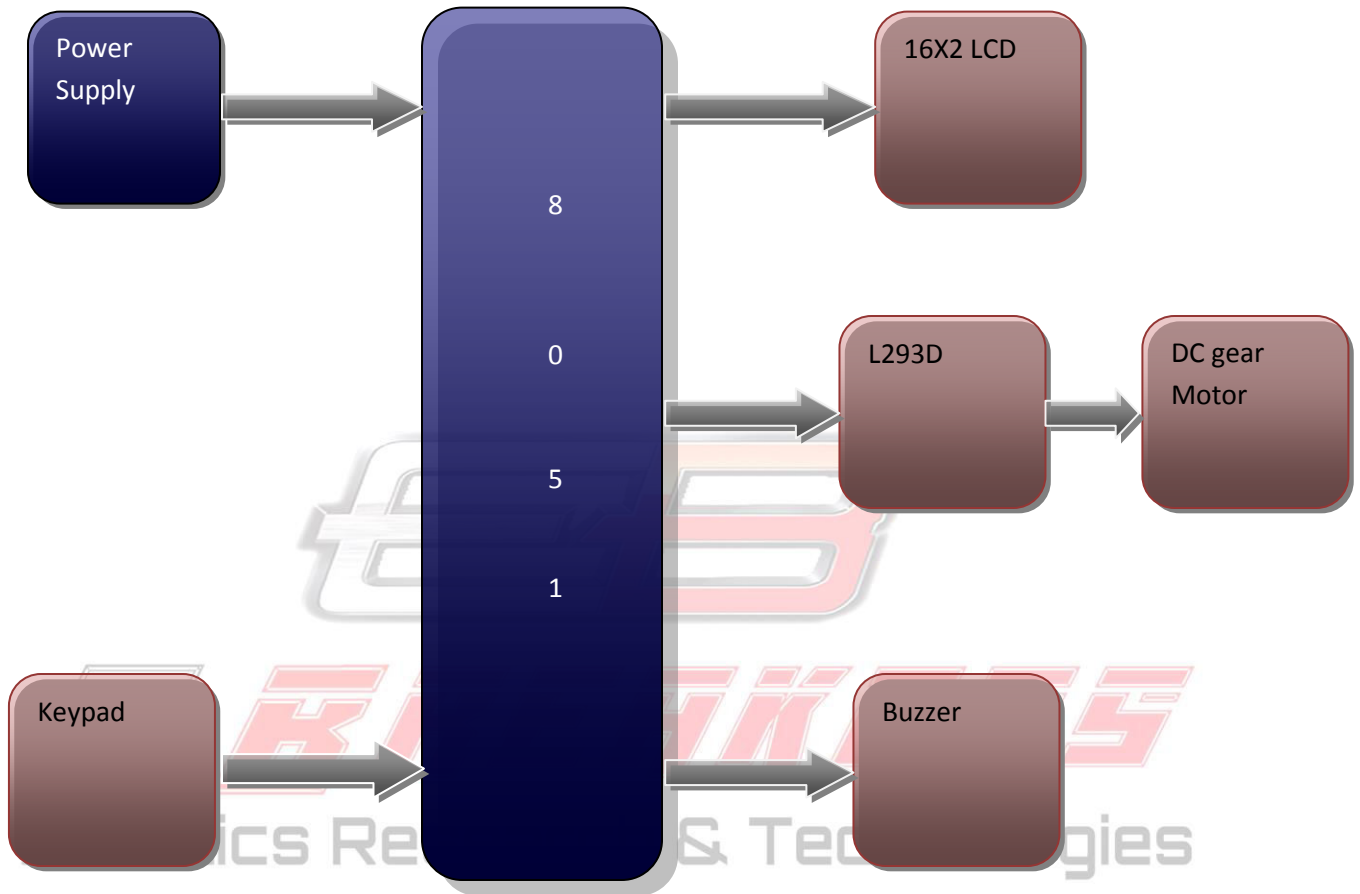
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Proteus

APPLICATIONS:

- Industrial applications
- House hold applications
- Business applications

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



