RFID BASED GATE OPENING ALONG WITH PASSWORD PROTECTION

AIM:

Design and development of RFID based gate opening along with password protection.

PURPOSE:

Anyone can access manual gates without permission. In Restricted area, manual monitor need for authorization. Here we designed gate automation without manual intervention. Also it has two level security RFID and password. Here we propose solution like RFID based gate opening along with password protection.

DESCRIPTION:

RFID reader (EM-18) Interfaced to Arduino through UART interfaces. 4X4 matrix keypad connected to Arduino digital pins. L293d connected to Arduino to control gate open and close.

WORKING:

Initially user has to swipe RFID card, if card is correct then it asks password. Password need to enter in keypad. If password is correct then gate will be open and close after some time. If wrong RFID access or wrong password entered then buzzer will be ON. All this information displayed on 16X2 LCD display.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
RFID reader	:	EM-18
Motor Driver	:	L293D
Door	:	Sliding Door
Keypad	:	4X4 Matrix Keypad
Power Source	:	12v 2 amp Adaptor

SOFTWARE:

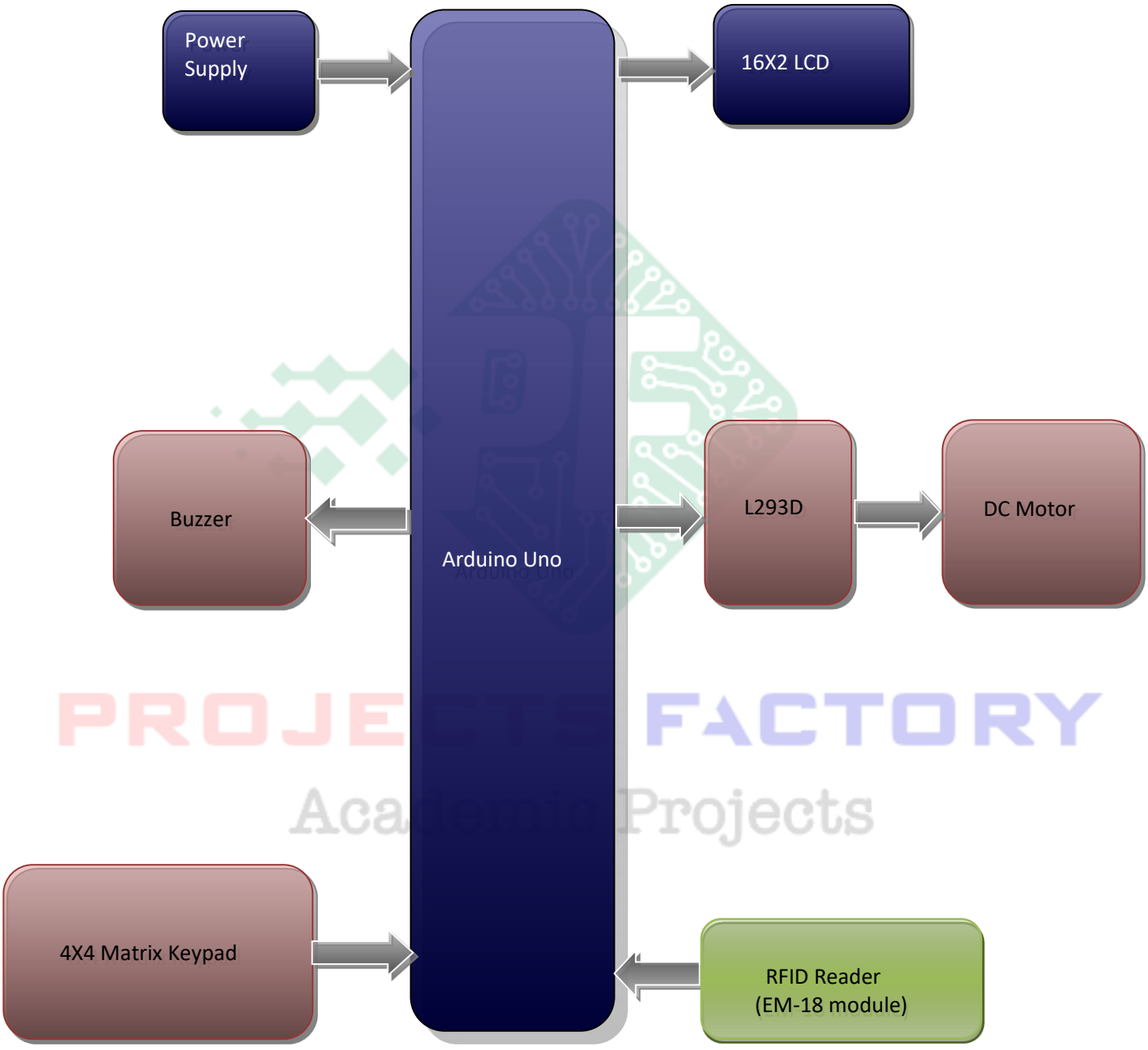
Arduino IDE

Proteus based circuit diagram

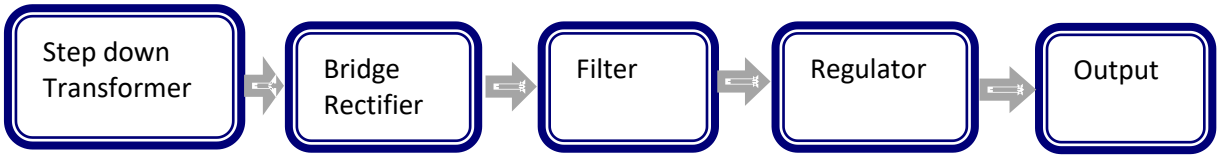
APPLICATIONS:

- Security Access
- Automated Gate Control

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERD:

- We have covered RFID (EM-18) module interfacing
- 4x4 matrix keypad interface
- DC gear motor and L293D