

FINGER PRINT BASED REAL TIME DOOR LOCK

AIM:

Design and Development of Fingerprint based real time door lock.

PURPOSE:

Biometric is safest security system around the world. Cloning and duplicating is very difficult and expensive. Duplicating finger prints is criminal case according to judicial law. So one can go with finger print based access when they want any kind of accessing systems. Here we want to develop real time door lock access with fingerprint security. This system can be implemented in real time applications like door lock. Here we propose finger print based real time door lock using Arduino.

DESCRIPTION:

This project includes Finger print module (R307-biometric), which is connected to Arduino through UART interface. Magnetic door lock controlled by Relay which is connected to Arduino digital pin. Two buttons connected to Arduino digital pin.

WORKING:

Here we can unlock door with finger print. Initially we have to store finger prints in module. To do this we have to press enroll button and need to keep finger on module. Module will enroll finger prints. While unlock door user need to keep finger on module and need to press identification button. If finger print detected from enrolls table then lock will be open otherwise buzzer will be ON. All this information displaying on 16X2 LCD display.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
Finger Print Module	:	Bio-metric Module (R307)
H-bridge IC	:	L293D
Ignition Key	:	Dc Connected three pole
Motor	:	12V DC
Buzzer	:	5vDC
Power Source	:	12v 2 amp Adaptor

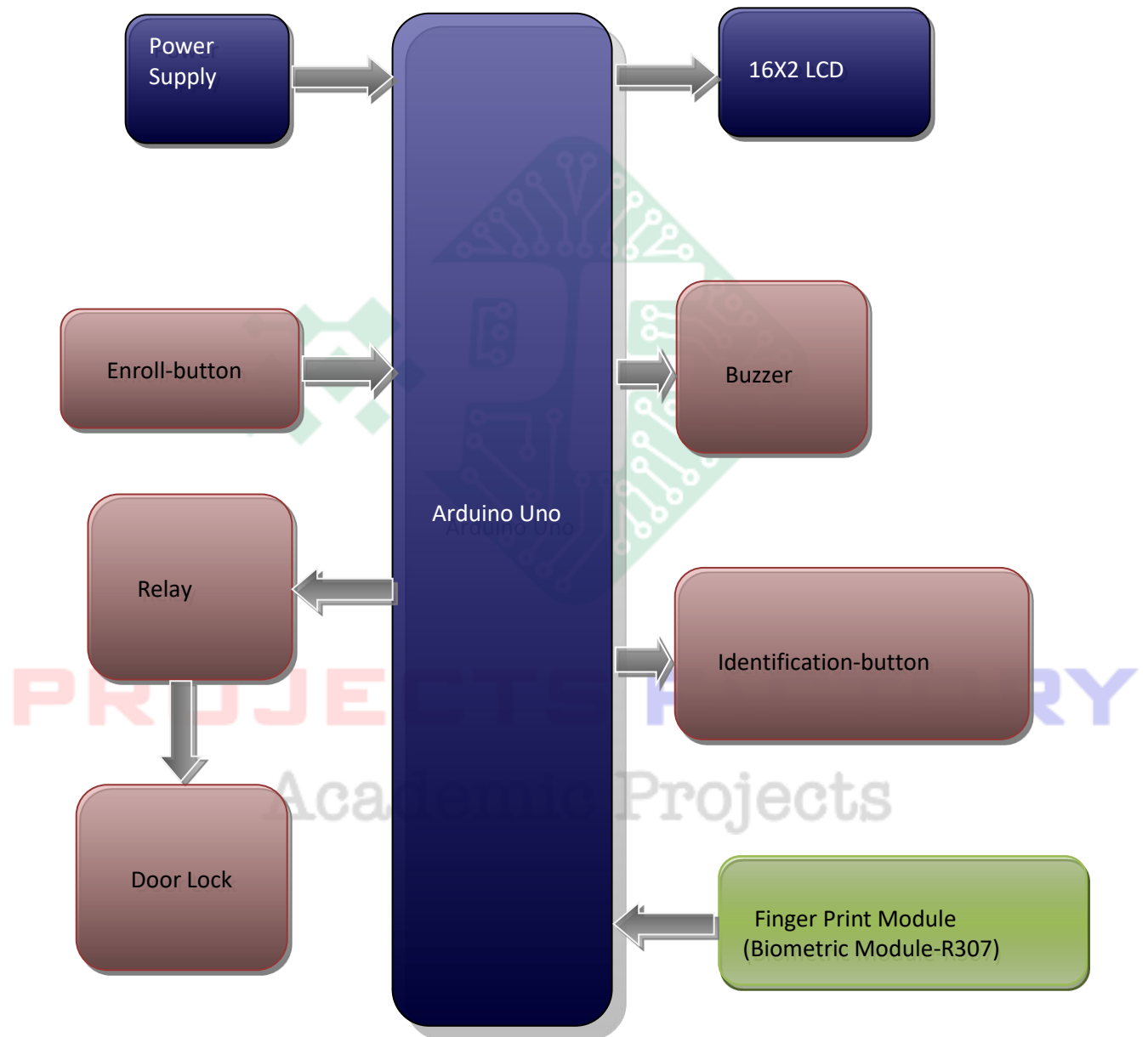
SOFTWARE:

Arduino IDE
Proteus based circuit diagram

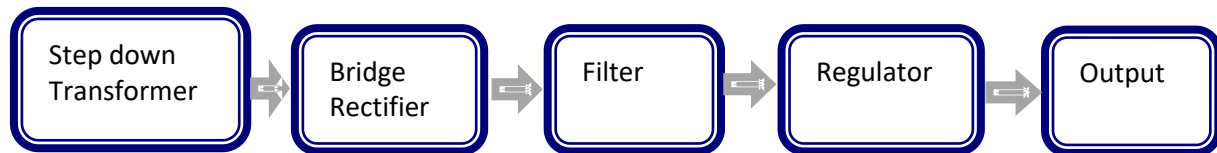
APPLICATIONS:

- Door Access Applications
- Security Applications
- Locker Applications

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered finger print module (R307-Biometric Module) interfacing
- Magnetic door lock and relay interface



PROJECTS FACTORY
Academic Projects