FINGER PRINT BASED ATTENDANCE SYSTEM

AIM:

Design and Development of Fingerprint based attendance system.

PURPOSE:

There are different kinds of attendance systems available in market. RFID, Smart card and many more available. But we can clone cards and possibility to do manipulate attendance system. But finger print cloning is very difficult and very expensive. Attendance system for schools, colleges and office purpose finger print is best solution. Here we propose finger print based attendance system using Arduino.

DESCRIPTION:

This project includes Finger print module (R307-biometric), which is connected to Arduino through UART interface. Two button and buzzer connected to Arduino digital pins.

WORKING:

Here attendance can be done by finger prints. Here initially we have to store finger prints in module by pressing enroll button. Also Arduino connected to PC through serial port. PC has software which can store attendance information with respective to Time. While doing attendance user has to press identification button and keep finger on module then information will store in PC. If any unauthorized persons want to access then buzzer will be ON.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
Finger Print Module	:	Bio-metric Module (R307)
Buzzer	:	5vDC
Power Source	:	12v 2 amp Adaptor

SOFTWARE:
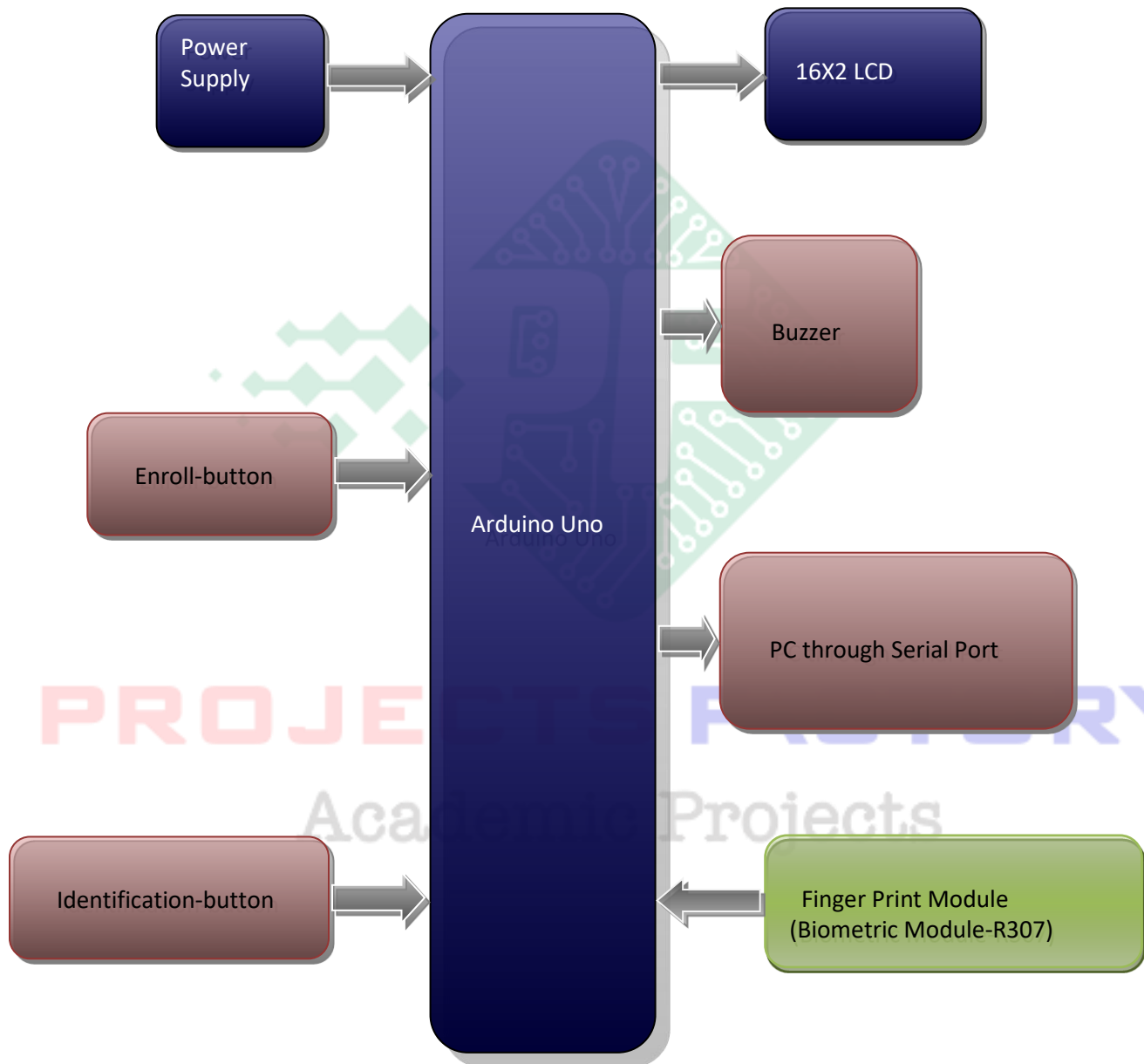
Arduino IDE
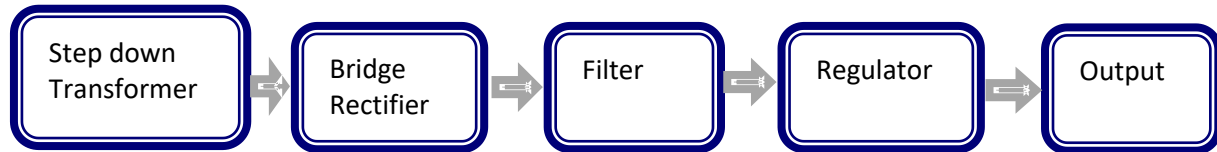
Proteus based circuit diagram

APPLICATIONS:

➢ School attendance
➢ College attendance
➢ Office staff attendance system

BLOCK DIAGRAM:

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Power          →    Arduino Uno    →    16X2 LCD
Supply
                                   →    Buzzer

Enroll-button  →                   →    PC through Serial Port

Identification-button →            ←    Finger Print Module
                                        (Biometric Module-R307)
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POWER SUPPLY BLOCKDIAGRAM:

Step down Transformer	→	Bridge Rectifier	→	Filter	→	Regulator	→	Output

INTERFACES COVERD:

- We have covered finger print module (R307-Biometric Module) interfacing
- Serial protocol for data sending to PC