FINGERPRINT BASED BIOMETRIC ATTENDANCE SYSTEM WITH SMS NOTIFICATION

AIM:

Design and Development of Fingerprint based biometric attendance system with SMS notification.

PURPOSE:

Electronic systems are used in everywhere, any kind of electronic systems saves lot of time and money. Manual Attendance systems are register based and need lot of manual involvement. Here we want to implement smart attendance system that can send attendance data to computer and SMS notification. To design this, here we used Arduino microcontroller along with required peripheral devices. Project title is fingerprint based biometric attendance system with SMS notification.

DESCRIPTION:

GSM module (SIM800c) and Biometric module (R307) connected to Arduino two UART ports respectively. RTC module (DS1307) interfaced to Arduino I2C port. USB to TTL cable connected to Arduino UART port through relay. Relay makes single serial port to two.

WORKING:

User can enroll fingers by pressing enroll button. Enrollment means storing fingerprints into biometric module memory. While accessing attendances, user needs to press identification button by keeping finger on biometric module. For first time access Arduino takes as “IN” and for second time access Arduino takes as “OUT”. This information will be send as SMS, along with real time and date. Also this information will update into PC.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
Finger Print Module	:	Biometric Module (R307)
GSM modem	:	SIM800C
RTC module	:	DS1307
Relay	:	12V DC
Power Source	:	12V 2 amp Adaptor

SOFTWARE:

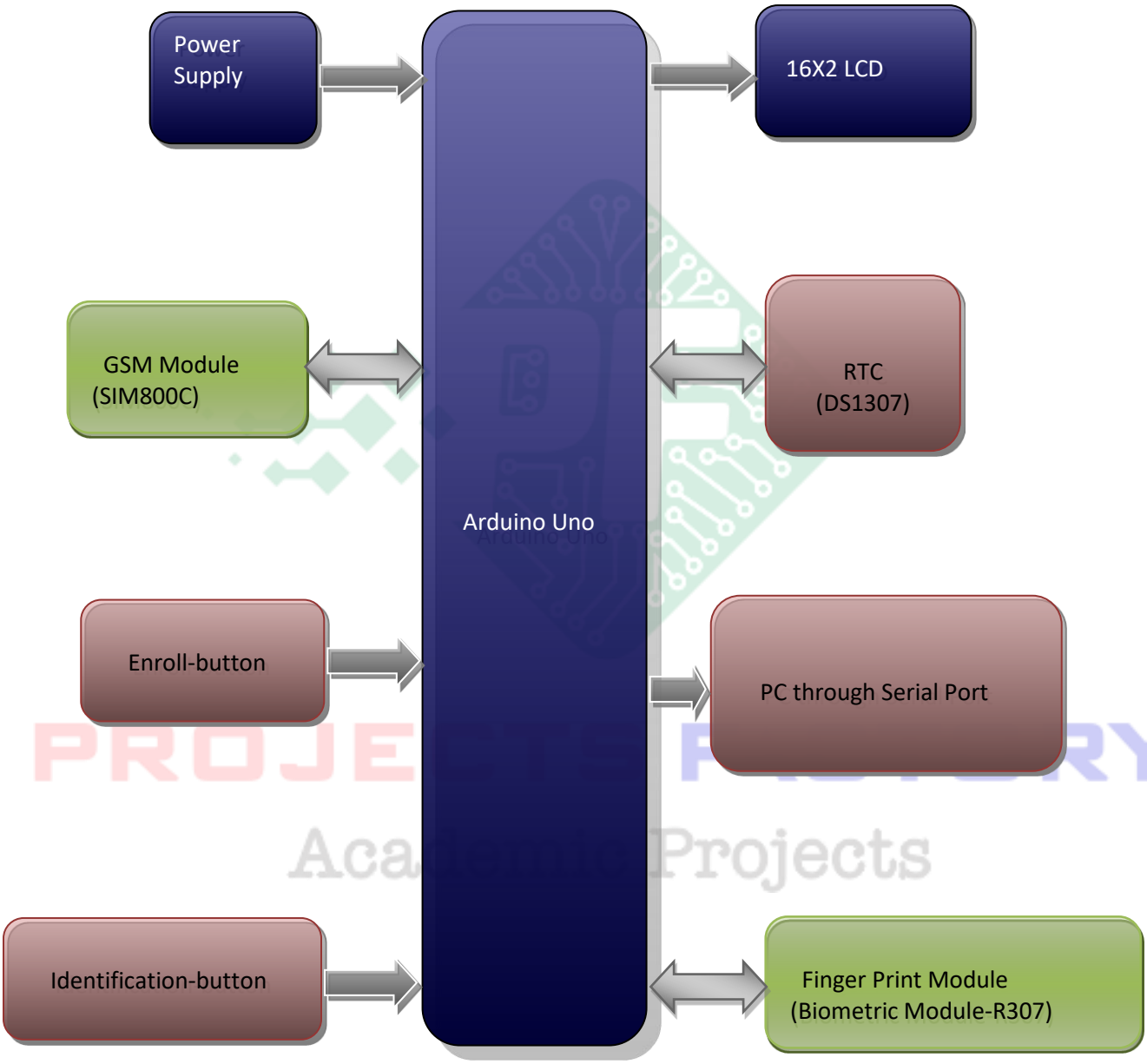
Arduino IDE

Proteus based circuit diagram

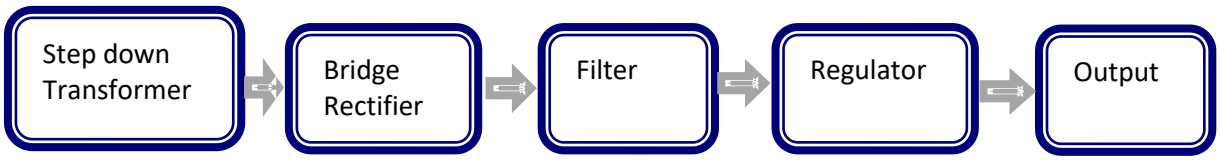
APPLICATIONS:

- Smart Attendance system
- Attendance notification
- Employee attendance system

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERD:

- We have covered finger print module (R307-Biometric Module) and GSM (SIM800C) interfacing
- RTC module (DS1307) and USB to TTL adaptor