ATM SECURITY SYSTEM USING FINGERPRINT AND GSM

AIM:

Design and Development of ATM Security System using Fingerprint and GSM.

PURPOSE:

Regular ATMs have fixed password and we can access with it. By doing cloning ATM cards accessing is possible. Here fixed passwords don't provide that much security. Here we suggest OTP based password. On other hand we add fingerprint module for next level security. By combining fingerprint, GSM and OTP password we will give multilevel security for ATM system. Here project title is ATM security system using fingerprint and GSM. Here we focused on accessing and security for ATM system. We are not focused on money withdraw and balance maintenance.

DESCRIPTION:

This project includes Finger print module (R307-biometric), which is connected to Arduino through UART interface. GSM module (SIM800C) connected to Arduino UART interface. L293d connected to Arduino digital pins. Two buttons and buzzer connected to Arduino digital pins.

WORKING:

In this project we will provide two level securities for ATM access. Initially User has to register finger prints in module by pressing enroll button. When user wants to access ATM then he has to keep finger on module and press identification button. If fingerprint is authorized then it sends OTP to mobile. If OTP is correct through keypad (here we used 3 pin keypad- due to lack of pins availability) then DC motor rotates. Otherwise buzzer will ON in all failure cases in OTP and fingerprints. All the information display on 16X2 LCD display.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
Finger Print Module	:	Bio-metric Module (R307)
GSM Module	:	SIM800C
H-bridge IC	:	L293D
Motor	:	DC gear 12V DC
Buzzer	:	5vDC
Power Source	:	12v 2 amp Adaptor

SOFTWARE:

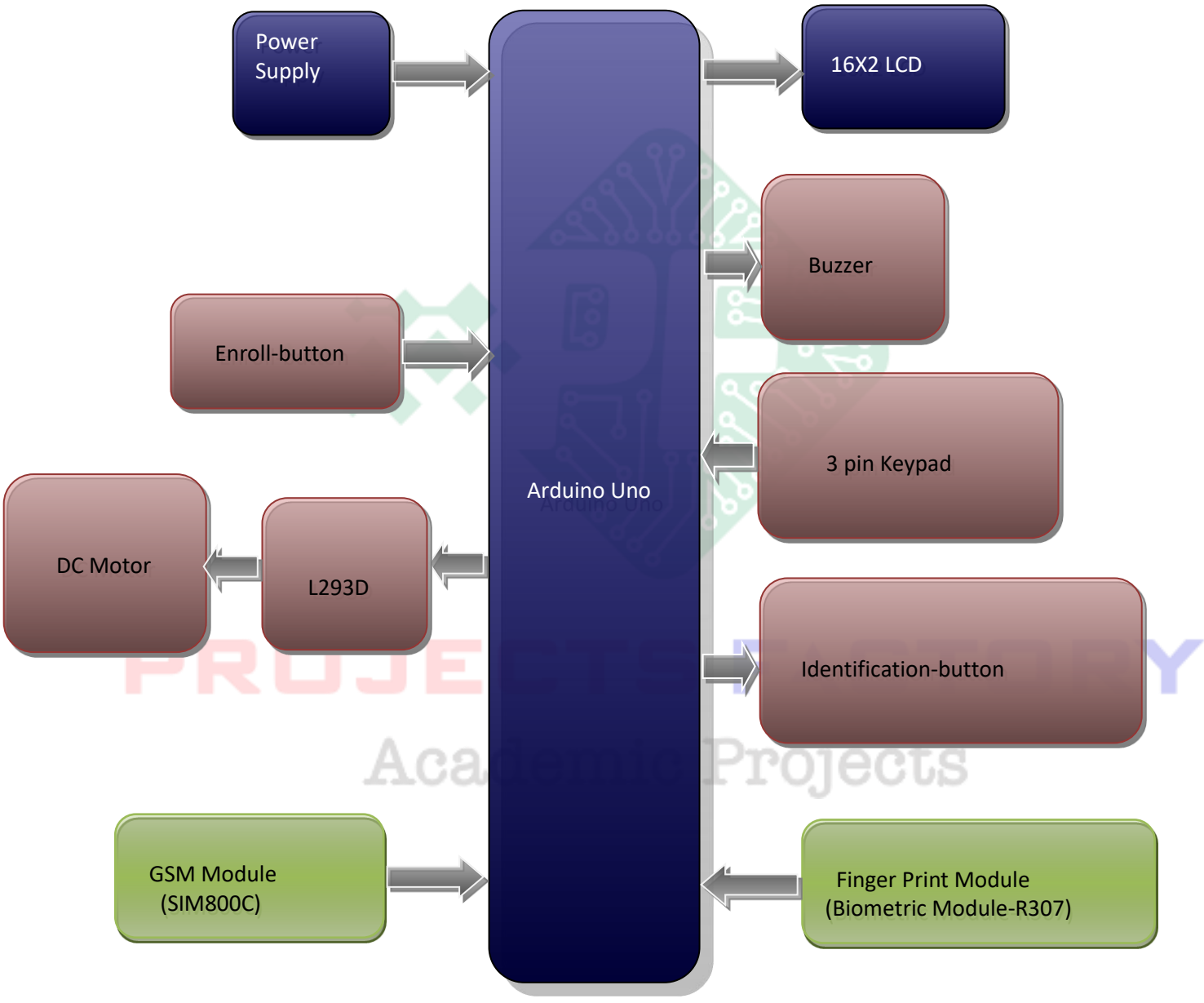
Arduino IDE

Proteus based circuit diagram

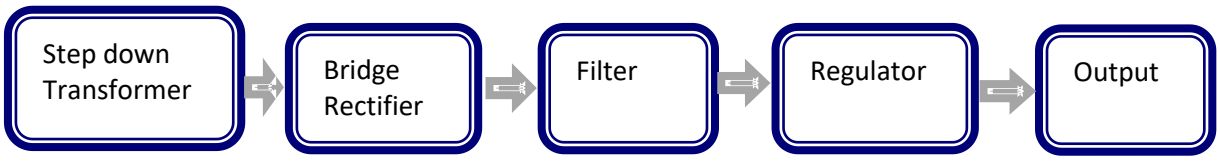
APPLICATIONS:

- ATM Security
- Money Dispenser Application

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERD:

- We have covered finger print module (R307-Biometric Module) interfacing
- L293D h-bridge IC interfacing