#include <Adafruit\_Fingerprint.h>

#include <LiquidCrystal.h>

char input[12];

int count = 0;

int a = 0;

const int rs = 6, en = 7, d4 = 2, d5 = 3, d6 = 4, d7 = 5;

LiquidCrystal lcd(rs, en, d4, d5, d6, d7);

SoftwareSerial mySerial(12,11);

Adafruit\_Fingerprint finger = Adafruit\_Fingerprint(&mySerial);

void setup()

{

pinMode(9,OUTPUT);

pinMode(10,OUTPUT);

digitalWrite(9,LOW);

digitalWrite(10,LOW);

Serial.begin(9600);

lcd.begin(16, 2);

lcd.setCursor(0, 0);

lcd.print(" WELCOME TO ");

lcd.setCursor(0, 1);

lcd.print(" CIRCUIT DIGEST ");

delay(2000);

lcd.clear();

lcd.setCursor(0, 0);

lcd.print("Please swipe ");

lcd.setCursor(0, 1);

lcd.print("Your License ");

}

void loop()

{

if (Serial.available())

{

count = 0;

while (Serial.available() && count < 12)

{

input[count] = Serial.read();

count++;

delay(5);

}

if (count == 12)

{

if ((strncmp(input, "3F009590566C", 12) == 0) && (a == 0))

{

lcd.setCursor(0, 0);

lcd.print("License Valid ");

lcd.setCursor(0, 1);

lcd.print("Welcome ");

delay(1000);

a = 1;

fingerprint();

}

else if ((strncmp(input, "0B0028883E95", 12) == 0) && (a == 0))

{

lcd.setCursor(0, 0);

lcd.print("License Valid ");

lcd.setCursor(0, 1);

lcd.print("Welcome ");

delay(1000);

a = 1;

fingerprint();

}

else

{

if (a != 1)

{

lcd.setCursor(0, 0);

lcd.print("License Invalid ");

lcd.setCursor(0, 1);

lcd.print("Try Again!!! ");

delay(2000);

lcd.clear();

lcd.setCursor(0, 0);

lcd.print("Please swipe ");

lcd.setCursor(0, 1);

lcd.print("Your License ");

}

}

}

}

}

int getFingerprintID()

{

uint8\_t p = finger.getImage();

if (p != FINGERPRINT\_OK) return -1;

p = finger.image2Tz();

if (p != FINGERPRINT\_OK) return -1;

p = finger.fingerFastSearch();

if (p != FINGERPRINT\_OK) return -1;

return finger.fingerID;

}

void fingerprint()

{

finger.begin(57600);

while(a==1)

{

int fingerprintID = getFingerprintID();

delay(50);

if (fingerprintID == 1)

{

lcd.setCursor(0, 0);

lcd.print("Access Granted ");

lcd.setCursor(0, 1);

lcd.print("Vehicle Started ");

digitalWrite(9,HIGH);

digitalWrite(10,LOW);

while(1);

}

else if (fingerprintID == 2)

{

lcd.setCursor(0, 0);

lcd.print("Access Granted ");

lcd.setCursor(0, 1);

lcd.print("Vehicle Started ");

digitalWrite(9,HIGH);

digitalWrite(10,LOW);

while(1);

}

else

{

lcd.setCursor(0, 0);

lcd.print("Pls Place a ");

lcd.setCursor(0, 1);

lcd.print("Valid Finger ");

}

}

}