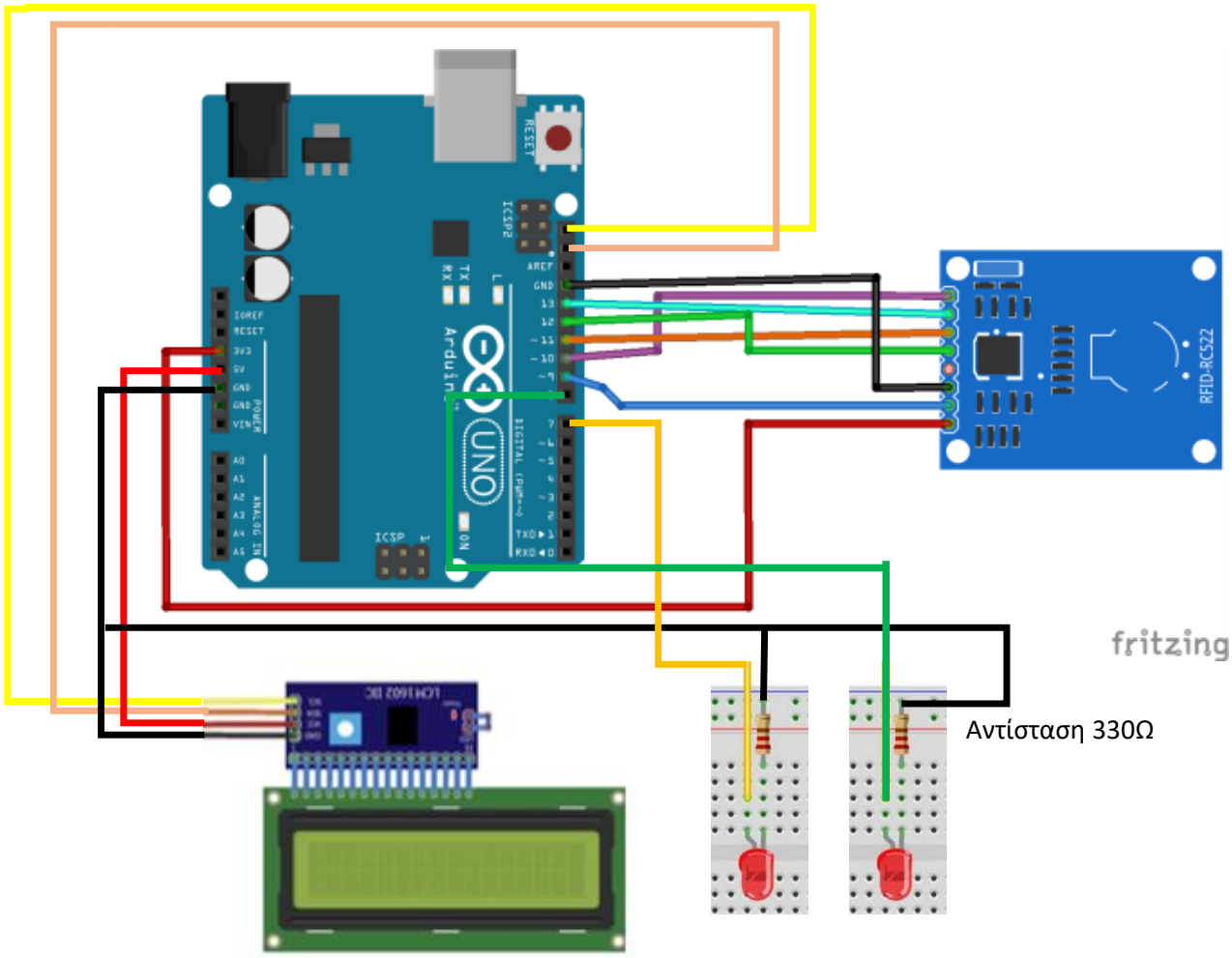


```
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
#include <SPI.h>
#include <RFID.h>

#define SS_PIN 10
#define RST_PIN 9

RFID rfid(SS_PIN,RST_PIN);
LiquidCrystal_I2C lcd(0x27, 16, 2);


int led = 7;
int led1 = 8;
int power = 8;
int serNum[5];

int cards[][5] = {
  {147,84,69,252,126}

};

int cards1[][5] = {
  {179,125,81,237,114}

};
```

```
bool access = false;

void setup(){

    lcd.init();
    lcd.backlight();

    Serial.begin(9600);
    SPI.begin();
    rfid.init();

    pinMode(led, OUTPUT);
    pinMode(led1, OUTPUT);
    digitalWrite(led, LOW);
    digitalWrite(led1, LOW);

}

void loop(){

    if(rfid.isCard()){

        if(rfid.readCardSerial()){
            Serial.print(rfid.serNum[0]);
            Serial.print(" ");
            Serial.print(rfid.serNum[1]);
            Serial.print(" ");
            Serial.print(rfid.serNum[2]);
            Serial.print(" ");
            Serial.print(rfid.serNum[3]);
            Serial.print(" ");
            Serial.print(rfid.serNum[4]);
            Serial.println("");

            for(int x = 0; x < sizeof(cards); x++){
              for(int i = 0; i < sizeof(rfid.serNum); i++ ){
                  if((rfid.serNum[i] != cards[x][i]))
                  {
                      access = false;
                      break;

                  } else {
                      access = true;
                  }


              }
              if(access) break;
            }

            for(int x = 0; x < sizeof(cards); x++){
              for(int i = 0; i < sizeof(rfid.serNum); i++ ){
                  if((rfid.serNum[i] != cards1[x][i]))
                  {
                      access = false;
                      break;
```

```
                } else {
                    access = true;
                }


              }
              if(access) break;
            }
         }

       if(access){
          Serial.println("Welcome!");
           digitalWrite(led, HIGH);
           delay(10);
           digitalWrite(led, LOW);
           lcd.setCursor(1,0); //Defining positon to write from first row, first column
.
           lcd.print("ACCESS GRANTED");
           lcd.setCursor(4,1); //Defining positon to write from second row, first column
.
           lcd.print(" ");

           delay(100);
           lcd.clear();
           /*digitalWrite(led, HIGH);
           delay(1000);
           digitalWrite(led, LOW);*/


      } else {
           Serial.println("Not allowed!");
           digitalWrite(led1, HIGH);
           delay(10);
           digitalWrite(led1, LOW);
           lcd.setCursor(2,0); //Defining positon to write from first row, first column
.
           lcd.print("ACCESS DENIED");
           lcd.setCursor(5,1); //Defining positon to write from second row, first column
.
           lcd.print(" ");
           delay(100);
           lcd.clear();
           /*delay(500);
           digitalWrite(led1, HIGH);
           delay(500);
           digitalWrite(led1, LOW);*/
       }
    }



    rfid.halt();

}
```