#include<DHT.h>

#define DHTPIN 0

#define DHTTYPE DHT11

DHT dht(DHTPIN,DHTTYPE);

#include <Wire.h>

#include <Adafruit\_GFX.h>

#include <Adafruit\_SSD1306.h>

#define SCREEN\_WIDTH 128

#define SCREEN\_HEIGHT 64

Adafruit\_SSD1306 display(SCREEN\_WIDTH, SCREEN\_HEIGHT, &Wire, -1);

int freq=5000;

int ledchannel=0;

int ledresolution=8;

int t2=28;

void setup()

{

pinMode(2,OUTPUT); // light

pinMode(15,OUTPUT); // fan

pinMode(4,INPUT);

ledcSetup(ledchannel,freq,ledresolution);

ledcAttachPin(15,ledchannel);

Serial.begin(115200);

if(!display.begin(SSD1306\_SWITCHCAPVCC, 0x3C))

{

Serial.println("SSD1306 allocation failed");

for(;;);

}

dht.begin();

}

void loop()

{

delay(6000);

float h=dht.readHumidity();

float t=dht.readTemperature();

float f=dht.readTemperature(true);

int ldr=analogRead(4);

if(isnan(h) || isnan(t) || isnan(f))

{

Serial.println("dht failed");

}

else

{

Serial.print("Humidity: ");

Serial.print(h);

Serial.println("%");

Serial.print("Temparature: ");

Serial.print(t);

Serial.println(" °C");

Serial.print("Temp in F: ");

Serial.print(f);

Serial.println(" °F");

display.clearDisplay();

display.setTextSize(1);

display.setTextColor(WHITE);

display.setCursor(0, 10);

display.println(" ");

display.print("intensity= ");

display.println(ldr);

display.print("Humidity: ");

display.print(h);

display.println("%");

display.print("Temparature: ");

display.print(t);

display.println(" Celsius");

display.display();

if(ldr<=3800)

{

digitalWrite(2,LOW);

Serial.println("led is off");

}

else

{

digitalWrite(2,HIGH);

Serial.println("led is on");

Serial.print("ldr value = ");

Serial.println(ldr);

}

if(t>=t2)

{

int fs=(t-t2)\*11.590;

ledcWrite(ledchannel,fs);

int fanspeed=fs\*100/255;

Serial.print("fan speed = ");

Serial.print(fanspeed);

Serial.println("%");

}

else

{

digitalWrite(15,LOW);

Serial.println(" fan is off");

}

}

}