|  |
| --- |
| #include<DHT.h> |
|  | #define DHTPIN 4 |
|  | #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 a=analogRead(34); |
|  |  |
|  | void setup() |
|  | { |
|  |  |
|  | pinMode(4,OUTPUT); // light |
|  | pinMode(0,OUTPUT); // fan |
|  | pinMode(34,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(2000); |
|  | int a=analogRead(34); |
|  | float h=dht.readHumidity(); |
|  | float t=dht.readTemperature(); |
|  | float f=dht.readTemperature(true); |
|  | int ldr=analogRead(34); |
|  | 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(a<300) |
|  | { |
|  | digitalWrite(0,HIGH); |
|  | delay(1000); |
|  | Serial.println("Ldr value is...."); |
|  | Serial.print(a); |
|  |  |
|  | } |
|  |  |
|  | else |
|  | { |
|  | digitalWrite(0,LOW); |
|  | delay(1000); |
|  | } |
|  | if(t>=30) //fan |
|  | { |
|  | digitalWrite(5,HIGH); |
|  | Serial.print("LED2 is on"); |
|  | } |
|  | else |
|  | { |
|  | digitalWrite(5,LOW); |
|  | Serial.println("LED2 is off"); |
|  | } |
|  | } |
|  | } |

