```
#include <Wire.h>
#include <Adafruit_GFX.h>
#include <Adafruit_SSD1306.h>
#include <Adafruit_Sensor.h>
#include <DHT.h>

#define SCREEN_WIDTH 128 // OLED display width, in pixels
#define SCREEN_HEIGHT 64 // OLED display height, in pixels

// Declaration for an SSD1306 display connected to I2C (SDA, SCL pins)
Adafruit_SSD1306 display(SCREEN_WIDTH, SCREEN_HEIGHT, &Wire, -1);

#define DHTPIN 14     // Digital pin connected to the DHT sensor

// Uncomment the type of sensor in use:
#define DHTTYPE    DHT11     // DHT 11
//#define DHTTYPE    DHT22     // DHT 22 (AM2302)
//#define DHTTYPE    DHT21     // DHT 21 (AM2301)

DHT dht(DHTPIN, DHTTYPE);

void setup() {
  Serial.begin(115200);

  dht.begin();

  if(!display.begin(SSD1306_SWITCHCAPVCC, 0x3C)) {
    Serial.println(F("SSD1306 allocation failed"));
    for(;;);
```

```
  }
  delay(2000);
  display.clearDisplay();
  display.setTextColor(WHITE);
}

void loop() {
  delay(5000);
//read ldr values
int ldrval=analogRead(15);
Serial.print("the LDR value is:");
Serial.println(ldrval);
delay(1000);

  //read temperature and humidity
  float t = dht.readTemperature();
  float h = dht.readHumidity();
  if (isnan(h) || isnan(t)) {
    Serial.println("Failed to read from DHT sensor!");
  }
  // clear display
  display.clearDisplay();

  // display temperature
  display.setTextSize(1);
  display.setCursor(0,0);
  display.print("Temperature: ");
  display.setTextSize(2);
  display.setCursor(0,10);
```

```
 display.print(t);
 display.print(" ");
 display.setTextSize(1);
 display.cp437(true);
 display.write(167);
 display.setTextSize(2);
 display.print("C");

 // display humidity
 display.setTextSize(1);
 display.setCursor(0,25);
 display.print("Humidity: ");
 display.setTextSize(2);
 display.setCursor(0,45);
 display.print(h);
 display.print(" %");

 display.display();

 //display ldr values
 display.setTextSize(1);
 display.setCursor(0,55);
 display.print("ldrvalue: ");
 display.setTextSize(2);
 display.setCursor(0,75);
 display.print(ldrval);
If(ldrval<700)
{
digitalWrite(2,HIGH);
```

```
display.println(“LIGHT is ON”);
}
Else

{
digitalWrite(2,LOW);
display.println(“ LIGHT is OFF”);
}
If(f>28&&h>40)
{
digitalWrite(13,HIGH);
display.println(“FAN is ON”);

}
else{
digitalWrite(13,LOW);
display.println(“FAN is OFF”);
}
}
```