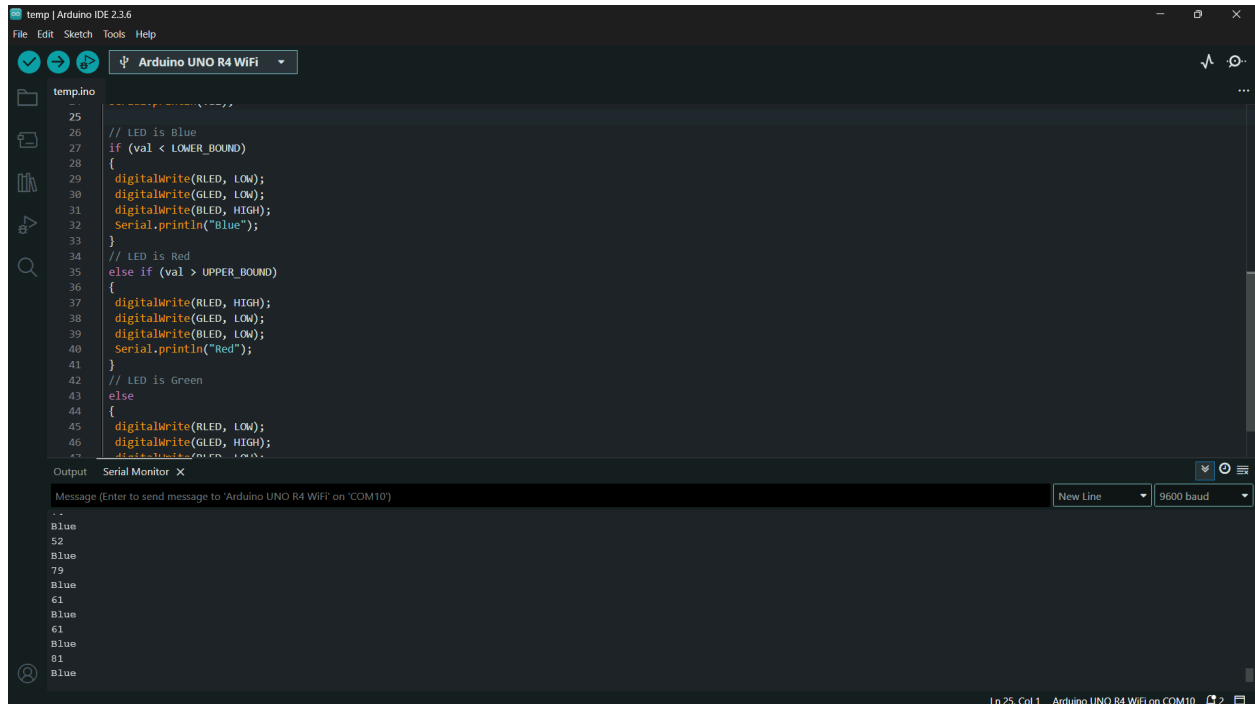


# Arduino - Temperature Sensor & Photoresistor

## Temperature

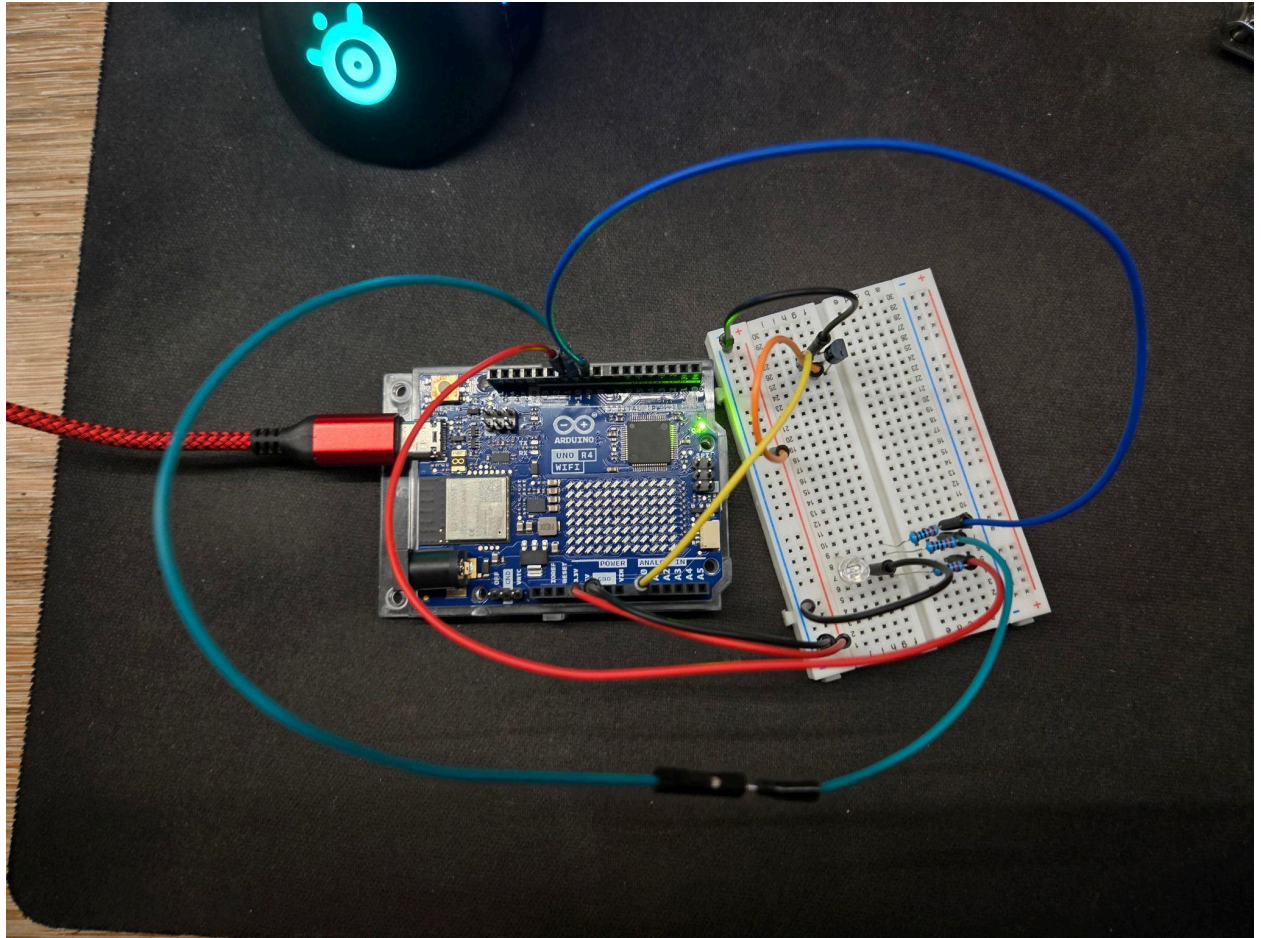


The screenshot displays the Arduino IDE interface with a sketch named 'temp.ino' open. The sketch is configured for an 'Arduino UNO R4 WiFi' board. The code implements a temperature-based logic to control three LEDs: RLED, GLED, and BLEED. It uses a digitalRead function to read a sensor value and compares it against LOWER\_BOUND and UPPER\_BOUND constants. Depending on the value, it sets the LEDs to LOW or HIGH states and prints a message to the serial monitor.

```
25
26 // LED is Blue
27 if (val < LOWER_BOUND)
28 {
29   digitalWrite(RLED, LOW);
30   digitalWrite(GLED, LOW);
31   digitalWrite(BLED, HIGH);
32   Serial.println("Blue");
33 }
34 // LED is Red
35 else if (val > UPPER_BOUND)
36 {
37   digitalWrite(RLED, HIGH);
38   digitalWrite(GLED, LOW);
39   digitalWrite(BLED, LOW);
40   Serial.println("Red");
41 }
42 // LED is Green
43 else
44 {
45   digitalWrite(RLED, LOW);
46   digitalWrite(GLED, HIGH);
47   digitalWrite(BLED, LOW);
48 }
```

The Serial Monitor window at the bottom shows the output of the sketch, displaying the word 'Blue' multiple times, indicating that the sensor value is consistently below the lower bound.

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# Photoresistor

```
1 // Automatic Night Light
2
3
4 const int WLED=9;      // White LED Anode on pin 9 (PWM)
5 const int LIGHT=0;     // Light Sensor on Analog Pin 0
6 const int MIN_LIGHT=200; // Minimum Expected light value
7 const int MAX_LIGHT=900; // Maximum Expected Light value
8 int val = 0;          // Variable to hold the analog reading
9
10 void setup()
11 {
12   pinMode(WLED, OUTPUT); // Set White LED pin as output
13   Serial.begin(9600);
14 }
15
16 void loop()
17 {
18   val = analogRead(LIGHT); // Read the light sensor
19   Serial.println(val);
20   val = map(val, MIN_LIGHT, MAX_LIGHT, 255, 0); // Map the light reading
21   val = constrain(val, 0, 255); // Constrain light value
22   Serial.println(val);
23   analogWrite(WLED, val); // Control the White LED
```

Serial Monitor X

Message (Enter to send message to 'Arduino UNO R4 WiFi' on 'COM10')

New Line 9600 baud

043  
21  
028  
27  
038  
23  
047  
20  
034  
25  
033

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