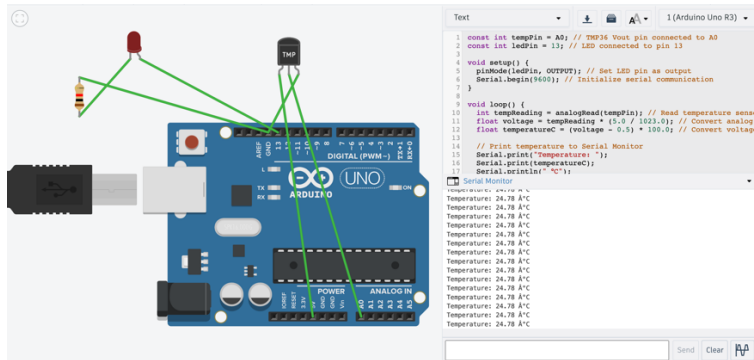
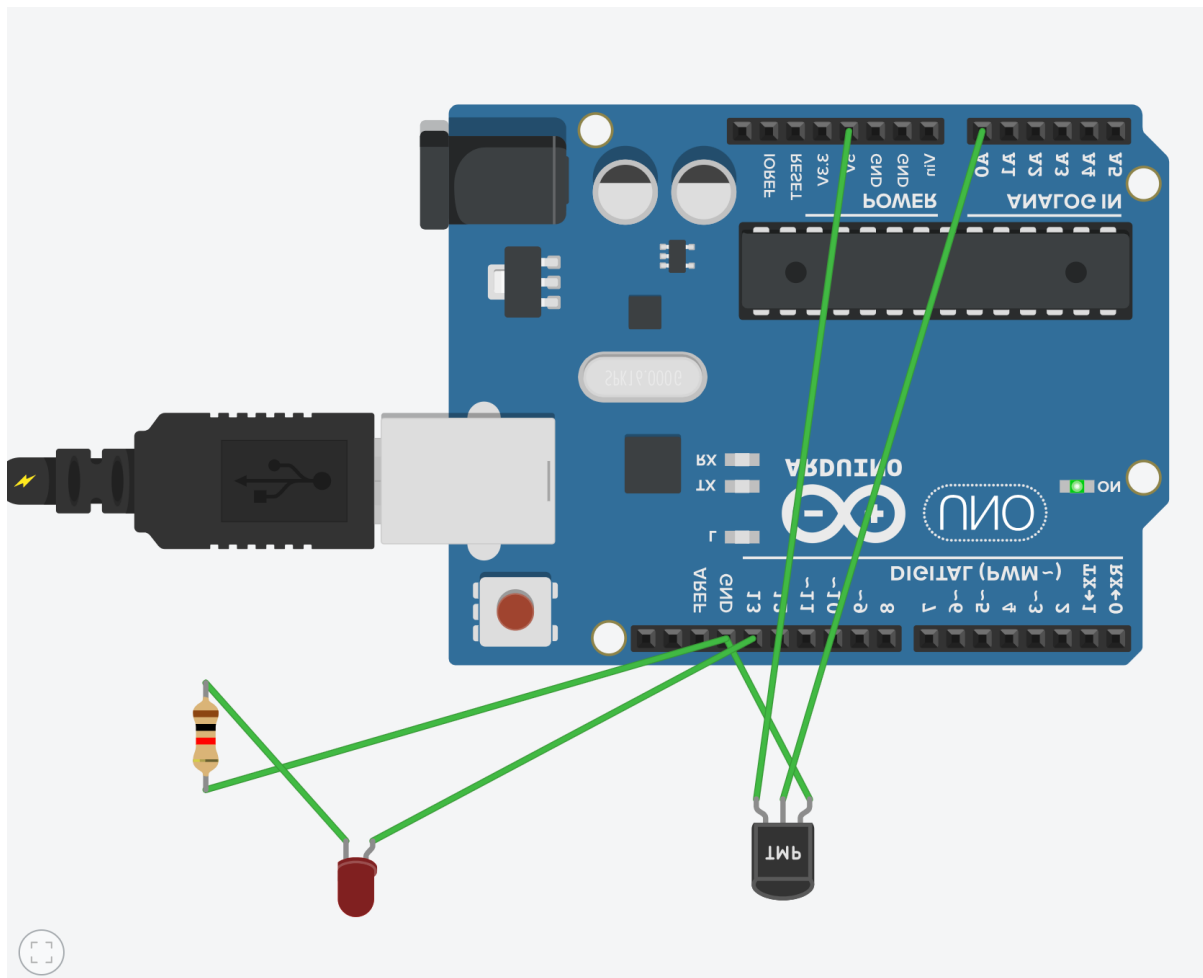


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SIT315 - Simple Sense-Think-Act Board



Schematic Diagram:



Code and serial monitor:

Text



1 (Arduino Uno R3)

```
1  const int tempPin = A0; // TMP36 Vout pin connected to A0
2  const int ledPin = 13; // LED connected to pin 13
3
4  void setup() {
5      pinMode(ledPin, OUTPUT); // Set LED pin as output
6      Serial.begin(9600); // Initialize serial communication
7  }
8
9  void loop() {
10     int tempReading = analogRead(tempPin); // Read temperature sensor
11     float voltage = tempReading * (5.0 / 1023.0); // Convert analog r
12     float temperatureC = (voltage - 0.5) * 100.0; // Convert voltage
13
14     // Print temperature to Serial Monitor
15     Serial.print("Temperature: ");
16     Serial.print(temperatureC);
17     Serial.println(" °C");
18 }
```

 Serial Monitor

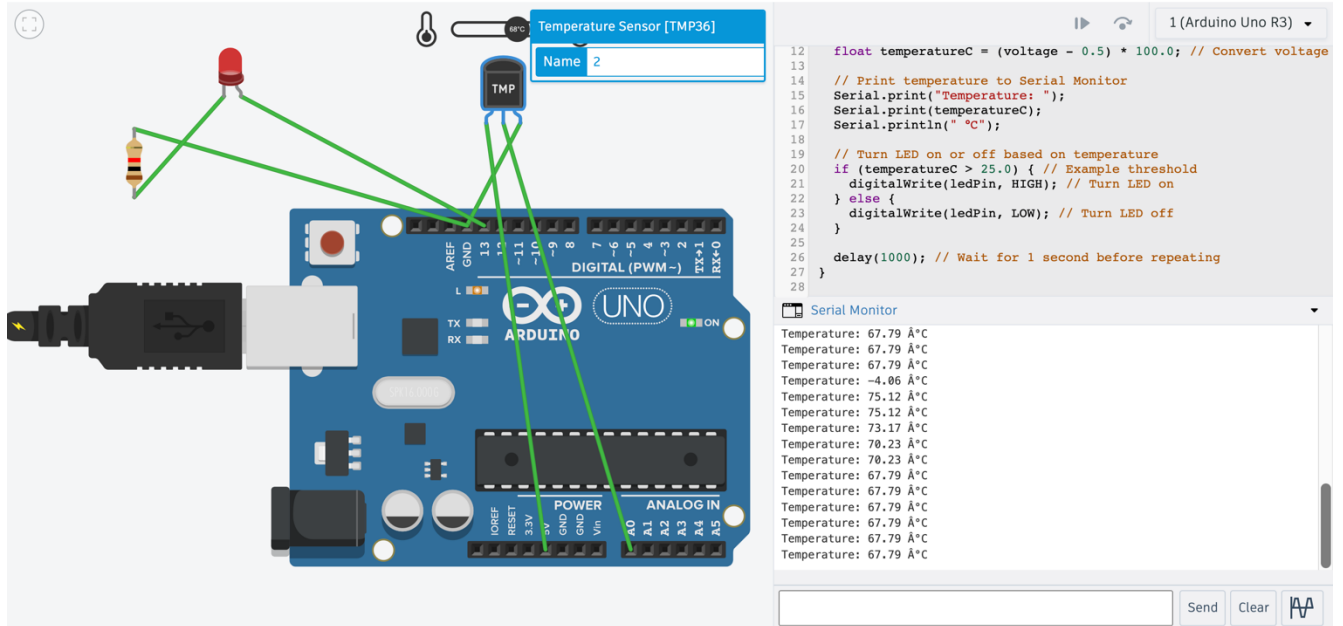
Temperature: 24.78 °C
Temperature: 24.78 °C
Temperature: 24.78 °C
Temperature: 24.78 °C
Temperature: 24.78 °C
Temperature: 24.78 °C
Temperature: 24.78 °C
Temperature: 24.78 °C
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Temperature: 24.78 °C
Temperature: 24.78 °C
Temperature: 24.78 °C
Temperature: 24.78 °C
Temperature: 24.78 °C

Send

Clear



Different temp and LED light on:



The image shows an Arduino Uno R3 board with a TMP36 temperature sensor and an LED connected. The sensor is connected to the 5V and GND pins, and the LED is connected to digital pin 2. The code in the background checks if the temperature is greater than 25.0 degrees Celsius and turns the LED on if it is. The Serial Monitor shows a list of temperature readings.

```
12 float temperatureC = (voltage - 0.5) * 100.0; // Convert voltage
13
14 // Print temperature to Serial Monitor
15 Serial.print("Temperature: ");
16 Serial.print(temperatureC);
17 Serial.println(" °C");
18
19 // Turn LED on or off based on temperature
20 if (temperatureC > 25.0) { // Example threshold
21   digitalWrite(ledPin, HIGH); // Turn LED on
22 } else {
23   digitalWrite(ledPin, LOW); // Turn LED off
24 }
25
26 delay(1000); // Wait for 1 second before repeating
27 }
28
```

Serial Monitor

Temperature: 67.79 °C
Temperature: 67.79 °C
Temperature: 67.79 °C
Temperature: -4.06 °C
Temperature: 75.12 °C
Temperature: 75.12 °C
Temperature: 73.17 °C
Temperature: 70.23 °C
Temperature: 70.23 °C
Temperature: 67.79 °C
Temperature: 67.79 °C
Temperature: 67.79 °C
Temperature: 67.79 °C
Temperature: 67.79 °C
Temperature: 67.79 °C