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**Class –** BE Artificial Intelligence and Data Science.

**Roll No. –** 09

**Practical No. 01 -** Write a program for sending alert messages to the user for controlling and interacting with your environment .

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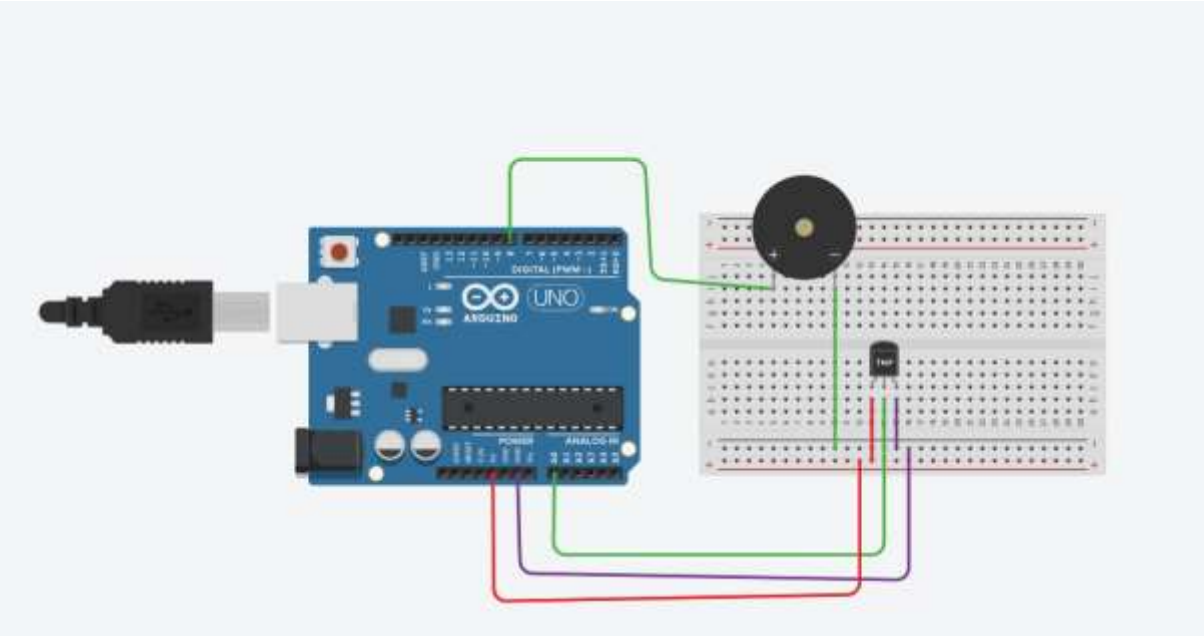
**Circuit Diagram –**



**Source Code –**

```
#define TEMP_PIN A0         // Pin where the TMP36 sensor is connected
#define BUZZER_PIN 8        // Buzzer pin
const float TEMPERATURE_THRESHOLD = 23.0; // Temperature threshold in Celsius
void setup() {
  // Initialize the buzzer pin as an output
  pinMode(BUZZER_PIN, OUTPUT);

  // Start the Serial Monitor for debugging
  Serial.begin(9600);
}
```

```
void loop() {
  // Read the temperature from the TMP36 sensor
  int tempReading = analogRead(TEMP_PIN);
  float voltage = tempReading * (5.0 / 1023.0);
  float temperatureC = (voltage - 0.5) * 100.0;
   // Print the temperature to the Serial Monitor
  Serial.print("Temperature: ");
  Serial.print(temperatureC);
  Serial.println(" C");
   // Check if the temperature exceeds the threshold
  if (temperatureC > TEMPERATURE_THRESHOLD) {
    // Turn on the buzzer
    digitalWrite(BUZZER_PIN, HIGH);
    // Print an alert message to the Serial Monitor
    Serial.println("ALERT: Temperature is too high!");
  } else {
    // Turn off the buzzer
    digitalWrite(BUZZER_PIN, LOW);
  }
   // Wait for a short period before the next loop
  delay(500);
}
```

**Output –**

Teamperature :  23.80 C

Teamperature :  24.78 C

ALERT : Teamperature is too high !