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// Define pin numbers

const int tempSensorPin = A0; // Analog input pin for TMP36 sensor

const int buzzerPin = 9; // Digital output pin for the buzzer


// Define temperature threshold in Celsius

const float thresholdTemp = 30.0; // Set threshold temperature


void setup() {

  Serial.begin(9600); // Initialize serial communication for debugging

  pinMode(buzzerPin, OUTPUT); // Set buzzer pin as output
}


void loop() {

  // Read the analog value from TMP36

  int sensorValue = analogRead(tempSensorPin);


  // Convert analog value to voltage

  float voltage = sensorValue * (5.0 / 1023.0);


  // Convert voltage to temperature in Celsius

  float temperatureC = (voltage - 0.5) * 100.0;


  // Print temperature to Serial Monitor

  Serial.print("Temperature: ");

  Serial.print(temperatureC);

  Serial.println(" C");


  // Check if the temperature crosses the threshold

  if (temperatureC > thresholdTemp) {

    digitalWrite(buzzerPin, HIGH); // Turn buzzer ON

  } else {

    digitalWrite(buzzerPin, LOW); // Turn buzzer OFF

  }


  delay(1000); // Wait for 1 second before the next reading
}

```

