

Assignment No. 01

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);  
}
```

