```
// Pin definitions
const int tempPin = A0; // Pin connected to LM35 output
const int buzzerPin = A1; // Pin connected to the buzzer
const float thresholdTemp = 40.0;//emperature threshold in Celsius
void setup() {
 // Initialize the buzzer pin as an output
 pinMode(buzzerPin, OUTPUT);
 Serial.begin(9600); // Start serial communication for debugging
}
void loop() {
 // Read the analog value from the LM35
 int sensorValue = analogRead(tempPin);
 // Convert the analog value to temperature in Celsius
 float voltage = sensorValue * (5.0 / 1023.0);
 // Calculate the temperature in Celsius
 float temperatureC = (voltage - 0.5) * 9.0; // For TMP36, adjust for LM35 if needed

 // Display the temperature on the Serial Monitor
 Serial.print("Temperature: ");
 Serial.print(temperatureC);
 Serial.println(" °C");
 // Check if the temperature exceeds the threshold
 if (temperatureC > thresholdTemp) {
 digitalWrite(buzzerPin, LOW); // Activate the buzzer
 Serial.println("Temperature threshold exceeded! Buzzer ON.");
 } else {
 digitalWrite(buzzerPin, HIGH); // Deactivate the buzzer
 }
 // Wait for 1 second before the next reading
 delay(1000);
}
```