7. Using a LM35 temperature sensor, create a temperature monitoring system that reads temperature data and displays it on the Serial Monitor. Adjust the code to send a warning message if the temperature exceeds a certain threshold.

Program :

```
const int lm35Pin = A0;              // Pin where the LM35 is connected
#define TEMP_THRESHOLD 30        // Temperature threshold in Celsius
void setup() {
  Serial.begin(9600);
}
void loop() {          // Read the analog value from the LM35
  int sensorValue = analogRead(lm35Pin);
                       // Convert the analog reading to voltage
  float voltage = sensorValue * (5.0 / 1023.0);
                       // Convert the voltage to temperature in Celsius
  float temperature = voltage * 100;     // LM35 outputs 10 mV/°C
                       // Display temperature
  Serial.print("Temperature: ");
  Serial.print(temperature);
  Serial.println(" °C");          // Check for temperature threshold
  if (temperature > TEMP_THRESHOLD) {
    Serial.println("Warning: Temperature exceeds threshold!");
  }
  delay(1000);              // Wait a second before the next reading
}
```