

## Arduino Temperature Sensor Code Explanation

**int tempPin = A0;**

This line assigns analog pin A0 to the temperature sensor.

**float temperature;**

This variable stores the calculated temperature value in Celsius.

### **setup() Function**

Serial.begin(9600); starts serial communication to display output in the Serial Monitor.

### **loop() Function**

analogRead(tempPin); reads the sensor value (0 to 1023).

The voltage is calculated using the formula: voltage = sensorValue × (5.0 / 1023.0).

Temperature is calculated using: (voltage – 0.5) × 100.

### **Serial Output**

The temperature value is printed in Celsius every second.

**delay(1000);**

Adds a 1-second delay between readings.