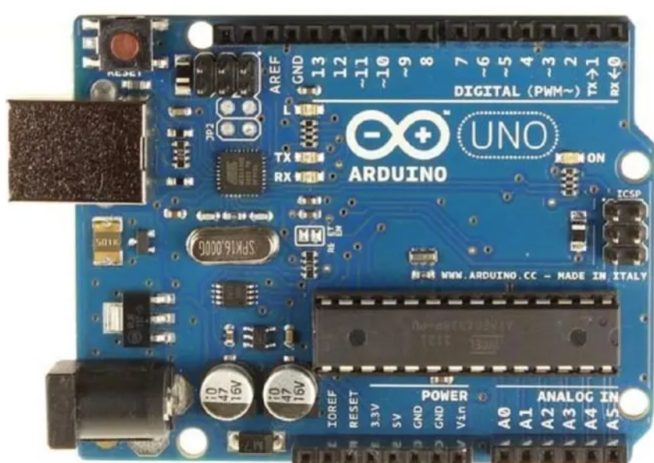


Objective: Measure the room temperature and display it on a 4-digit 7-segment display.

Assembly diagram



Wiring section

- Draw the cables on the diagram to connect the power supplies for the temperature sensor (3.3V and GND) and the data pin to digital pin D2 on the Arduino board.
- Draw the cables on the diagram to connect the display power supplies (5V and GND), the DIO pin to the Arduino digital pin D3, and the CLK pin to the Arduino digital pin D4.
- Connect the Arduino board to the computer using the USB cable.

Encoding section

- Launch the Arduino software.
- Select the Arduino Uno board and the port corresponding to your board.
- Install the OneWire, DallasTemperature, and Grove 4 Digits Display libraries.
- Load the next program and save.
- Compile and upload the program to the Arduino board.

Explain the result

File

```
#include <OneWire.h>
#include <DallasTemperature.h>
#include "TM1637.h"

#define ONE_WIRE_BUS 2
#define CLK 4
#define DIO 3

OneWire oneWire(ONE_WIRE_BUS);
DallasTemperature sensors(&oneWire);
TM1637 display(CLK, DIO);

void setup() {
    sensors.begin();
    display.init();
    display.set(3);
}

void loop() {
    sensors.requestTemperatures();
    float tempC = sensors.getTempCByIndex(0);

    int entier = (int)tempC;
    int decimale = (int)((tempC - entier) * 10);

    display.display(0, (entier / 10) % 10);
    display.display(1, entier % 10);
    display.point(true);
    display.display(2, decimale);
    display.display(3, 12);

    delay(1000);
}
```