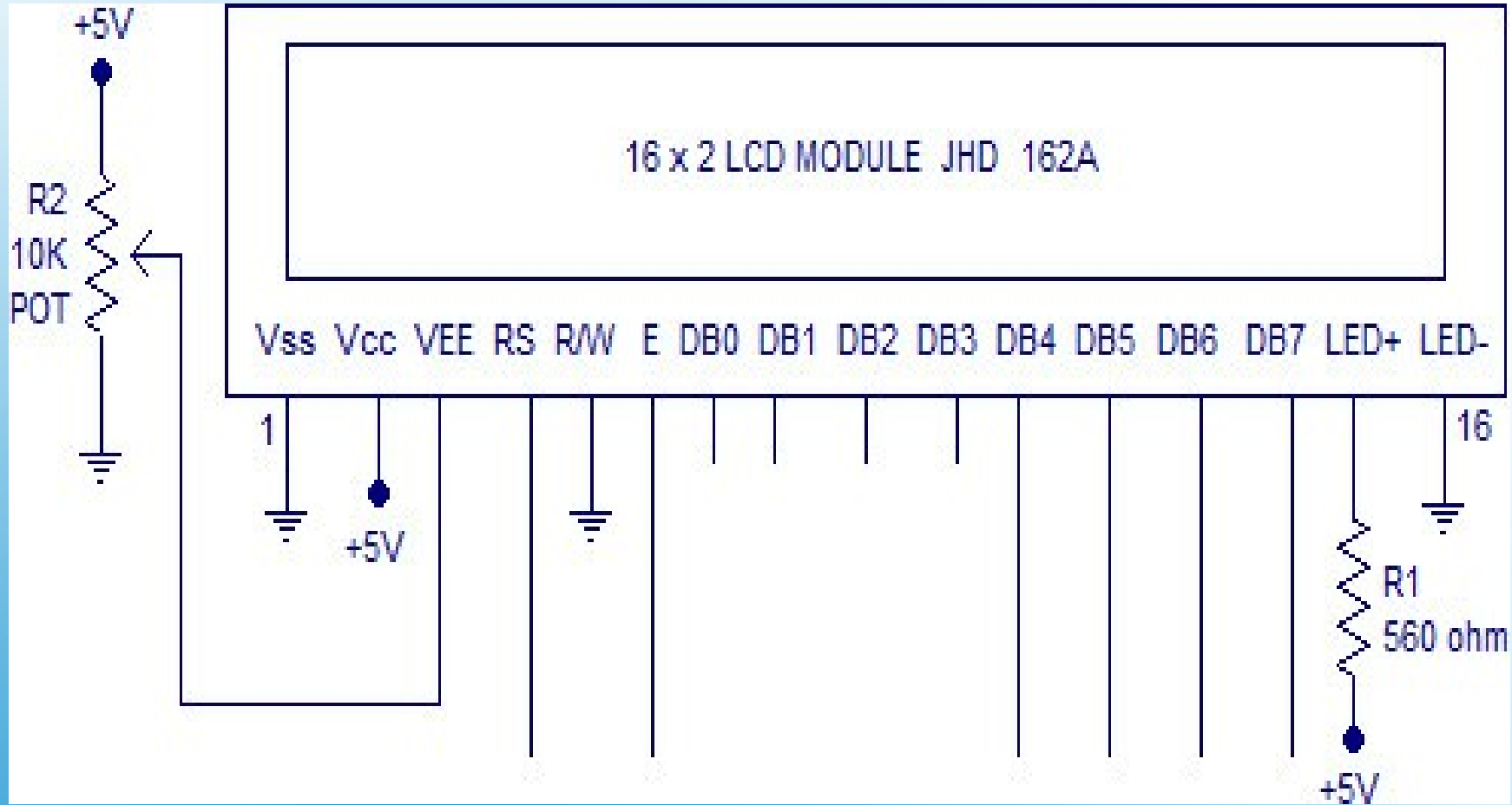# We will use:

- Arduino UNO board

- LCD

- Temperature sensor

- Tilt sensor

- Potentiometer

- Push button

- Wires, resistors, ...

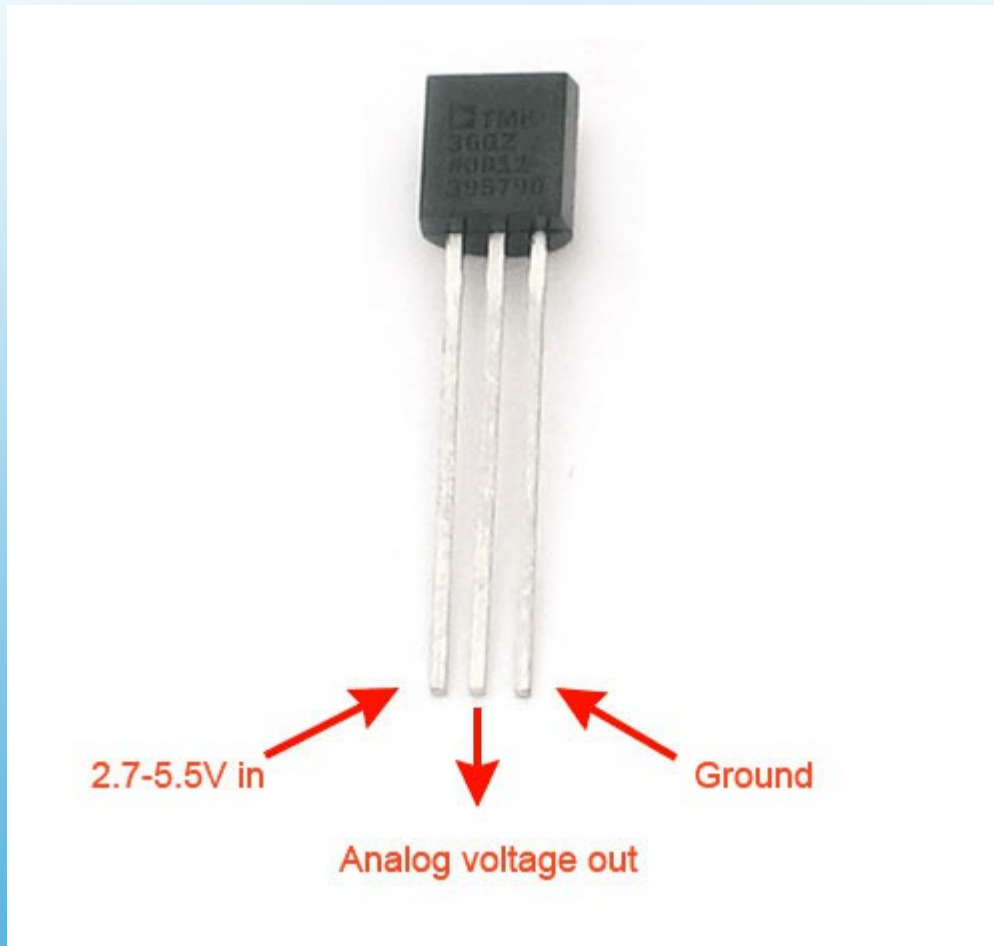**Temperature and crystal ball readings**

We will use LiquidCrystal library to operate with the display.
Here you can find all the functions of the library: https://www.arduino.cc/lcd

LCD display

2.7-5.5V in

Ground

Analog voltage out

Temperature sensor TMP36 changes its voltage output depending on the temperature of the component.

Features:
- Voltage Input: 2.7 V to 5.5 VDC
- 10 mV/°C scale factor
- ±2°C accuracy over temperature
- ±0.5°C linearity
- Operating Range: −40°C to +125°C

Temperature Sensor

Tilt sensor is a type of switch that will open or close depending on its orientation. Typically they are hollow cylinders with a metal ball inside that will make a connection across two leads when tilted in the proper direction.

It will help us replicate the motion of shaking the crystal ball for answers (we will have 8 possible responses).
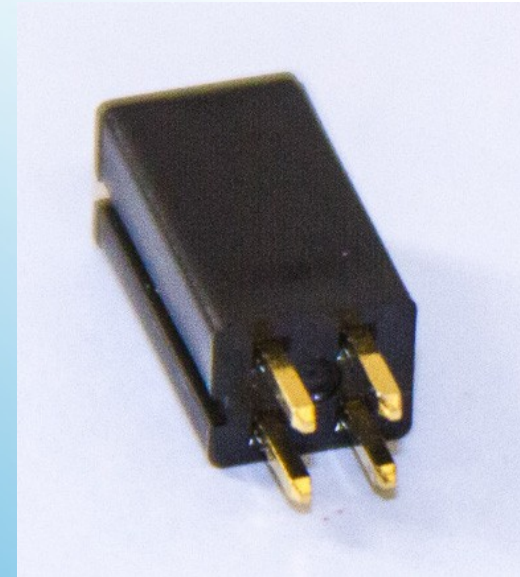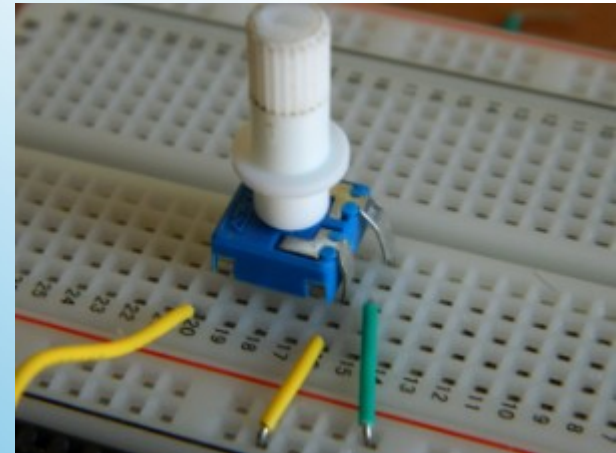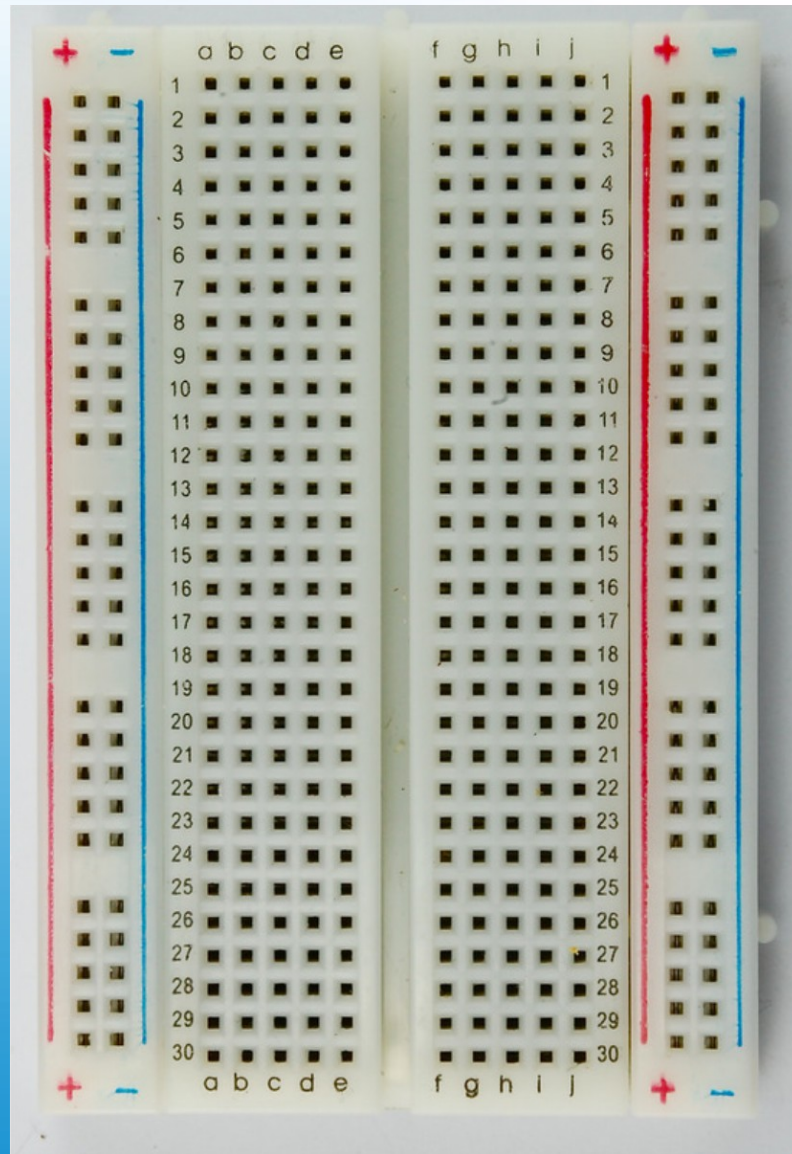

Tilt sensor

Potentiometer is a variable resistor with three pins.

Two of the pins we will connect to voltage and ground.

The middle pin, or wiper, moves across the resistor, dividing it into two halves, and will give us the difference in voltage as we turn the knob.
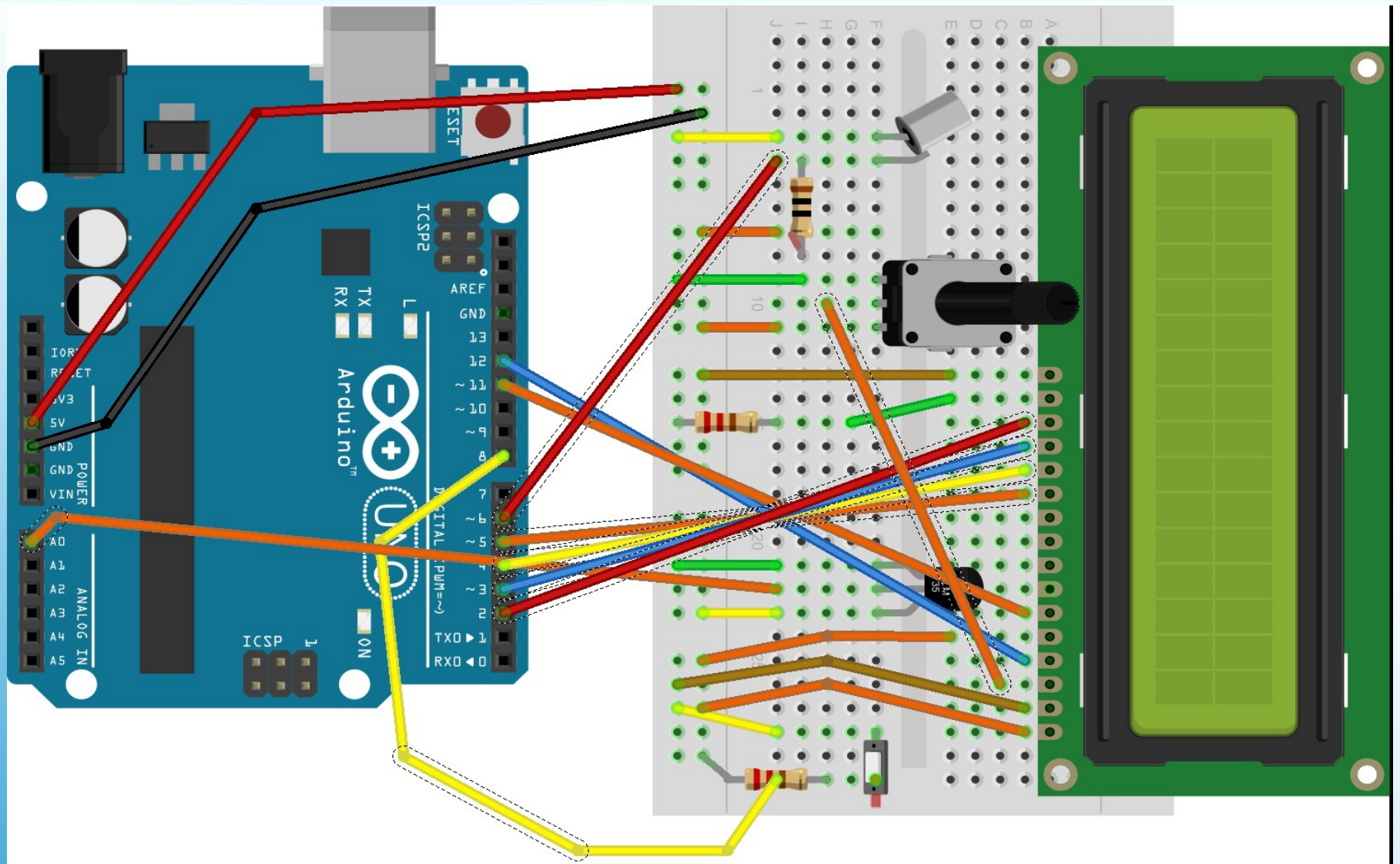

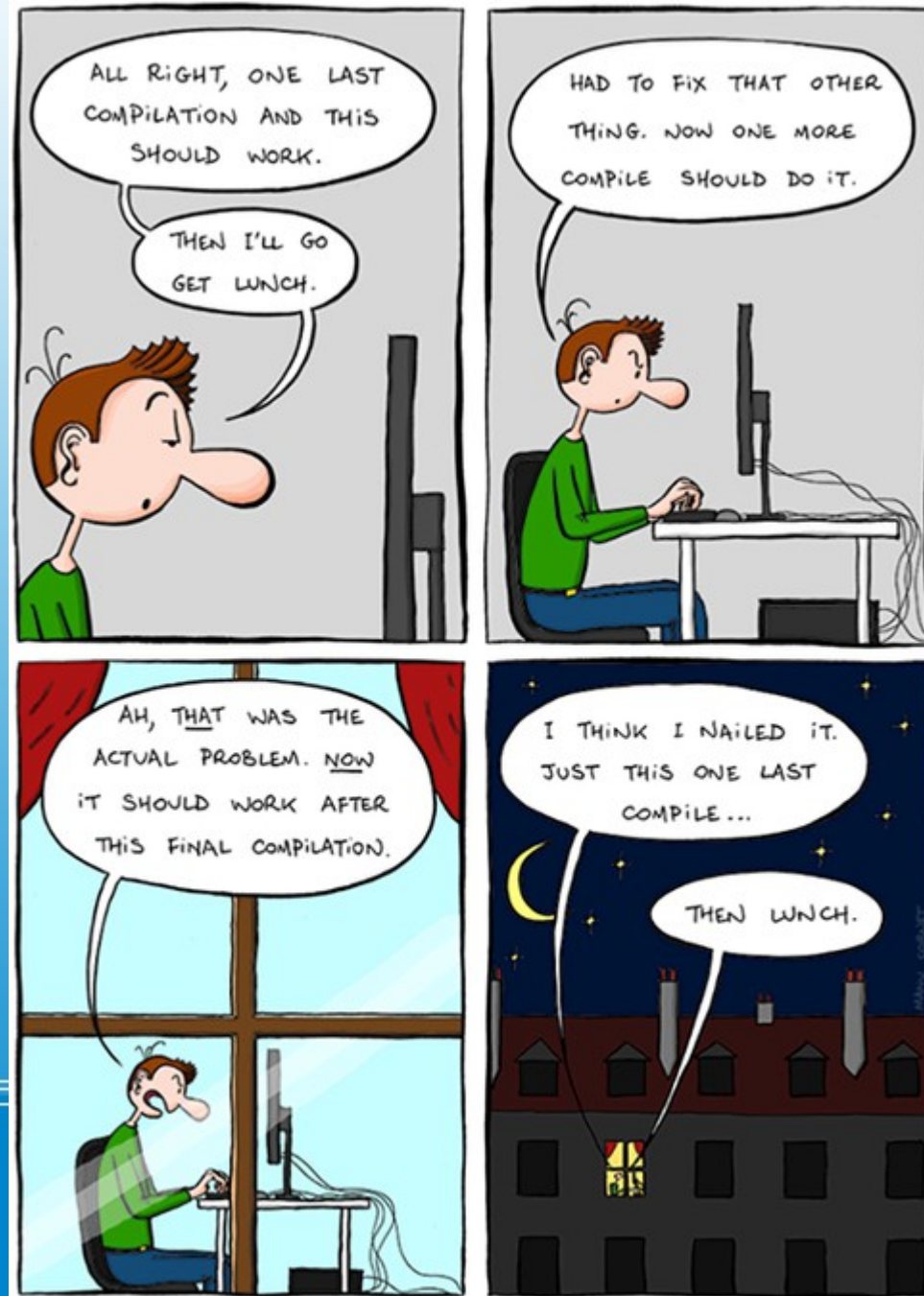# Potentiometer

Arduino breadboard

Temperature sensor wiring

Wiring the Arduino and the breadboard

Now let's proceed to coding!

Coding