

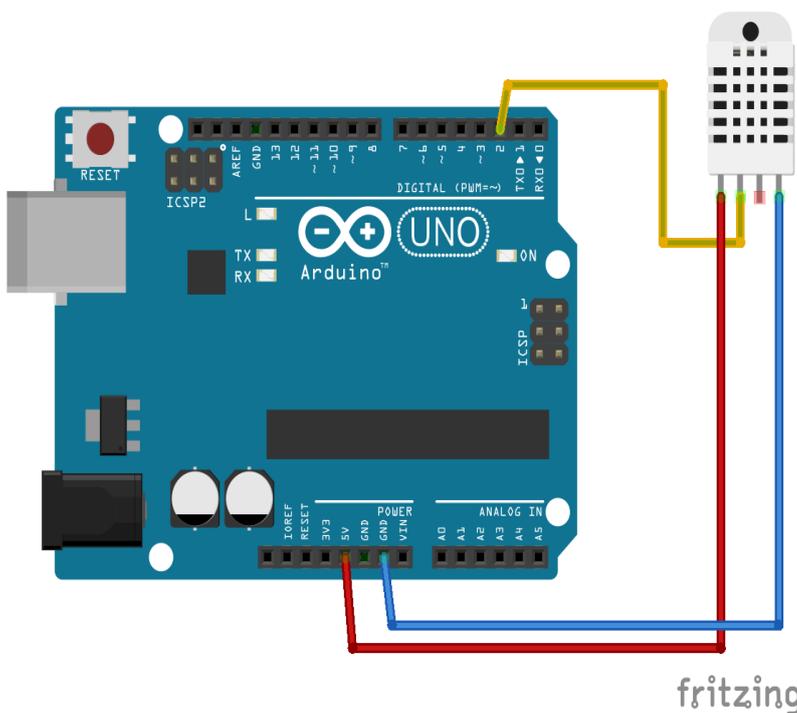


## Practice 8 – Measuring humidity and temperature levels with the DHT-11 sensor

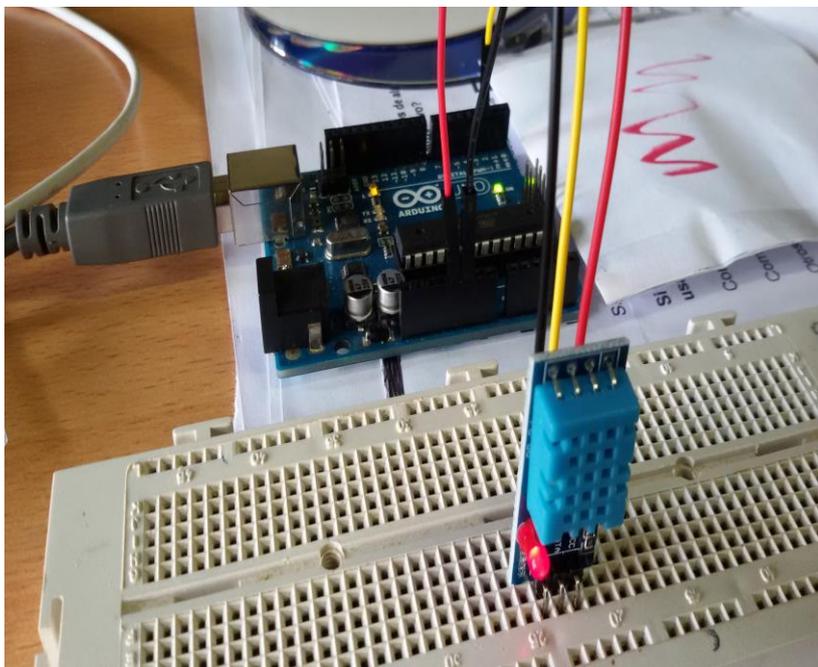
To carry out this practice we will use a protoboard board, a DHT-11 sensor and an Arduino board. It is to connect it as it indicates the connection system that appears in the scheme to receive data and to monitor them through the serial port.

Before entering the program in the Arduino IDE, you have to download the corresponding library and unzip it into the program's libraries folder. A download address is <https://github.com/rDuinoStar/rDHT11--DHT11-Arduino-Lib>.

Once downloaded, the library must be loaded into the program, followed by the rest of the instructions.



The sequence can be seen in the following flowchart:



The Arduino IDE instructions that will allow us to perform this sequence are the ones that appear in

the image below:

```
sensorDHT11
#include <rDHT11.h>

int rDHT11pin = 2;
rDHT11 DHT11(rDHT11pin); // Llamada a la librería e inicialización del sensor DHT11

void setup() {

  Serial.begin(9600); // Inicialización del monitor serie
  //DHT11.begin();

}

void loop() {

  int result = DHT11.update();
  float h = DHT11.getHumidity();
  float t = DHT11.getCelsius(); //Lectura de los datos de humedad y temperatura

  Serial.print("Humedad: "); //Muestra de los datos en el monitor serie
  Serial.print(h);
  Serial.println(" %");
  Serial.print("Temperatura: ");
  Serial.print(t);
  Serial.println(" °C");
  delay(3000);

}
```

```
COM3 (Arduino Uno)
|
Temperatura: 19.00 C
Humedad: 51.00 %
Temperatura: 19.00 C
Humedad: 51.00 %
Temperatura: 19.00 C
Humedad: 52.00 %
Temperatura: 20.00 C
Humedad: 52.00 %
Temperatura: 20.00 C
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Humedad: 52.00 %
Temperatura: 21.00 C
Humedad: 52.00 %
Temperatura: 21.00 C

[Enviar]
[Autoscroll] [Sin ajuste de línea] [9600 baudio]
```