Prática 07:
DHT11 e Servo 9g

Disciplina: **Introdução à Internet das Coisas - IMD0902**

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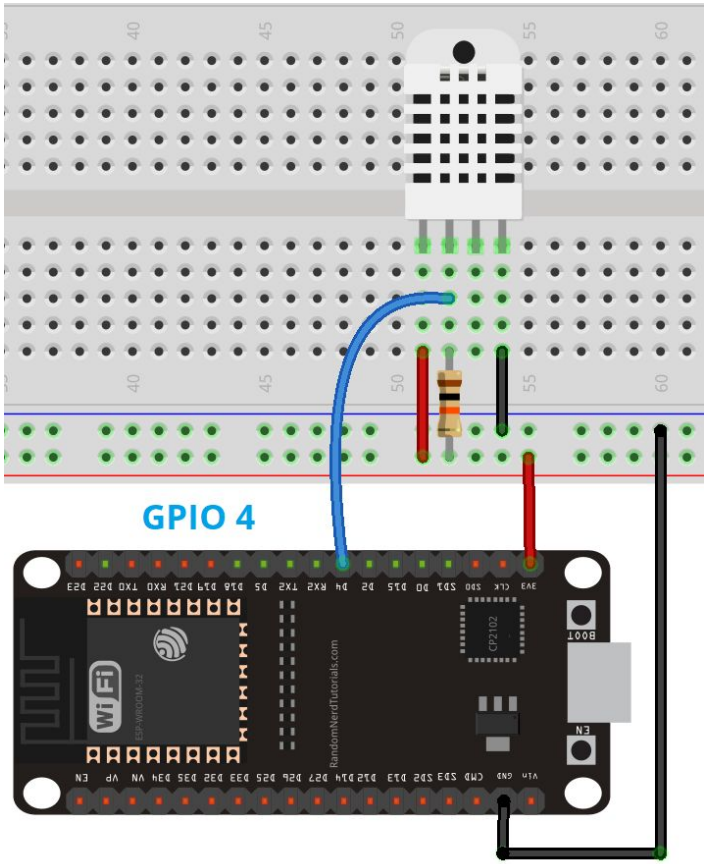
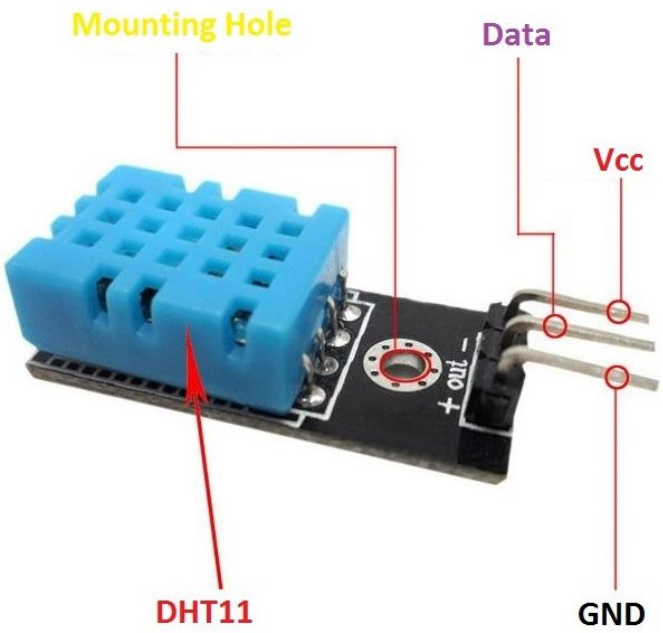
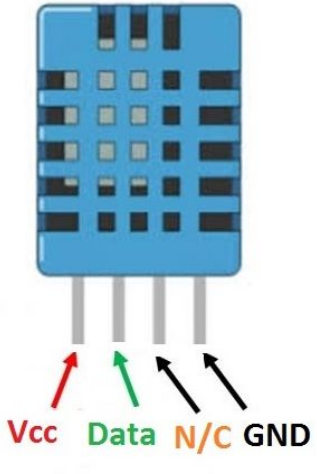
Experimento 01: dht11

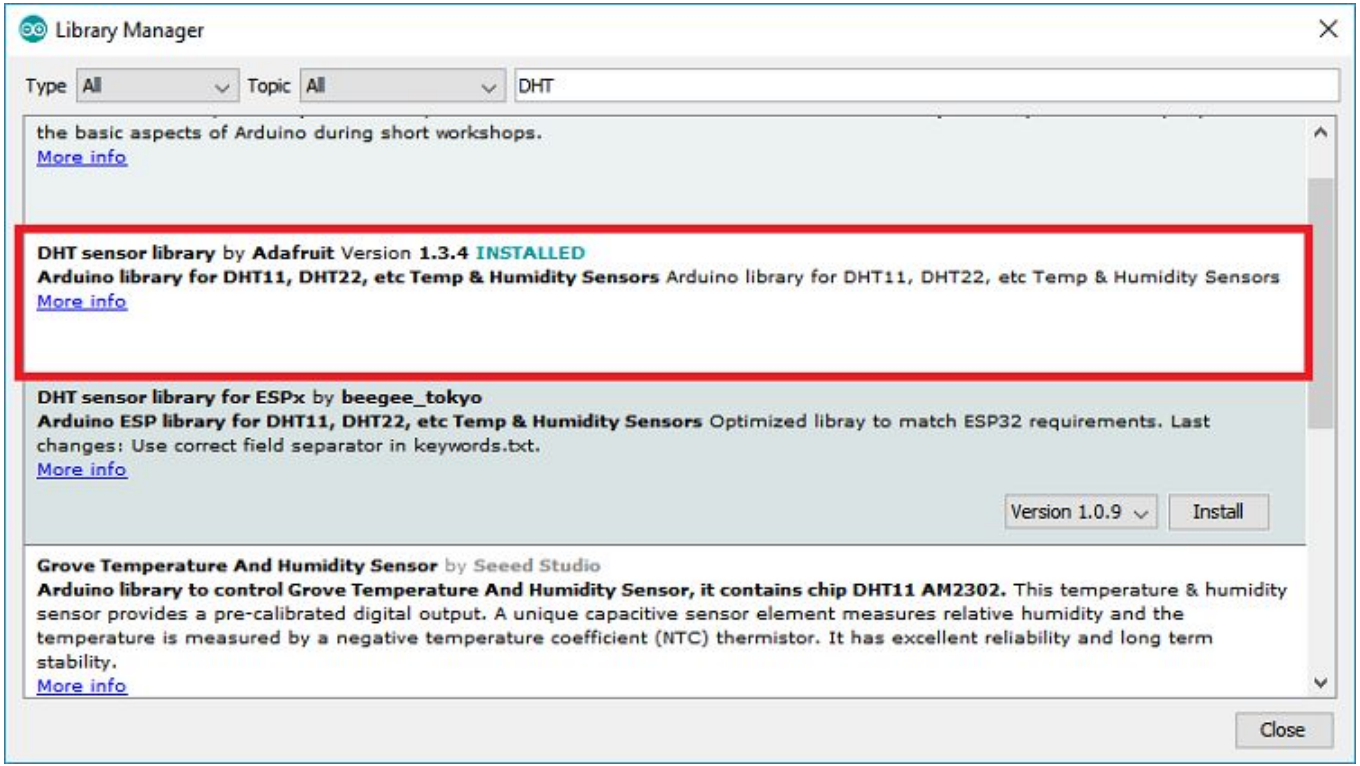
	DHT11	DHT22
		
Temperature range	0 to 50 °C +/-2 °C	-40 to 80 °C +/-0.5°C
Humidity range	20 to 90% +/-5%	0 to 100% +/-2%
Resolution	Humidity: 1% Temperature: 1°C	Humidity: 0.1% Temperature: 0.1°C
Operating voltage	3 – 5.5 V DC	3 – 6 V DC
Current supply	0.5 – 2.5 mA	1 – 1.5 mA
Sampling period	1 second	2 seconds
Price	$1 to $5	$4 to $10
Where to buy	Check prices	Check prices

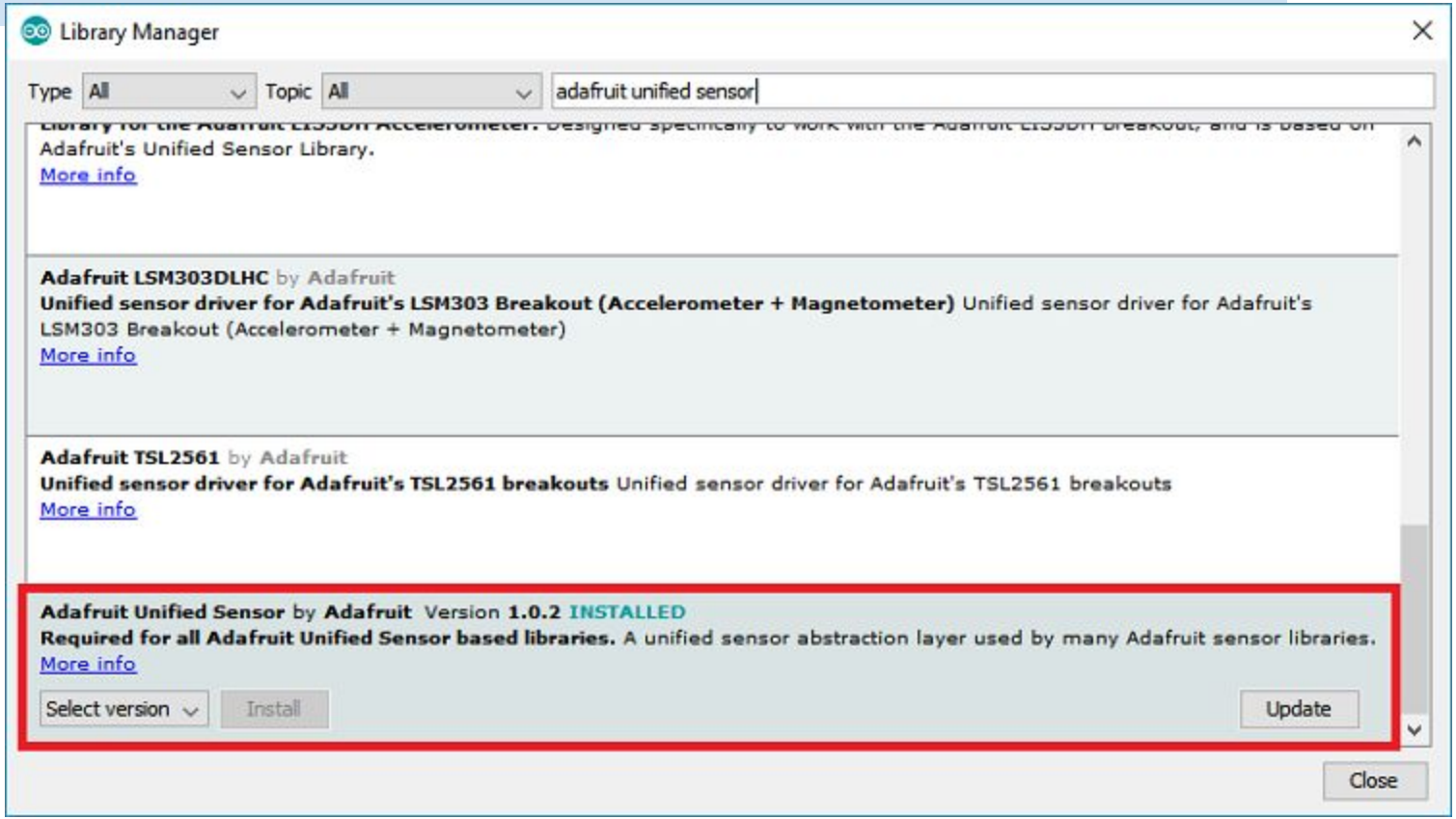
Experimento 01: dht11








Library Manager
Type All
Topic All
DHT
the basic aspects of Arduino during short workshops.
More info
DHT sensor library by Adafruit Version 1.3.4 INSTALLED
Arduino library for DHT11, DHT22, etc Temp & Humidity Sensors Arduino library for DHT11, DHT22, etc Temp & Humidity Sensors
More info
DHT sensor library for ESPx by beegee_tokyo
Arduino ESP library for DHT11, DHT22, etc Temp & Humidity Sensors Optimized libray to match ESP32 requirements. Last changes: Use correct field separator in keywords.txt.
More info
Version 1.0.9
Install
Grove Temperature And Humidity Sensor by Seeed Studio
Arduino library to control Grove Temperature And Humidity Sensor, it contains chip DHT11 AM2302. This temperature & humidity sensor provides a pre-calibrated digital output. A unique capacitive sensor element measures relative humidity and the temperature is measured by a negative temperature coefficient (NTC) thermistor. It has excellent reliability and long term stability.
More info
Close


Library Manager
Type All
Topic All
adafruit unified sensor
Adafruit's Unified Sensor Library.
More info
Adafruit LSM303DLHC by Adafruit
Unified sensor driver for Adafruit's LSM303 Breakout (Accelerometer + Magnetometer) Unified sensor driver for Adafruit's LSM303 Breakout (Accelerometer + Magnetometer)
More info
Adafruit TSL2561 by Adafruit
Unified sensor driver for Adafruit's TSL2561 breakouts Unified sensor driver for Adafruit's TSL2561 breakouts
More info
Adafruit Unified Sensor by Adafruit Version 1.0.2 INSTALLED
Required for all Adafruit Unified Sensor based libraries. A unified sensor abstraction layer used by many Adafruit sensor libraries.
More info
Select version
Install
Update
Close

Exemplo

File->Examples->DHT sensor Library->DHTtester

```
#define DHTPIN 4     // Digital pin connected to the DHT sensor
```

```
//#define DHTTYPE DHT11   // DHT 11
#define DHTTYPE DHT22   // DHT 22  (AM2302), AM2321
//#define DHTTYPE DHT21   // DHT 21 (AM2301)
```

```
DHT dht(DHTPIN, DHTTYPE);
```

```
dht.begin();
```

```
float h = dht.readHumidity();
// Read temperature as Celsius (the default)
float t = dht.readTemperature();
```

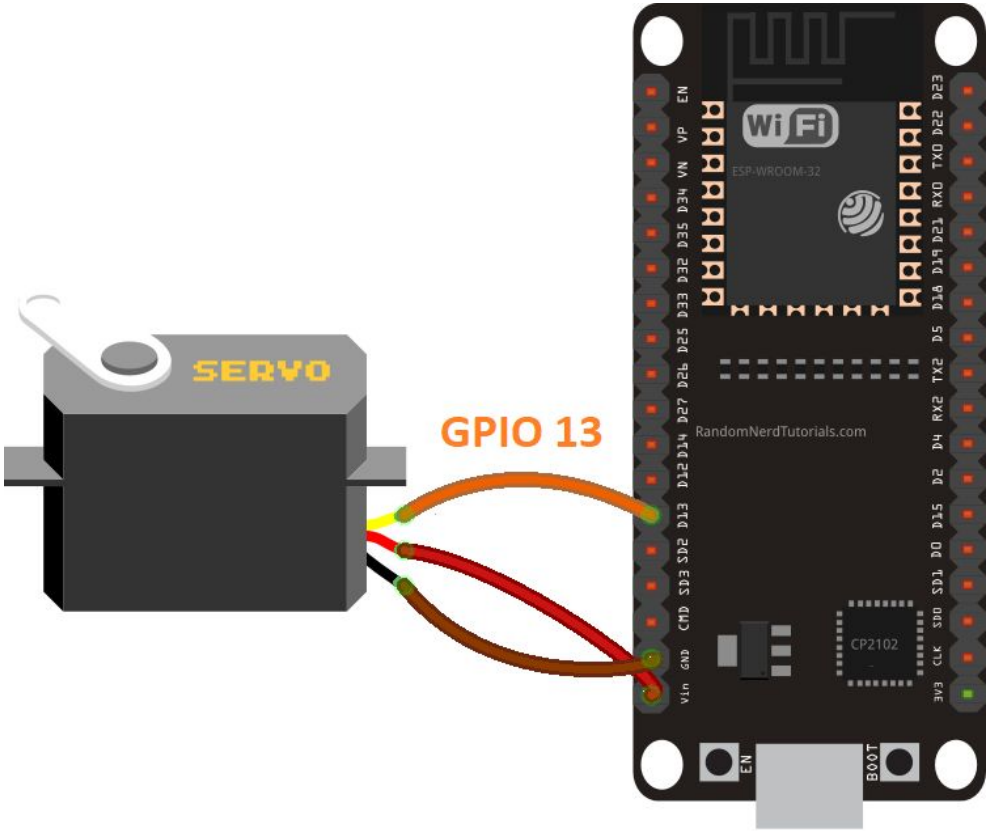
Link de apoio

https://randomnerdtutorials.com/esp32-dht11-dht22-temperature-humidity-sensor-arduino-ide/

Servo 9g

```
#include <Servo.h>
#define SERVO_PIN 13 // ESP32 pin GIOP26 connected to servo motor
Servo servoMotor;
void setup() {
  servoMotor.attach(SERVO_PIN);  // attaches the servo on ESP32 pin
}
void loop() {
  // rotates from 0 degrees to 180 degrees
  for (int pos = 0; pos <= 180; pos += 1) {
    // in steps of 1 degree
    servoMotor.write(pos);
    delay(15); // waits 15ms to reach the position
  }
  // rotates from 180 degrees to 0 degrees
  for (int pos = 180; pos >= 0; pos -= 1) {
    servoMotor.write(pos);
    delay(15); // waits 15ms to reach the position
  }
}
```

Servo 9g


SERVO
GPIO 13
RandomNerdTutorials.com
ESP-WROOM-32
CP2102
EN
BOOT