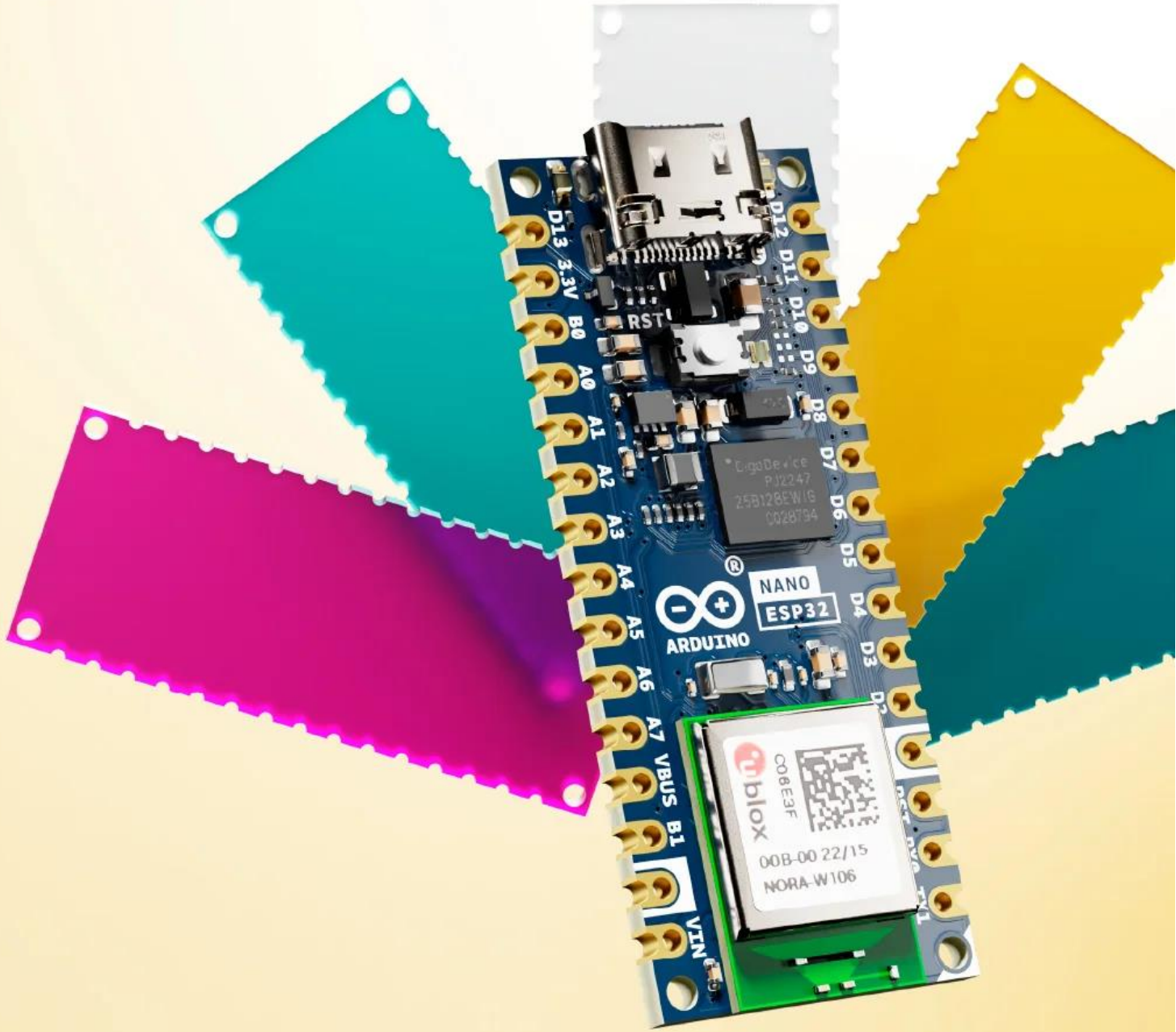
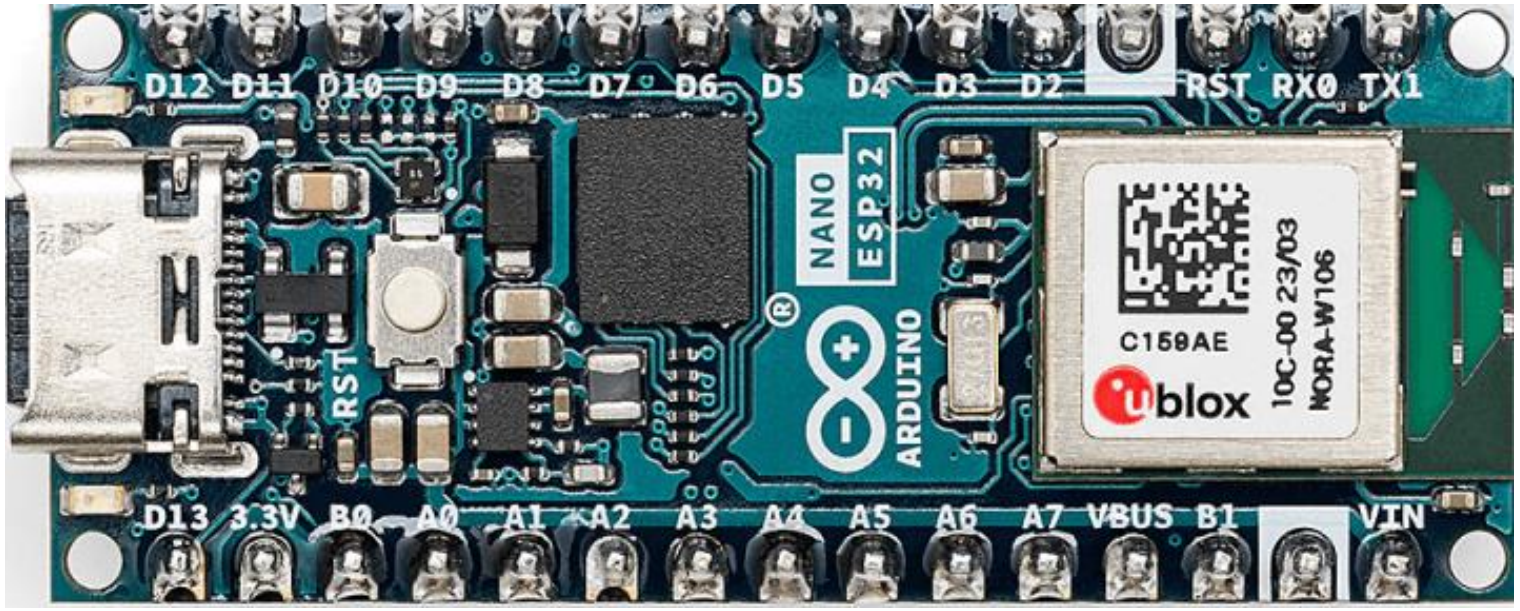
Episode 12 ตอนที่ 5 การส่งค่าจาก Webserver มาแสดงผลผ่าน WiFi โดยใช้ Arduino Nano ESP32

ARDUINO

NANO ESP32



WiFi



- **Connectivity**
  - Wi-Fi®
  - Bluetooth® LE
  - Built-in antenna
  - 2.4 GHz transmitter/receiver
  - Up to 150 Mbps

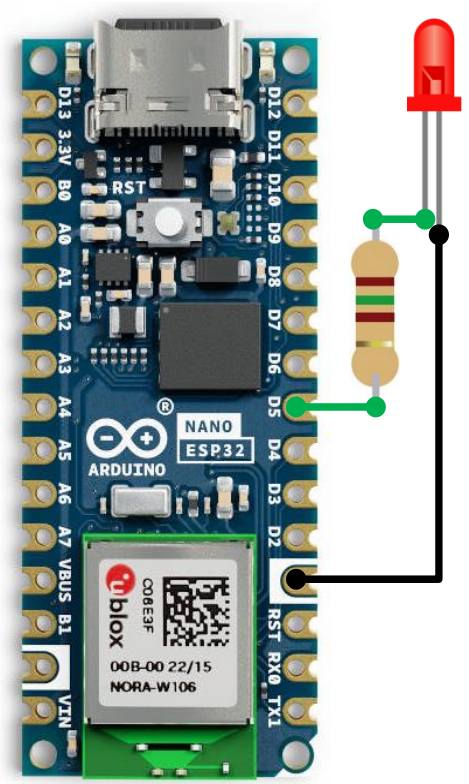
6.2 Wi-Fi®

The NORA-W106-10B module supports the Wi-Fi® 4 IEEE 802.11 standards b/g/n, with an output power EIRP at up to 10 dBm. The max range for this module is 500 meters.

- 802.11b: 11 Mbit/s
- 802.11g: 54 Mbit/s
- 802.11n: 72 Mbit/s max at HT-20 (20 MHz), 150 Mbit/s max at HT-40 (40 MHz)

SSID: TP-Link_D50B
Password: 41624151

IP Address:
192.168.0.116



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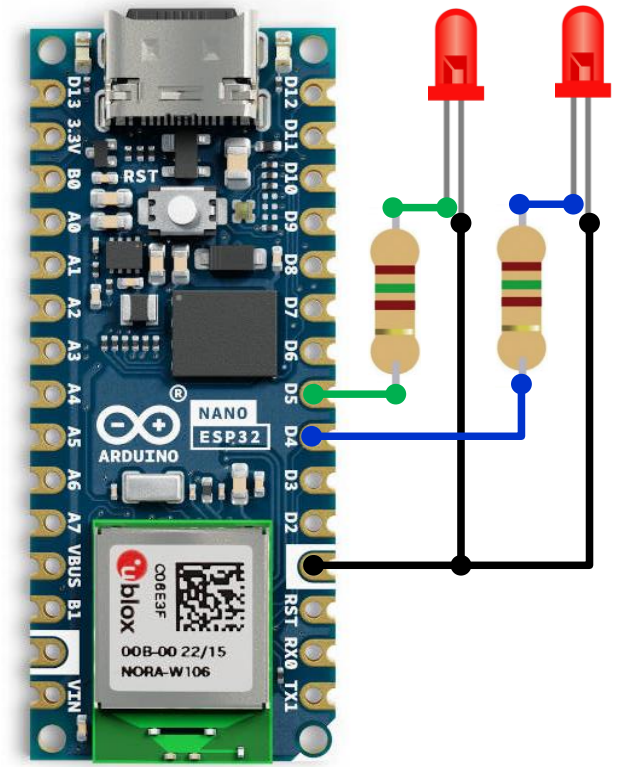
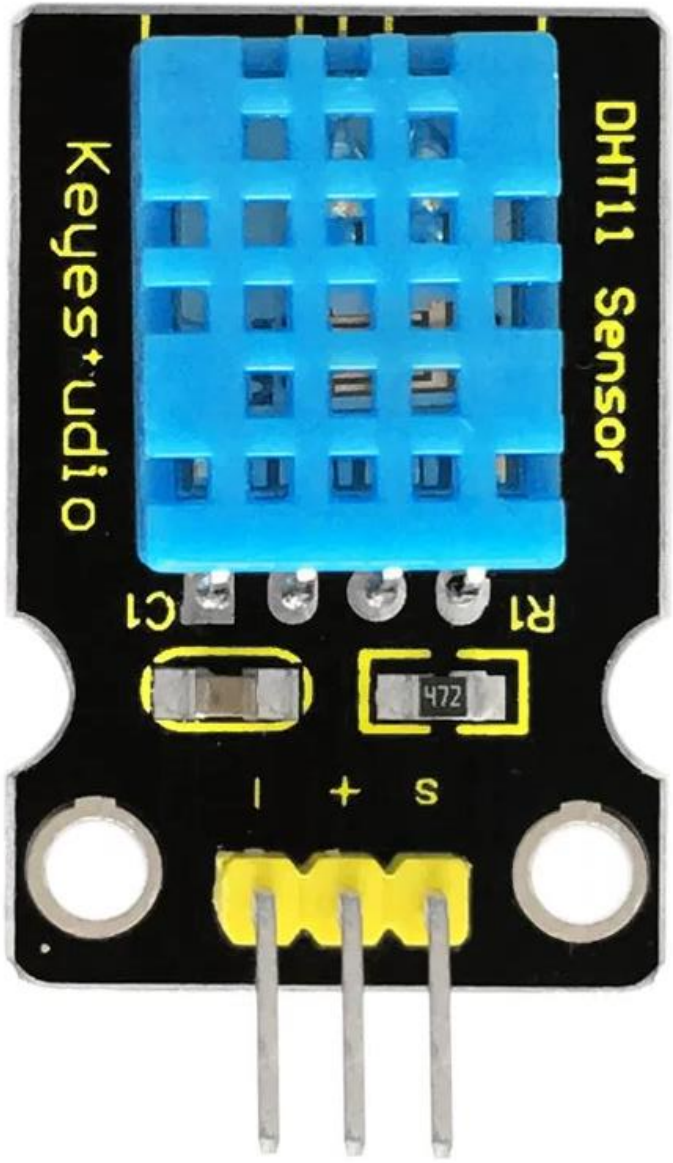


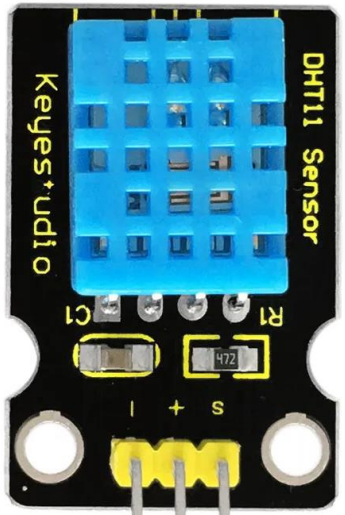


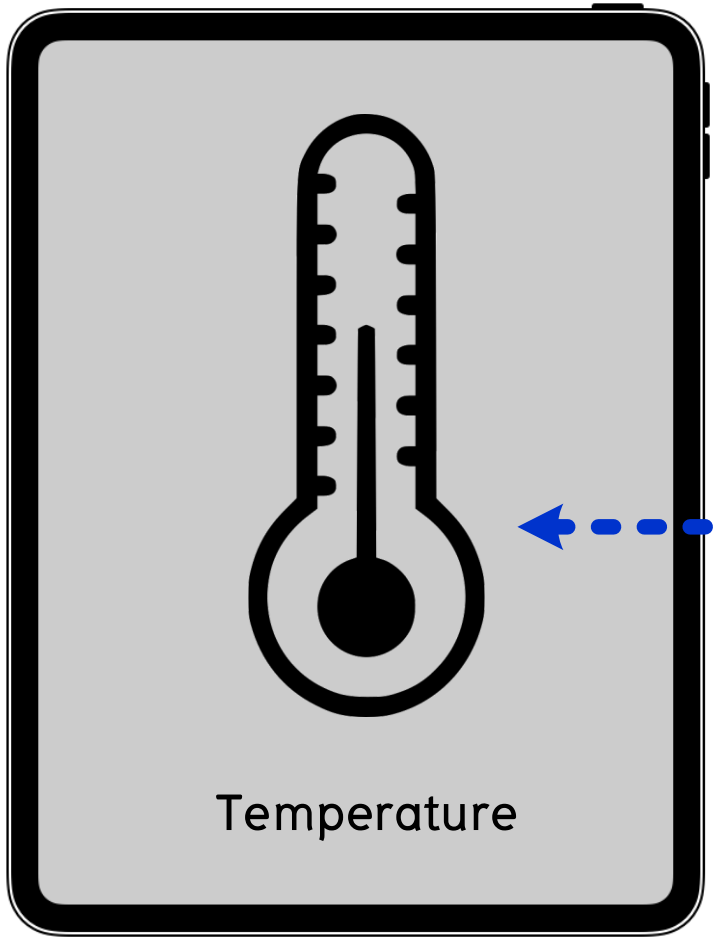
DHT11 Module

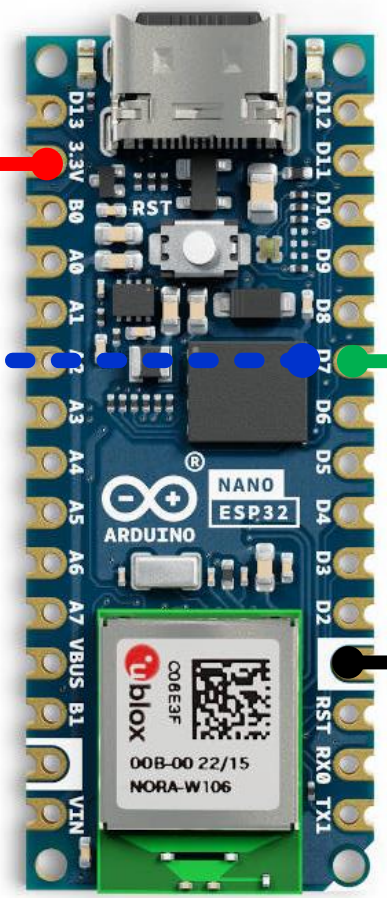
SSID: TP-Link_D50B

Password: 41624151

DHT11







DHT11_Test.ino

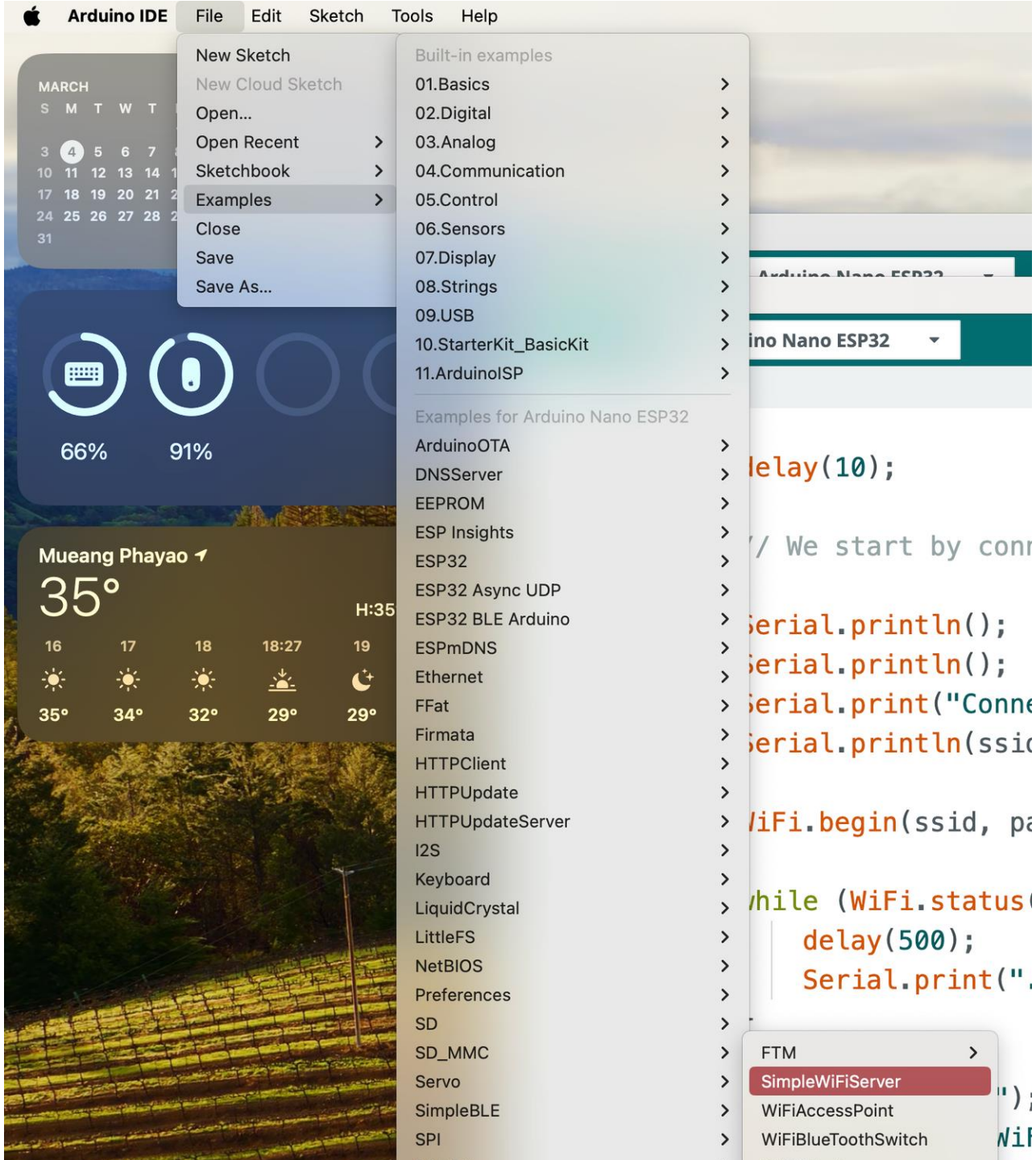
```
1  #include <dhtnew.h>
2  DHTNEW mySensor(5); // เชื่อมต่อเซ็นเซอร์ที่ขา D5
3  void setup()
4  {
5    Serial.begin(115200); // อัตราบอดเรตอยู่ที่ 115200
6  }
7  void loop()
8  {
9      mySensor.read();
10     Serial.print("ค่าความชื้นในอากาศ: ");
11     Serial.print(mySensor.getHumidity(), 2);
12     Serial.println("  %");
13     Serial.print("ค่าอุณหภูมิของอากาศ: ");
14     Serial.print(mySensor.getTemperature(), 2);
15     Serial.println("  องศา");
16     delay(1000);
17 }
```

โปรแกรมทดสอบโมดูล
เซ็นเซอร์ DHT11

https://arduinogetstarted.com/tutorials/arduino-temperature-via-web

Arduino Code - Simple Web Page

```
/*
 * Created by ArduinoGetStarted.com
 *
 * This example code is in the public domain
 *
 * Tutorial page: https://arduinogetstarted.com/tutorials/arduino-temperature-via-web
 */

#include <WiFiS3.h>
#include <OneWire.h>
#include <DallasTemperature.h>

const char ssid[] = "YOUR_WIFI";  // change your network SSID (name)
const char pass[] = "YOUR_WIFI_PASSWORD";   // change your network password (use for WPA, or use as key for WE

const int SENSOR_PIN = 6;  // Arduino pin connected to DS18B20 sensor's DQ pin

OneWire oneWire(SENSOR_PIN);              // setup a oneWire instance
DallasTemperature tempSensor(&oneWire);  // pass oneWire to DallasTemperature library

int status = WL_IDLE_STATUS;

WiFiServer server(80);

float getTemperature() {
  tempSensor.requestTemperatures();                    // send the command to get temperatures
  float tempCelsius = tempSensor.getTempCByIndex(0);  // read temperature in Celsius
  return tempCelsius;
```



SimpleWiFiServer