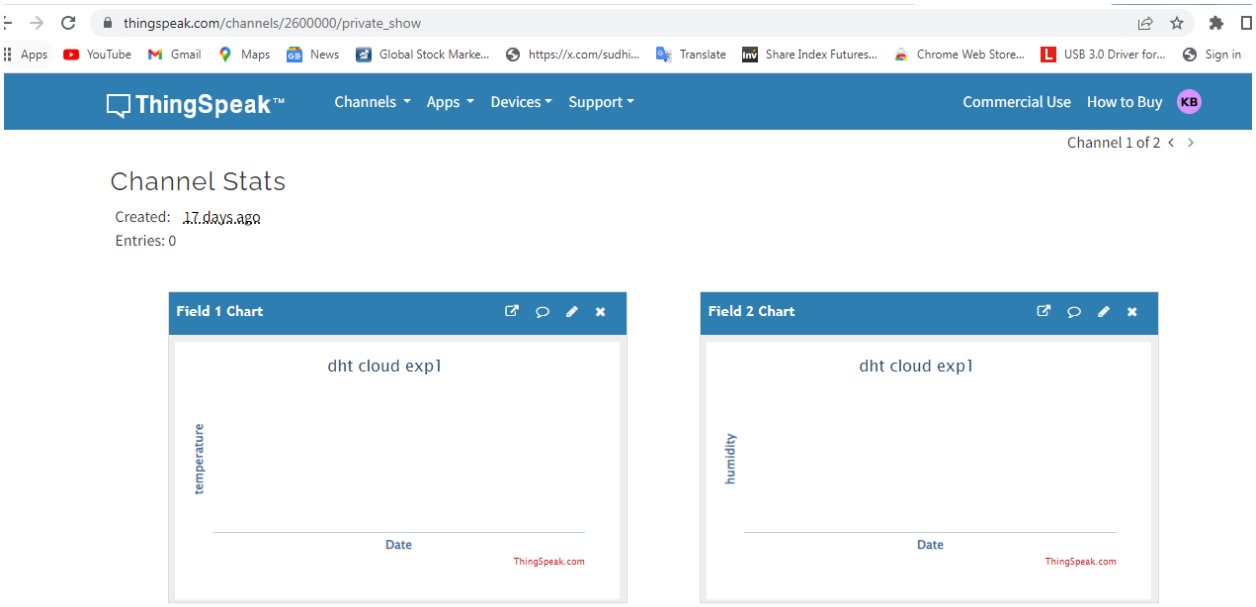
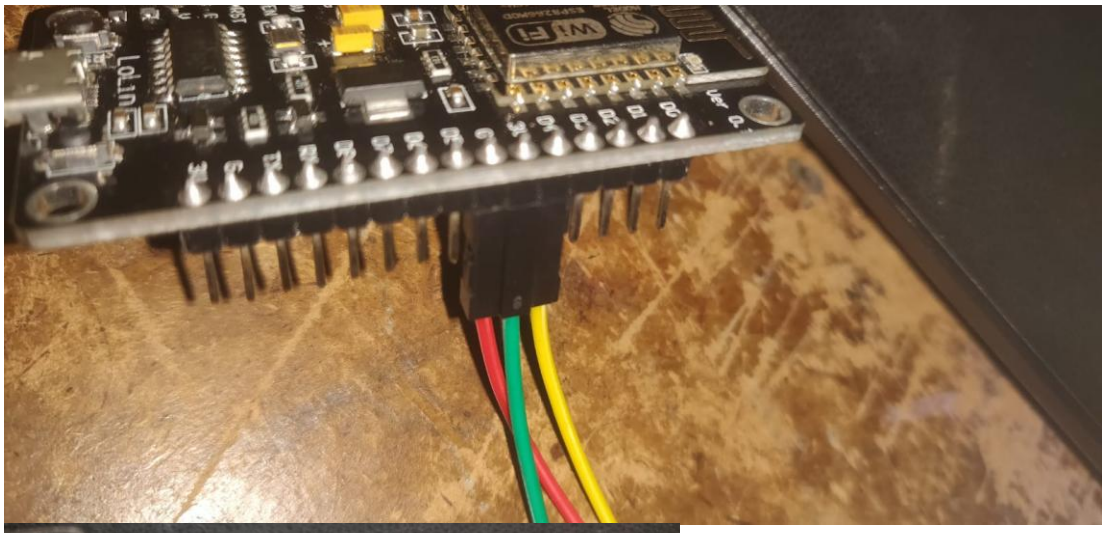
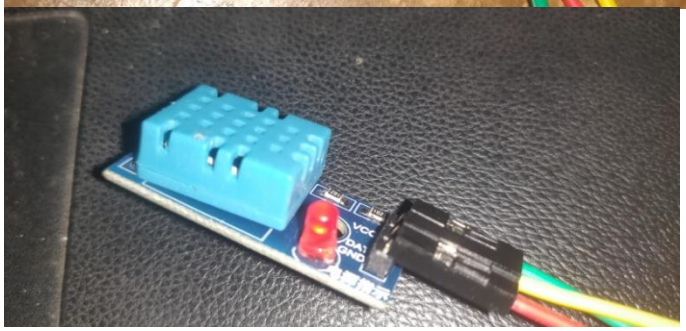
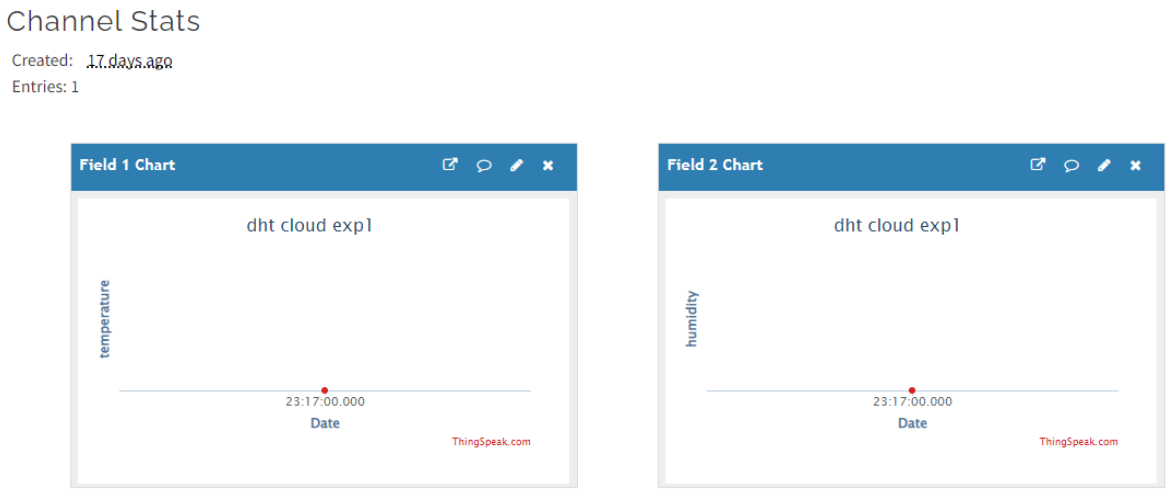
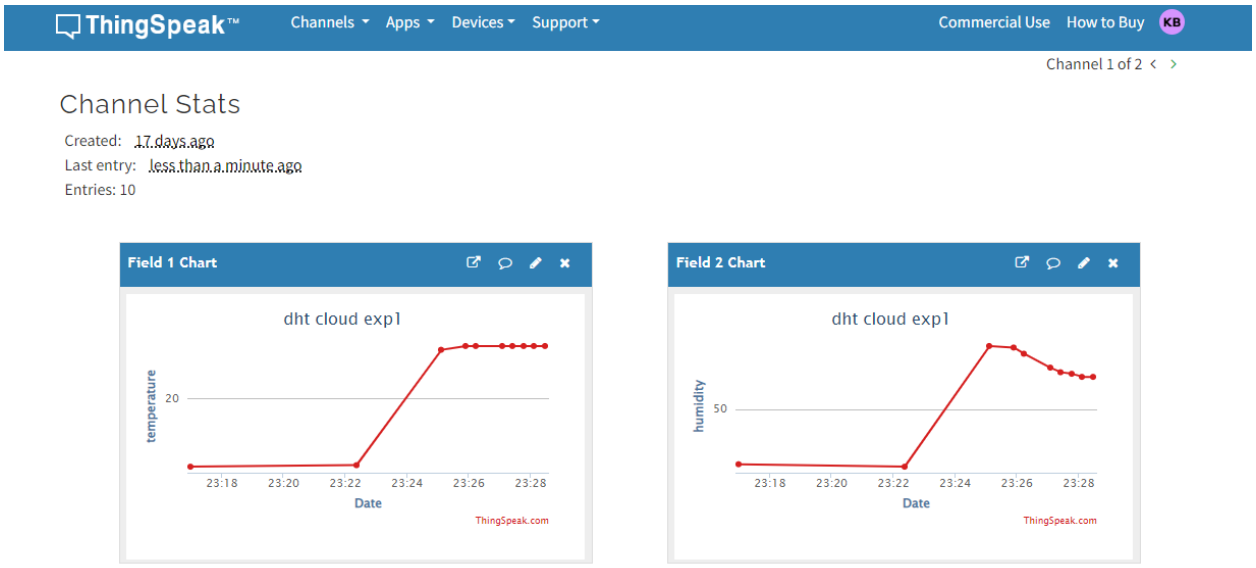

thingspeak.com/channels/2600000/private_show
ThingSpeak™
Channels
Apps
Devices
Support
Commercial Use
How to Buy
KB
Channel 1 of 2
Channel Stats
Created: 17 days ago
Entries: 0
Field 1 Chart
dht cloud exp1
temperature
Date
ThingSpeak.com
Field 2 Chart
dht cloud exp1
humidity
Date
ThingSpeak.com










```
#include <ESP8266WiFi.h>

#include <Adafruit_Sensor.h>

#include <DHT.h>


// Replace with your network credentials

const char *ssid = "OnePlus 6";  // Replace with your Wi-Fi SSID
```

```
const char *password = "12345678";  // Replace with your Wi-Fi password

// Replace with your ThingSpeak Channel details
const char* server = "api.thingspeak.com";
const char* apiKey = "6PDYBUJL3R6NRWFZ";

#define DHTPIN D4          // DHT11 data pin connected to D4
#define DHTTYPE DHT11      // Define sensor type

DHT dht(DHTPIN, DHTTYPE);

void setup() {
  Serial.begin(115200);
  delay(10);
  dht.begin();

  // Connect to Wi-Fi
  WiFi.begin(ssid, password);
  Serial.print("Connecting to WiFi");
  while (WiFi.status() != WL_CONNECTED) {
    delay(500);
```

```
    Serial.print(".");
  }
  Serial.println("\nConnected to WiFi");
}

void loop() {
  float h = dht.readHumidity();
  float t = dht.readTemperature();

  // Check if any reads failed and exit early (to retry).
  if (isnan(h) || isnan(t)) {
    Serial.println("Failed to read from DHT sensor!");
    return;
  }

  // Connect to ThingSpeak
  WiFiClient client;
  if (client.connect(server, 80)) {
    String url = String("/update?api_key=") + apiKey + "&field1=" + String(t) + "&field2=" +
String(h);
    client.print(String("GET ") + url + " HTTP/1.1\r\n" +
```

```
            "Host: " + server + "\r\n" +
            "Connection: close\r\n\r\n");

    // Read and print the response from ThingSpeak
    while(client.available()){
      String line = client.readStringUntil('\r');
      Serial.print(line);
    }
    Serial.println();
    client.stop();
  } else {
    Serial.println("Connection to ThingSpeak failed!");
  }

  delay(20000);  // Update every 20 seconds
}
```

step-by-step guide to get input from a DHT11 sensor and upload it to ThingSpeak using a LoLin NodeMCU V3 (ESP8266).

Step-by-Step Instructions

1. Gather Materials

- LoLin NodeMCU V3 (ESP8266)
- DHT11 Sensor
- Breadboard and Jumper Wires
- USB cable to connect NodeMCU to your computer

2. Connect the DHT11 Sensor to NodeMCU

1. **DHT11 Connections:**
    - **VCC (DHT11)** to **3V3 (NodeMCU)**
    - **GND (DHT11)** to **GND (NodeMCU)**
    - **DATA (DHT11)** to **D4 (NodeMCU)**

3. Prepare Your Computer

1. **Install Arduino IDE:**
    - Download and install the Arduino IDE.
2. **Add ESP8266 Board Support:**
    - Open Arduino IDE.
    - Go to **File** > **Preferences**.
    - In the **Additional Boards Manager URLs** field, add:

      http://arduino.esp8266.com/stable/package_esp8266com_index.json

    - Click **OK**.
3. **Install ESP8266 Board:**
    - Go to **Tools** > **Board** > **Boards Manager**.
    - Search for **esp8266** and install it.
4. **Install Libraries:**
    - Go to **Sketch** > **Include Library** > **Manage Libraries...**
    - Search for and install:
        - **DHT sensor library** by Adafruit
        - **Adafruit Unified Sensor** by Adafruit

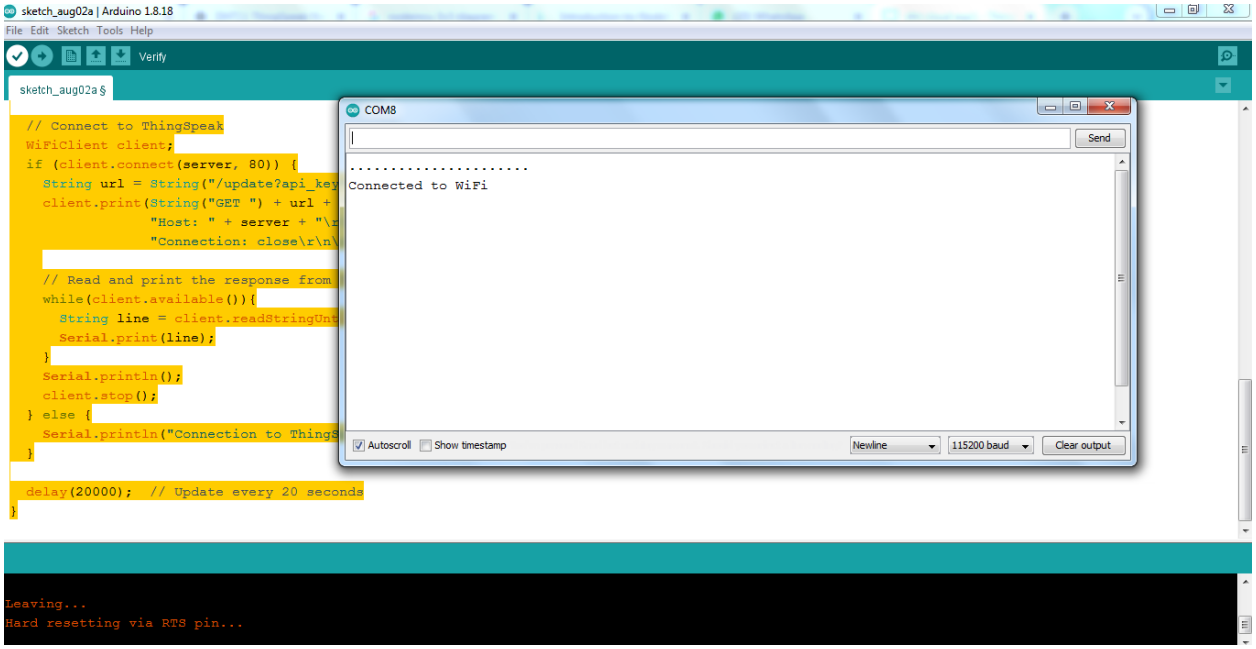
4. Write and Upload the Code

1. **Open Arduino IDE:**
    - Go to **File** > **New** to open a new sketch.
2. **Copy and Paste the Code:**
    1.
    - Replace YOUR_SSID, YOUR_PASSWORD, and YOUR_API_KEY with your WiFi credentials and ThingSpeak API key.
2. **Select the Board and Port:**
    - Go to **Tools** > **Board** and select **NodeMCU 1.0 (ESP-12E Module)**.
    - Go to **Tools** > **Port** and select the port your NodeMCU is connected to.
3. **Upload the Code:**
    - Click the **Upload** button (right arrow icon) in the Arduino IDE.

5. Monitor the Output

1. **Open Serial Monitor:**
    - Go to **Tools** > **Serial Monitor**.
    - Set the baud rate to **115200**.
    - You should see "Connected to WiFi" once the NodeMCU connects to your WiFi.
2. **Check ThingSpeak:**
    - Go to ThingSpeak.
    - Log in and navigate to your channel.
    - You should see temperature and humidity data being updated every 20 seconds.

That's it! You've successfully set up your DHT11 sensor with NodeMCU and uploaded data to ThingSpeak.

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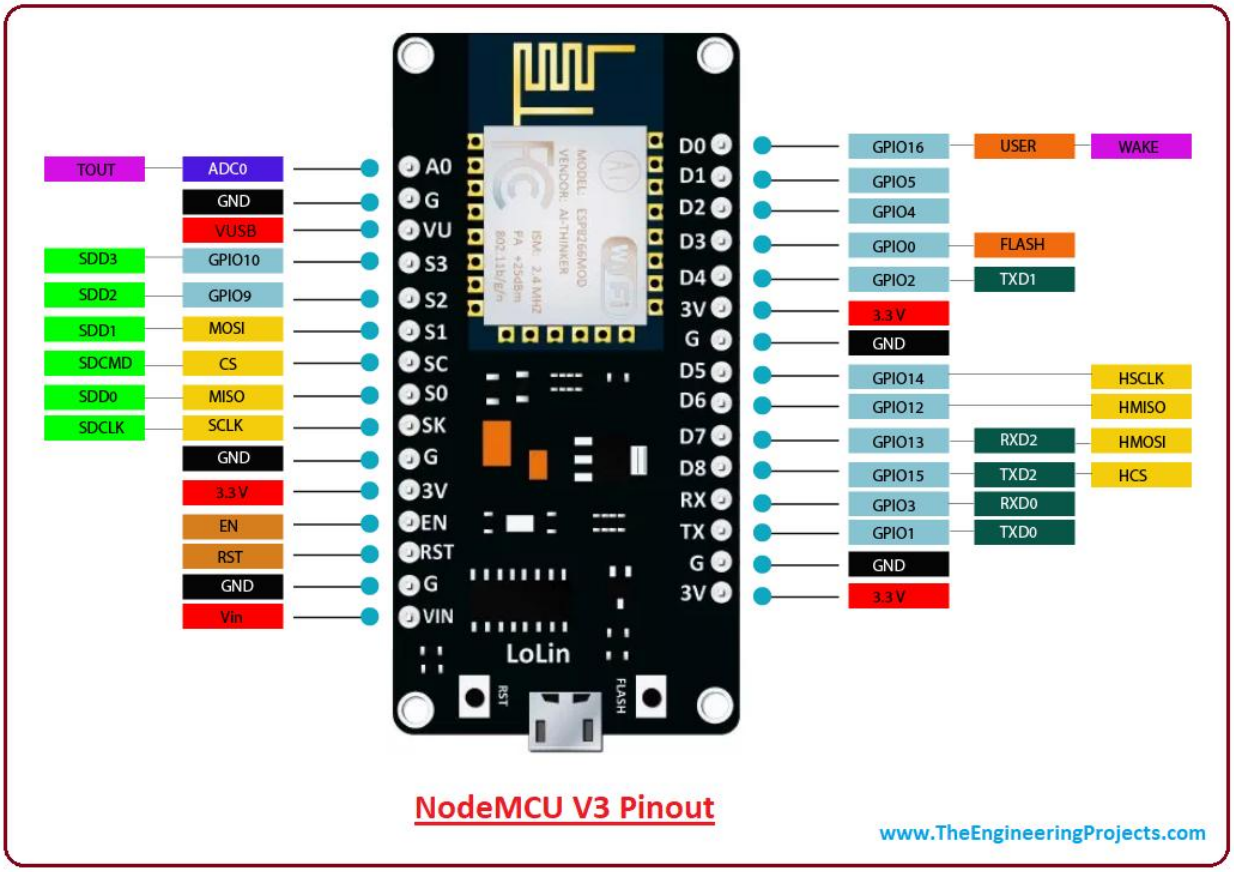
```
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  Serial.println();

  client.stop();

 } else {

  Serial.println("Connection to ThingSpeak failed!");

 }


 delay(20000);  // Update every 20 seconds

}
```