

## เริ่มต้น IoT (2) กับ ESP8266

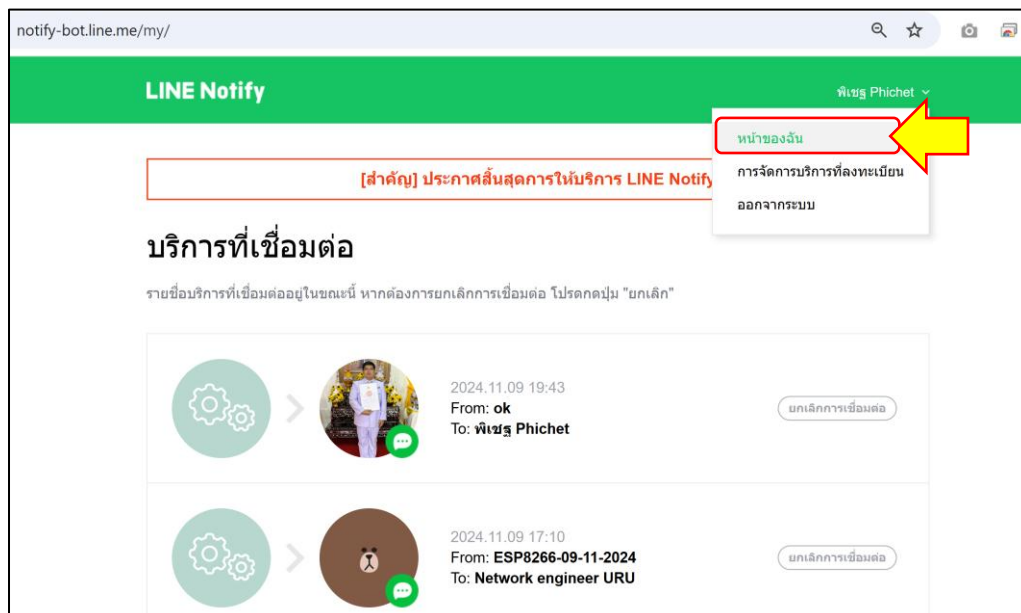
By Mr.Phichet Luehong : ระบบแจ้งเตือนภัยน้ำท่วมและอุณหภูมิ ชุด 2



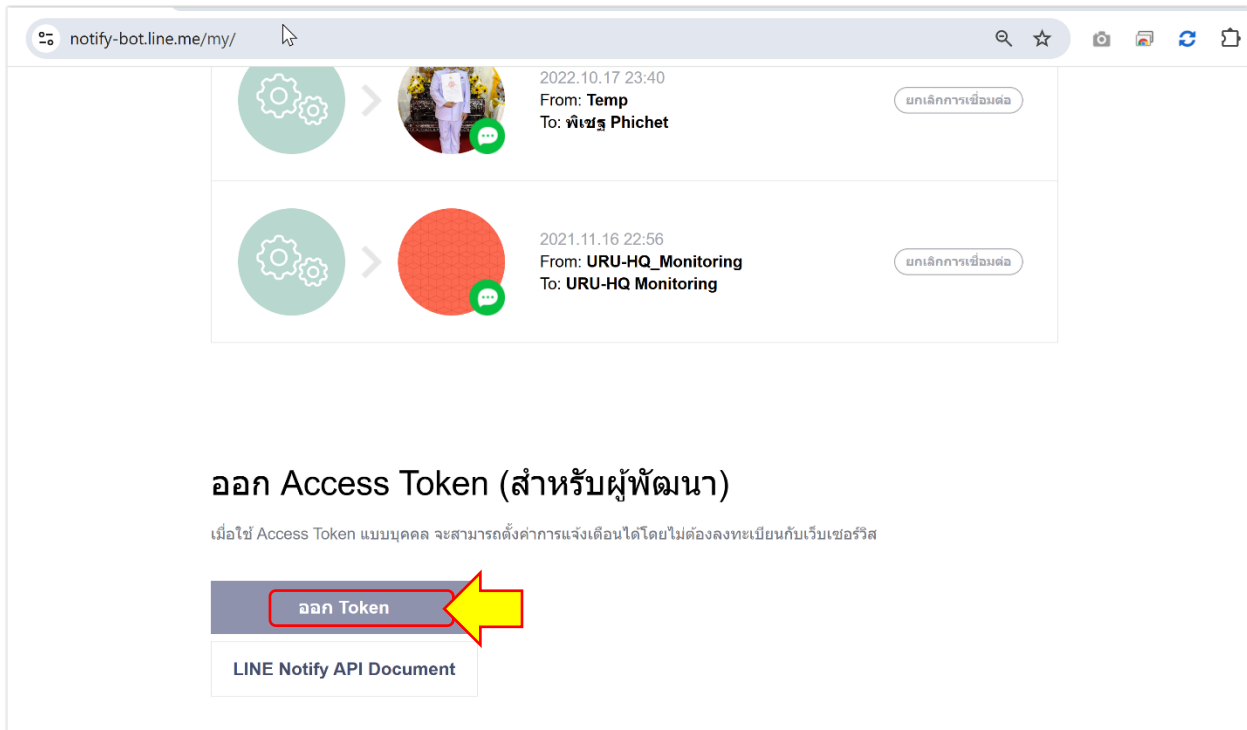
1. เข้าใช้งานเว็บไซต์ <https://notify-bot.line.me/th/> เพื่อสร้าง Token key สำหรับเชื่อมต่อ Line กับ ESP8266



2. เลือก “หน้าของฉัน” เพื่อเริ่มสร้าง Token Key

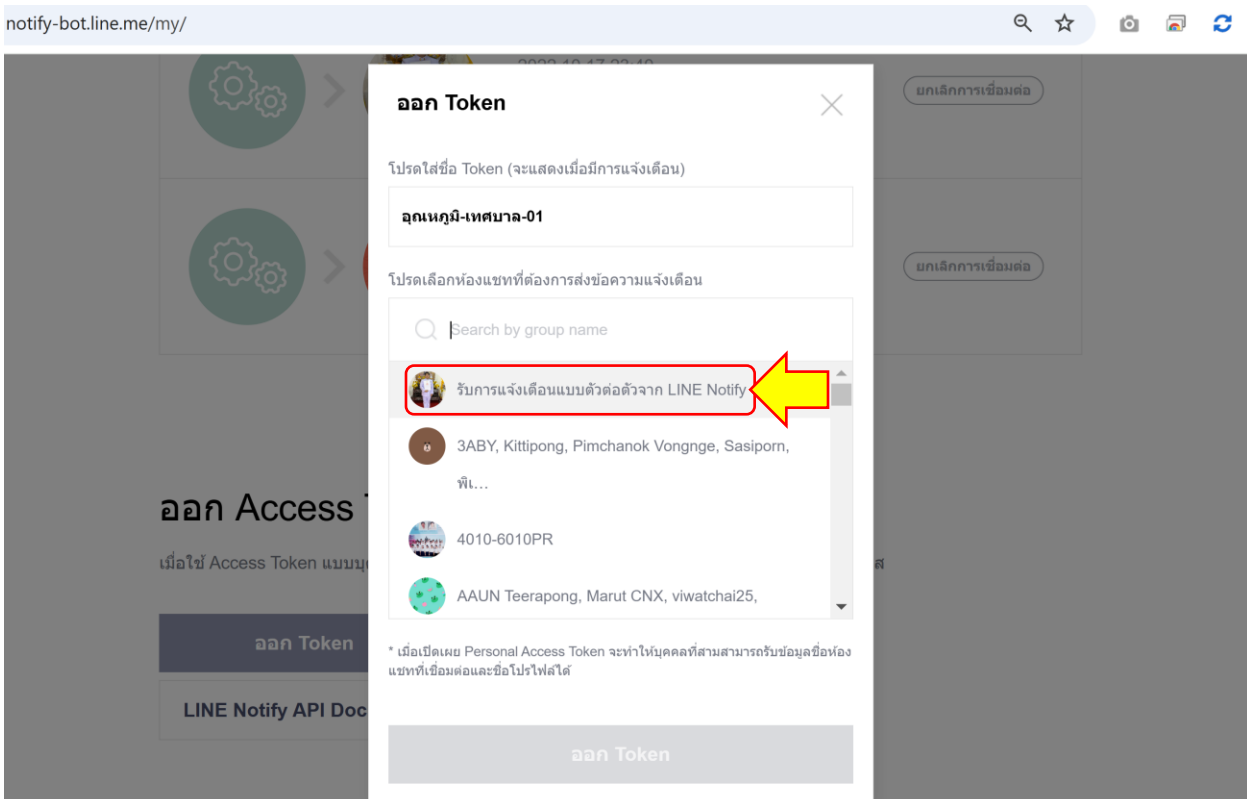


### 3. เลือก “ออก Token”



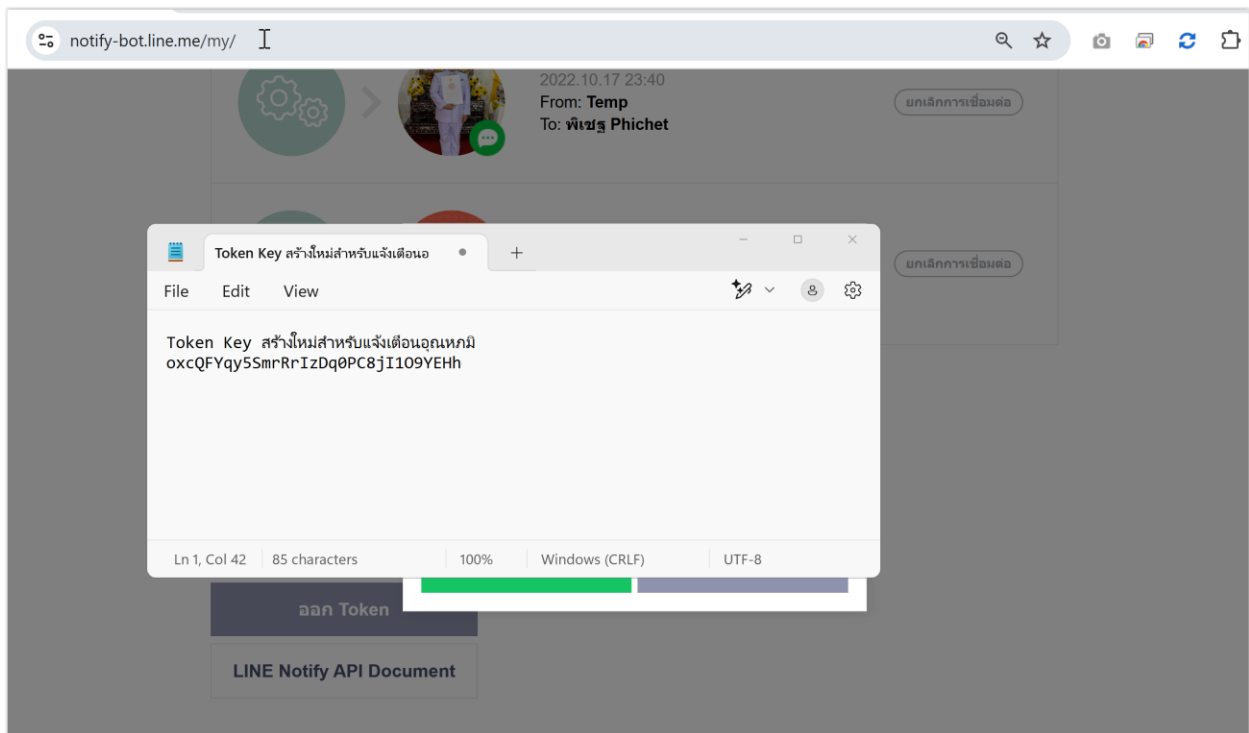
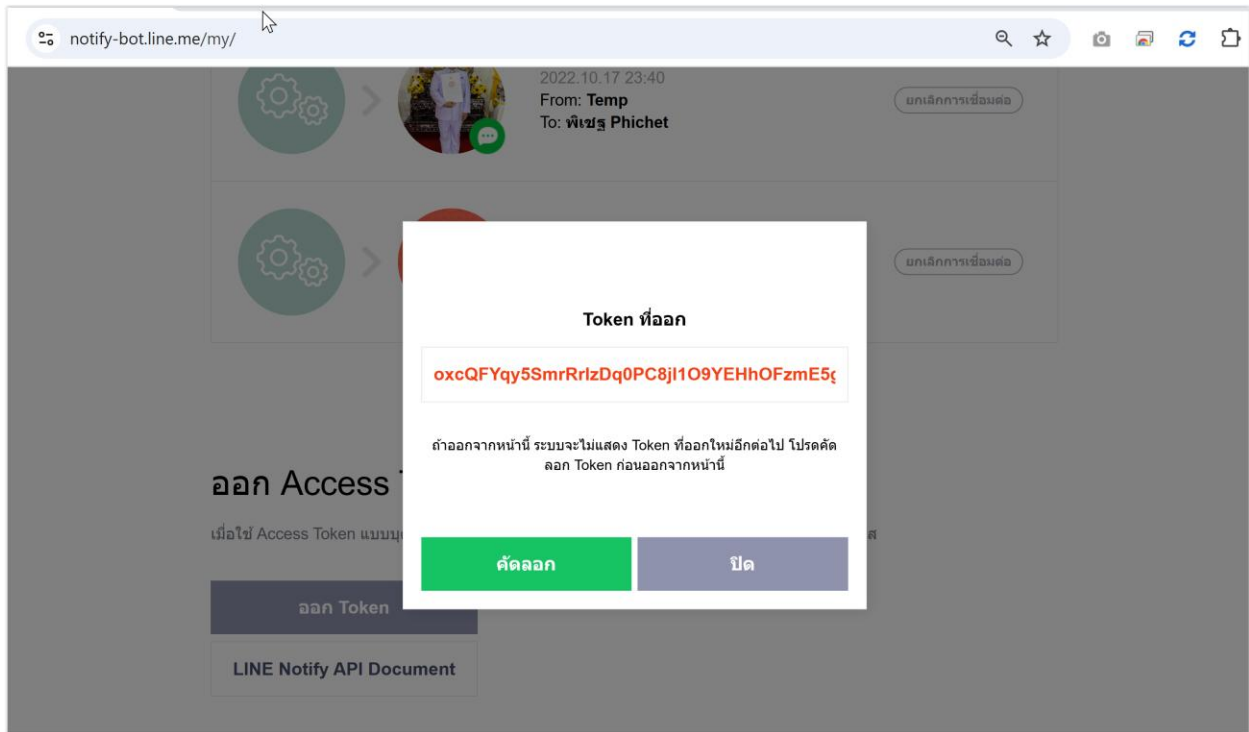
The screenshot shows the LINE Notify bot management page at [notify-bot.line.me/my/](https://notify-bot.line.me/my/). It displays two bot profiles: one from 'Temp' (Phichet) and another from 'URU-HQ\_Monitoring'. Below the profiles, there is a section titled 'ออก Access Token (สำหรับผู้พัฒนา)' with a subtext explaining that using an Access Token allows for scheduled messages without needing a browser. A button labeled 'ออก Token' is highlighted with a red box and a yellow arrow pointing to it.

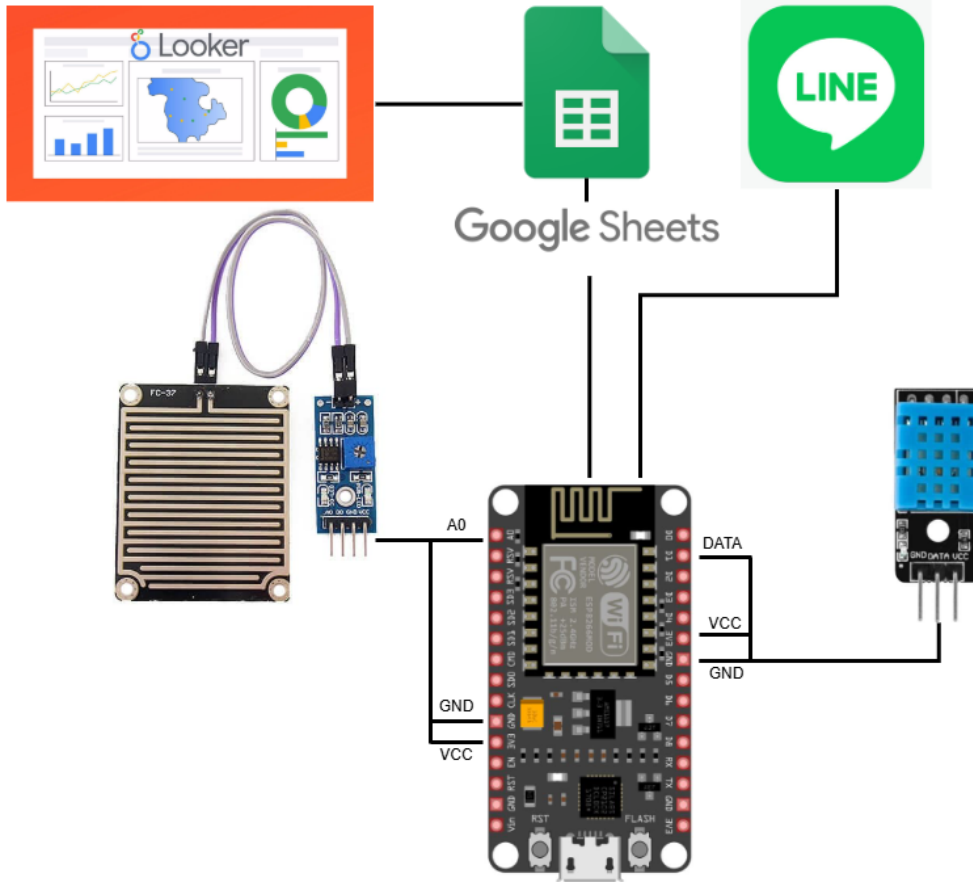
### 4. ตั้งชื่อ Token และเลือกห้องแชทที่ต้องการส่ง ทำได้ทั้งส่งแบบตัวต่อตัว และแบบกลุ่ม



The screenshot shows the 'ออก Token' dialog box. It has two sections: 'โปรดใส่ชื่อ Token (จะแสดงเมื่อมีการแจ้งเตือน)' with the input 'ลูกหนี-เทศบาล-01', and 'โปรดเลือกห้องแชทที่ต้องการส่งข้อความแจ้งเตือน' with a search bar 'Search by group name'. A list of chat options is shown, with the first option 'รับการแจ้งเตือนแบบตัวต่อตัวจาก LINE Notify' highlighted by a red box and a yellow arrow. Other options include a group chat '3ABY, Kittipong, Pimchanok Vongnge, Sasiporn, พิ...' and another group chat '4010-6010PR'. At the bottom, there is a note about Personal Access Tokens and an 'ออก Token' button.

5. ให้ทำการ Copy ใส่ Notepad ป้องกัน Token Key สูญหาย

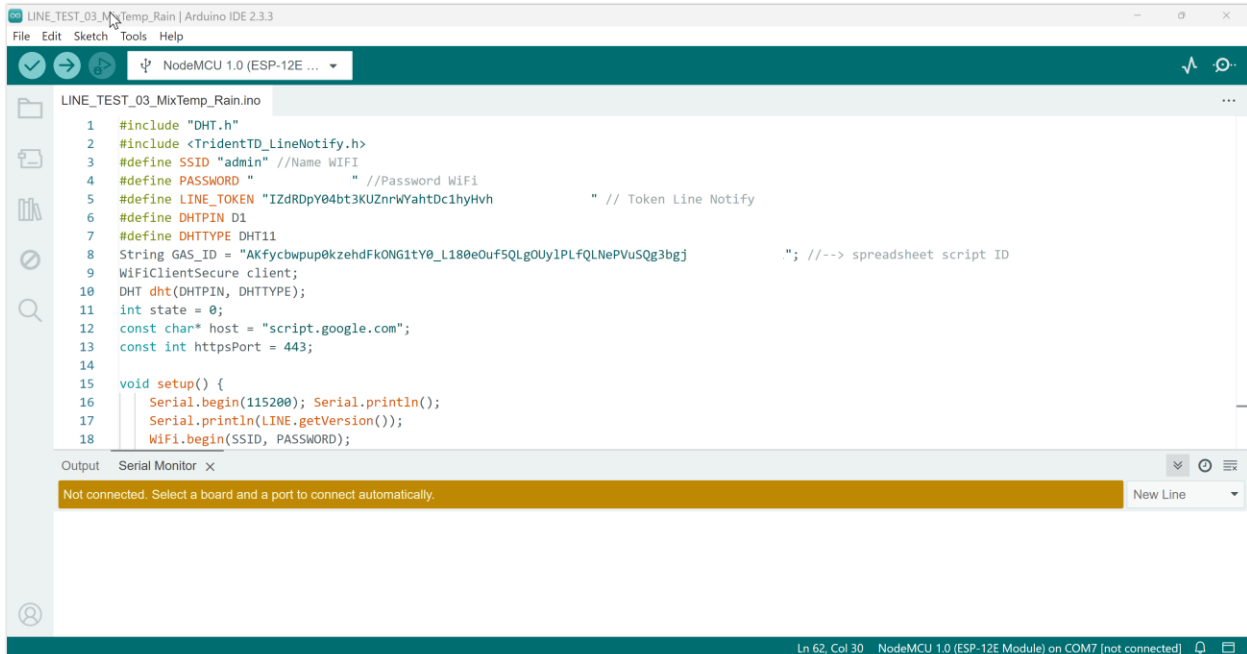




การเชื่อมต่อระบบ 2 เซ็นเซอร์ เพื่อส่งข้อมูลเตือน  
ระดับน้ำ อุณหภูมิ ความชื้น  
Upload ขึ้น Google Sheet และ Line Alert

## 6. เปิดโปรแกรม Arduino แล้วทำการพิมพ์โค้ด

5



```
LINE_TEST_03_MixTemp_Rain.ino
1 #include "DHT.h"
2 #include <TridentTD_LineNotify.h>
3 #define SSID "admin" //Name WIFI
4 #define PASSWORD "xxxxx" //Password WiFi
5 #define LINE_TOKEN "IZdRDpY04bt3KUZnrWYahtDc1hyHvh" // Token Line Notify
6 #define DHTPIN D1
7 #define DHTTYPE DHT11
8 String GAS_ID = "AKfycbwpu0kzehdFkONG1tY0_L180eOuF5QLg0Uy1PLfQLNePVuSQg3bgj"; //--> spreadsheet script ID
9 WiFiClientSecure client;
10 DHT dht(DHTPIN, DHTTYPE);
11 int state = 0;
12 const char* host = "script.google.com";
13 const int httpsPort = 443;
14
15 void setup() {
16   Serial.begin(115200); Serial.println();
17   Serial.println(LINE.getVersion());
18   WiFi.begin(SSID, PASSWORD);
19 }
```

โค้ดดังต่อไปนี้

```
#include "DHT.h"
#include <TridentTD_LineNotify.h>
#define SSID "admin" //Name WIFI
#define PASSWORD "xxxxx" //Password WiFi
#define LINE_TOKEN "IZdRDpY04bt3KUZnrWYahtDc1hyHxxxxxxxxxx" // Token Line Notify
#define DHTPIN D1
#define DHTTYPE DHT11
WiFiClientSecure client;
DHT dht(DHTPIN, DHTTYPE);
int state = 0;
const char* host = "script.google.com";
const int httpsPort = 443;

void setup() {
  Serial.begin(115200); Serial.println();
  Serial.println(LINE.getVersion());
  WiFi.begin(SSID, PASSWORD);
  Serial.printf("WiFi connecting to %s\n", SSID);
  while (WiFi.status() != WL_CONNECTED) {
    Serial.print(".");
    const char* host = "script.google.com";
    const int httpsPort = 443;
    delay(400);
  }
}
```

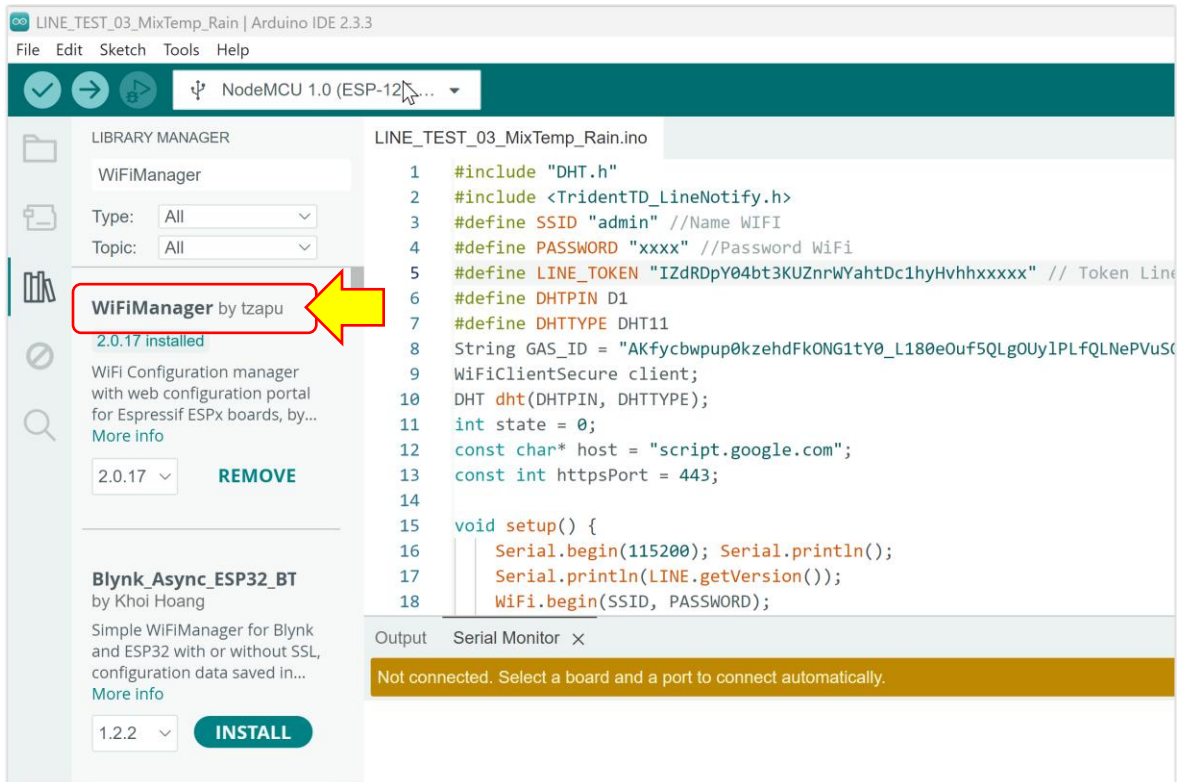
```

Serial.printf("\nWiFi connected\nIP : ");
Serial.println(WiFi.localIP());
LINE.setToken(LINE_TOKEN);
}
void loop() {
  const char* host = "script.google.com";
  const int httpsPort = 443;
  int Water = analogRead(A0);
  Serial.println(Water);
  String val = "";
  float h = dht.readHumidity(); // ความชื้น
  float t = dht.readTemperature(); // อุณหภูมิ
  val = val + h;
  val = val + "% ";
  val = val + t;
  val = val + "C";
  Serial.println(val);
  LINE.notify(val);

  if (state == 0) {
    if (Water < 900) {
      LINE.notify("เตือน!! น้ำขึ้นสูงถึงระดับเซ็นเซอร์แล้ว");
      state = 1;
    }
  }
  else if (state == 1) {
    delay(6000);
    state = 0;
  }
  // Serial.println(host);
  // //-----Connect to Google host
  //   client.connect(host, httpsPort);
  //   float string_temp = dht.readTemperature();
  //   float string_humi = dht.readHumidity();
  //   String url = "/macros/s/" + GAS_ID + "/exec?temperature=" + string_temp +
  "&humidity="+string_humi; // 2 variables
  //   Serial.print("requesting URL: ");
  //   Serial.println(url);
  //   client.print(String("GET ") + url + " HTTP/1.1\r\n" +
  //     "Host: " + host + "\r\n" +
  //     "User-Agent: BuildFailureDetectorESP8266\r\n" +
  //     "Connection: close\r\n\r\n");
  //   Serial.println("request sent");
  //   delay(1000);
}

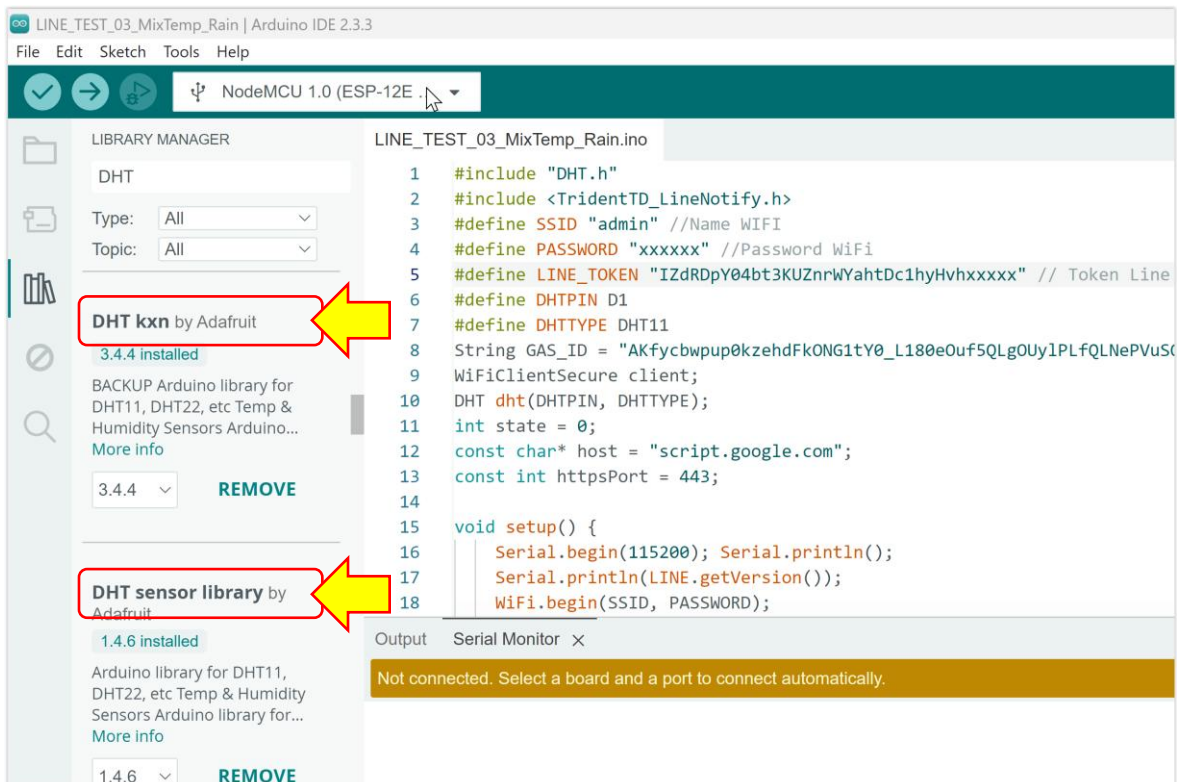
```

## 7. ติดตั้ง LIBRARY ที่จำเป็น



The screenshot shows the Arduino IDE interface with the Library Manager open. The search results for "WiFiManager" are displayed. The library "WiFiManager by tzapu" is highlighted with a red box and a yellow arrow pointing to it. The version 2.0.17 is shown as installed. The code editor shows the sketch "LINE\_TEST\_03\_MixTemp\_Rain.ino" with the following code:

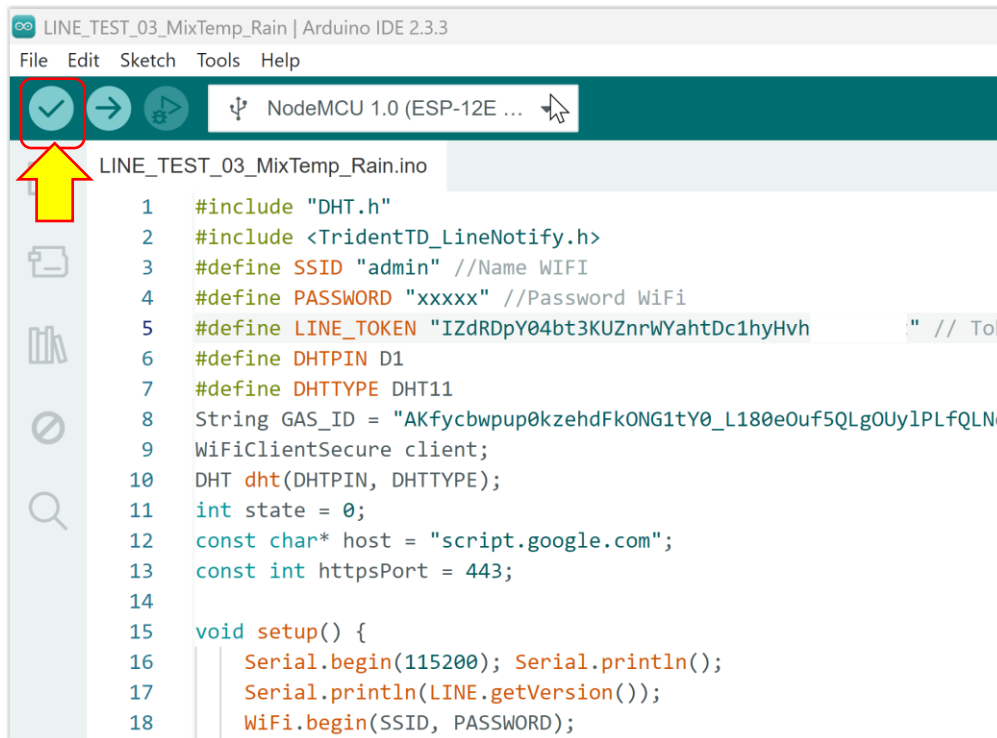
```
1 #include "DHT.h"
2 #include <TridentTD_LineNotify.h>
3 #define SSID "admin" //Name WIFI
4 #define PASSWORD "xxxx" //Password WiFi
5 #define LINE_TOKEN "IZdRDpY04bt3KUZnrWYhtDc1hyHvhxxxxx" // Token Line
6 #define DHTPIN D1
7 #define DHTTYPE DHT11
8 String GAS_ID = "AKfycbwup0kzehdFkONG1tY0_L180eOuf5QLgOUy1PLfQLNePVuS
9 WiFiClientSecure client;
10 DHT dht(DHTPIN, DHTTYPE);
11 int state = 0;
12 const char* host = "script.google.com";
13 const int httpsPort = 443;
14
15 void setup() {
16   Serial.begin(115200); Serial.println();
17   Serial.println(LINE.getVersion());
18   WiFi.begin(SSID, PASSWORD);
```



The screenshot shows the Arduino IDE interface with the Library Manager open. The search results for "DHT" are displayed. Two libraries are highlighted with red boxes and yellow arrows: "DHT kxn by Adafruit" (version 3.4.4) and "DHT sensor library by Adafruit" (version 1.4.6). The code editor shows the sketch "LINE\_TEST\_03\_MixTemp\_Rain.ino" with the following code:

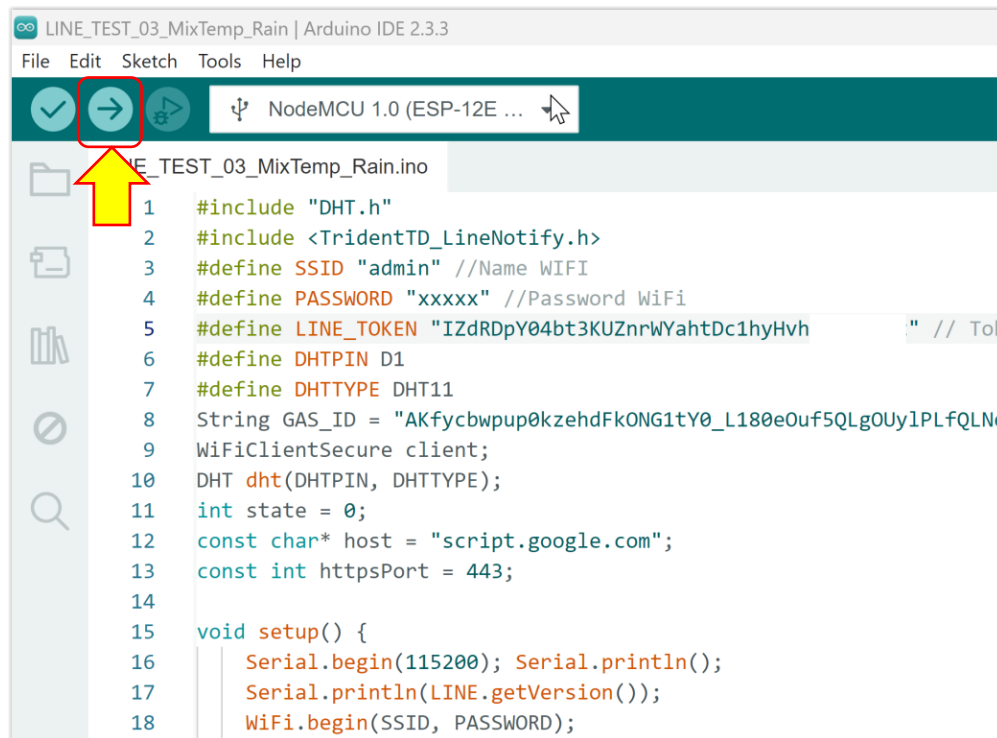
```
1 #include "DHT.h"
2 #include <TridentTD_LineNotify.h>
3 #define SSID "admin" //Name WIFI
4 #define PASSWORD "xxxxxx" //Password WiFi
5 #define LINE_TOKEN "IZdRDpY04bt3KUZnrWYhtDc1hyHvhxxxxx" // Token Line
6 #define DHTPIN D1
7 #define DHTTYPE DHT11
8 String GAS_ID = "AKfycbwup0kzehdFkONG1tY0_L180eOuf5QLgOUy1PLfQLNePVuS
9 WiFiClientSecure client;
10 DHT dht(DHTPIN, DHTTYPE);
11 int state = 0;
12 const char* host = "script.google.com";
13 const int httpsPort = 443;
14
15 void setup() {
16   Serial.begin(115200); Serial.println();
17   Serial.println(LINE.getVersion());
18   WiFi.begin(SSID, PASSWORD);
```

8. กด “Compile” ตรวจสอบโปรแกรม



```
LINE_TEST_03_MixTemp_Rain | Arduino IDE 2.3.3
File Edit Sketch Tools Help
NodeMCU 1.0 (ESP-12E ...)
LINE_TEST_03_MixTemp_Rain.ino
1 #include "DHT.h"
2 #include <TridentTD_LineNotify.h>
3 #define SSID "admin" //Name WIFI
4 #define PASSWORD "xxxxx" //Password WiFi
5 #define LINE_TOKEN "IZdRDpY04bt3KUZnrWYahtDc1hyHvh" // Tok
6 #define DHTPIN D1
7 #define DHTTYPE DHT11
8 String GAS_ID = "AKfycbwup0kzehdFkONG1tY0_L180eOuf5QLgOUy1PLfQLNe
9 WiFiClientSecure client;
10 DHT dht(DHTPIN, DHTTYPE);
11 int state = 0;
12 const char* host = "script.google.com";
13 const int httpsPort = 443;
14
15 void setup() {
16     Serial.begin(115200); Serial.println();
17     Serial.println(LINE.getVersion());
18     WiFi.begin(SSID, PASSWORD);
```

9. กด “Upload” เพื่อนำโค้ดเข้าสู่บอร์ด ESP8266



```
LINE_TEST_03_MixTemp_Rain | Arduino IDE 2.3.3
File Edit Sketch Tools Help
NodeMCU 1.0 (ESP-12E ...)
LINE_TEST_03_MixTemp_Rain.ino
1 #include "DHT.h"
2 #include <TridentTD_LineNotify.h>
3 #define SSID "admin" //Name WIFI
4 #define PASSWORD "xxxxx" //Password WiFi
5 #define LINE_TOKEN "IZdRDpY04bt3KUZnrWYahtDc1hyHvh" // Tok
6 #define DHTPIN D1
7 #define DHTTYPE DHT11
8 String GAS_ID = "AKfycbwup0kzehdFkONG1tY0_L180eOuf5QLgOUy1PLfQLNe
9 WiFiClientSecure client;
10 DHT dht(DHTPIN, DHTTYPE);
11 int state = 0;
12 const char* host = "script.google.com";
13 const int httpsPort = 443;
14
15 void setup() {
16     Serial.begin(115200); Serial.println();
17     Serial.println(LINE.getVersion());
18     WiFi.begin(SSID, PASSWORD);
```



10. เปิดโปรแกรม Line เพื่อดูการแจ้งเตือน

