Name: Mothis B (737819ITR048)

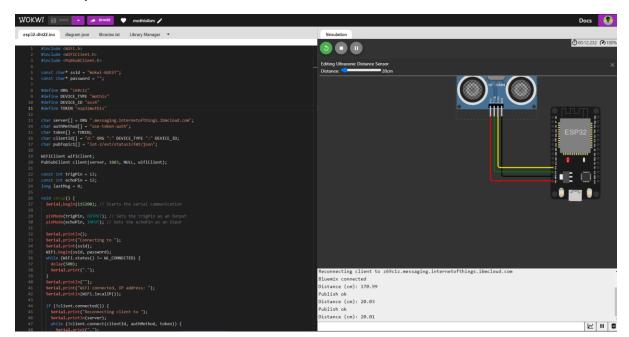
## Code:

```
#include <WiFi.h>
#include <WiFiClient.h>
#include < PubSubClient.h>
const char* ssid = "Wokwi-GUEST";
const char* password = "";
#define ORG "z69c1z"
#define DEVICE_TYPE "mothis"
#define DEVICE_ID "ass4"
#define TOKEN "esp32mothis"
char server[] = ORG ".messaging.internetofthings.ibmcloud.com";
char authMethod[] = "use-token-auth";
char token[] = TOKEN;
char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;
char pubTopic1[] = "iot-2/evt/status1/fmt/json";
WiFiClient wifiClient;
PubSubClient client(server, 1883, NULL, wifiClient);
const int trigPin = 13;
const int echoPin = 12;
long lastMsg = 0;
void setup() {
Serial.begin(115200); // Starts the serial communication
 pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
 pinMode(echoPin, INPUT); // Sets the echoPin as an Input
 Serial.println();
 Serial.print("Connecting to ");
 Serial.print(ssid);
 WiFi.begin(ssid, password);
 while (WiFi.status() != WL_CONNECTED) {
  delay(500);
```

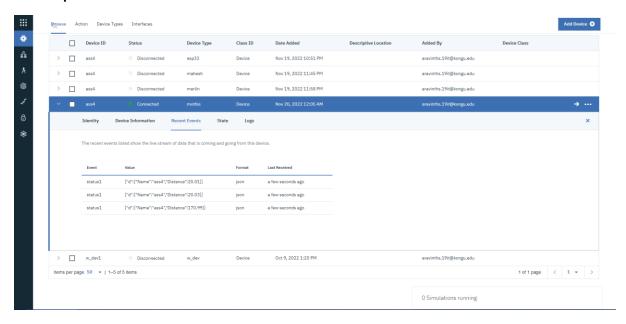
```
Serial.print(".");
 }
 Serial.println("");
 Serial.print("WiFi connected, IP address: ");
 Serial.println(WiFi.localIP());
 if (!client.connected()) {
  Serial.print("Reconnecting client to ");
  Serial.println(server);
  while (!client.connect(clientId, authMethod, token)) {
   Serial.print(".");
   delay(500);
  }
  Serial.println("Bluemix connected");
 }
}
void loop() {
 // Clears the trigPin
 digitalWrite(trigPin, LOW);
 delayMicroseconds(2);
 // Sets the trigPin on HIGH state for 10 micro seconds
 digitalWrite(trigPin, HIGH);
 delayMicroseconds(10);
 digitalWrite(trigPin, LOW);
 // Reads the echoPin, returns the sound wave travel time in microseconds
 long duration = pulseIn(echoPin, HIGH);
 // Calculate the distance
 float distanceCm = duration * 0.034/2;
 // Prints the distance in the Serial Monitor
 Serial.print("Distance (cm): ");
 Serial.println(distanceCm);
 delay(3000);
```

```
client.loop();
String payload = "{\"d\":{\"Name\":\"" DEVICE_ID "\"";
    payload += ",\"Distance\":";
    payload += distanceCm;
    payload += "}}";
if (client.publish(pubTopic1, (char*) payload.c_str())) {
    Serial.println("Publish ok");
} else {
    Serial.println("Publish failed");
}
```

## **Wokwi Output:**



## **IBM output:**



Wokwi link: https://wokwi.com/projects/348779805803545171