

PROJECT DEVELOPMENT PHASE SPRINT-2

DATE	03-11-2022
TEAM ID	PNT2022TMID36746
PROJECT NAME	SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY

WORK SIMULATION REF:<https://wokwi.com/projects/348492661709079123>

IBM Watson IoT Platform x MicroPython MQTT Weather Log x Node-RED : node-red-qgokr-202 x

wokwi.com/projects/348492661709079123

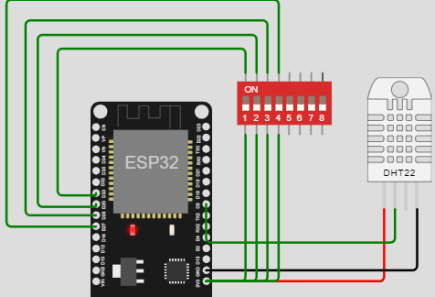
WOKWI SAVE SHARE MicroPython MQTT Weather Logger (ESP32) copy Docs

main.ino diagram.json libraries.txt Library Manager

```
1 #include <WiFi.h> //library for wifi
2 #include <PubSubClient.h> //library for MQTT
3 #include "DHT.h" // Library for dht11
4 #define DHTPIN 5 // What pin we're connected to
5 #define DHTTYPE DHT22 // define type of sensor DHT 11
6
7 DHT dht (DHTPIN, DHTTYPE); // creating the instance by passing pin and type of dht connected
8
9 void callback(char* topic, byte* payload, unsigned int payloadLength);
10
11 //-----credentials of IBM Accounts-----
12
13 #define ORG "qguokr" //IBM ORGANITION ID
14 #define DEVICE_TYPE "ibm" //Device type mentioned in ibm watson IOT Platform
15 #define DEVICE_ID "wikki14" //Device ID mentioned in ibm watson IOT Platform
16 #define TOKEN "123456789" //Token
17 String data3;
18 float h, t;
19
20 //----- Customise the above values -----
21
22 char server[] = ORG ".messaging.internetofthings.ibmcloud.com"; // Server Name
23 char publishTopic[] = "iot-2/evt/Data/fmt/json"; // topic name and type of event perform and form
24 char subscribTopic[] = "iot-2/cmd/command/fmt/String"; // cmd REPRESENT command type AND COMMAND
25 char authMethod[] = "use-token-auth"; // authentication method
26 char token[] = TOKEN;
27 char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID; //client id
28
29
30 //-----
31 WiFiClient wifiClient; // creating the instance for wifi client
32 PubSubClient client(server, 1883, callback, wifiClient); //calling the predefined client id by
33
34
35 void setup() // configureing the ESP32
36 {
37   Serial.begin(115200);
38   //Serial.println();
39 }
```

Simulation

00:06.609 97%



humidity:80.00
Sending payload: {"temp":62.30,"humidity":80.00,"North":0,"South":0,"East":0,"West":0}
Publish ok
temp:62.30
humidity:80.00
Sending payload: {"temp":62.30,"humidity":80.00,"North":0,"South":0,"East":0,"West":0}
Publish ok

WATSON IOT PLATFORM:

IBM Watson IoT Platform

MicroPython MQTT Weather Log

Node-RED : node-red-qqokr-202

qguokr.internetofthings.ibmcloud.com/dashboard/devices/browse

210219106039@smartinternz.com
ID: qguokr

Browse Action Device Types Interfaces

Add Device

Search by Device ID

Device Simulator

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By
ultrasonic_sensor	Disconnected	arduino_uno	Device	Nov 10, 2022 9:51 AM		210219106039@smartinternz.com
wiki14	Connected	ibm	Device	Nov 17, 2022 7:07 PM		210219106039@smartinternz.com

Identity Device Information Recent Events State Logs

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
Data	{"temp":62.3,"humidity":80,"North":0,"South":0,...	json	a few seconds ago
Data	{"temp":62.3,"humidity":80,"North":0,"South":0,...	json	a few seconds ago
Data	{"temp":62.3,"humidity":80,"North":0,"South":0,...	json	a few seconds ago
Data	{"temp":62.3,"humidity":80,"North":0,"South":0,...	json	a few seconds ago
Data	{"temp":62.3,"humidity":80,"North":0,"South":0,...	json	a few seconds ago

0 Simulations running

NODE RED REF:<https://node-red-qqokr-2022-11-16.eu-gb.mybluemix.net/red/#flow/1b4926549d19c693>

IBM Watson IoT Platform

MicroPython MQTT Weather Log

Node-RED : node-red-qqokr-202

node-red-qqokr-2022-11-16.eu-gb.mybluemix.net/red/#flow/1b4926549d19c693

Node-RED

Deploy

filter nodes

common

- inject
- debug
- complete
- catch
- status
- link in
- link call
- link out
- comment

function

- function
- switch
- change
- range

Flow 2

Flow 1

Flow 3

debug

all nodes

msg.payload : Object

```
{ temp: 62.3, humidity: 80, North: 0, South: 0, East: 0 }
```

11/18/2022, 7:49:38 PM node: 619a743aba573537
iot-2/type/ibm/id/wiki14/evts/Data/fmt/json :
msg.payload : string[1]
"-"

11/18/2022, 7:49:38 PM node: temperature node
function : (error)
"TypeError: Cannot read properties
of undefined (reading
'Temperature')"

11/18/2022, 7:49:38 PM node: c0edf39594ae5f21
iot-2/type/ibm/id/wiki14/evts/Data/fmt/json :
msg.payload : Object

```
{ temp: 62.3, humidity: 80, North: 0, South: 0, East: 0 }
```

11/18/2022, 7:49:38 PM node: 619a743aba573537
iot-2/type/ibm/id/wiki14/evts/Data/fmt/json :
msg.payload : string[1]
"-"

11/18/2022, 7:49:38 PM node: temperature node
function : (error)
"TypeError: Cannot read properties
of undefined (reading
'Temperature')"

WATSON IOT OUTPUT

REF:<https://qguokr.internetofthings.ibmcloud.com/dashboard/boards/05852963-14b4-4e09-aaa7-cd87b972d945>

