

IOT-HANDS-ON-4

מגישים:

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Test 1:

The screenshot displays the MQTT Websocket Client interface on the left and a Python script running in a terminal on the right.

MQTT Websocket Client Interface:

- Connection:** Shows the client is connected to the broker.
- Publish:** The topic is set to `pr/home/5976397/sts`. The QoS is set to 0. The Retain checkbox is unchecked. The Publish button is visible.
- Messages:** A list of received messages is shown, all with a QoS of 0. The messages are:
 - 2025-05-08 11:26:28 Topic: pr/home/5976397/sts QoS: 0 Temperature: 22.6 Humidity: 74.5
 - 2025-05-08 11:26:29 Topic: pr/home/5976397/sts QoS: 0 Temperature: 22.7 Humidity: 76.0
 - 2025-05-08 11:26:19 Topic: pr/home/5976397/sts QoS: 0 Temperature: 22.7 Humidity: 75.3
 - 2025-05-08 11:26:13 Topic: pr/home/5976397/sts QoS: 0 Temperature: 22.7 Humidity: 75.0

Python Script (DHT.py):

```
12 from mqtt_init import *
13
14 #from PyQES.QtCore import QTimer
15
16 # Creating Client name - should be unique
17 global clientname, CONNECTED
18 CONNECTED = False
19 r=random.randrange(1,100000000)
20 clientname="IDT_client-1d234-"+str(r)
21 DHT_topic = 'pr/home/5976397/sts'
22 update_rate = 5000 # in msec
23
24 class Mqtt_client():
```

Terminal Output:


```
log: Sending CONNECT (u1, p1, w0, u0, w0, c1, k0) client_id=b""
log: Received CONNACK (0, 0)
connected OK
Next update
log: Sending PUBLISH (d0, q0, r0, m1), 'b'pr/home/5976397/sts'', ... (32 bytes)
Next update
log: Sending PUBLISH (d0, q0, r0, m2), 'b'pr/home/5976397/sts'', ... (32 bytes)
Next update
log: Sending PUBLISH (d0, q0, r0, m3), 'b'pr/home/5976397/sts'', ... (32 bytes)
Next update
log: Sending PUBLISH (d0, q0, r0, m4), 'b'pr/home/5976397/sts'', ... (32 bytes)
```

Test 2:


MQTT Websocket Client

hivemq.com/demos/websocket-client/

New Chrome available

 **HIVEMQ**

Websockets Client Showcase

 **HIVEMQ** cloud

Need a fully managed MQTT broker?
Get your own Cloud broker and connect up to 100 devices for free.

Get your free account

Connection

connected

Publish

Topic

pr/home/8542547/sts

QoS

0

Retain

☐

Publish

Message

test

Subscriptions

Add New Topic Subscription

One: 2

pr/home/8542547/sts

Messages

2025-05-08 11:32:11

Topic: pr/home/8542547/sts

QoS: 0

test

2025-05-08 11:32:09

Topic: pr/home/8542547/sts

QoS: 0

test

2025-05-08 11:32:08

Topic: pr/home/8542547/sts

QoS: 0

test

RELAY

Connect

Turn On/Off

Sub topic

pr/home/8542547/sts

Status

DHT.py

mqtt_init.py

RELAY.py

BUTTON.py

on_message

1 import os

2 import sys

3 import PyQT5

4 import random

5 from PyQT5 import QtWidgets, QtCore, QtGui

6 from PyQT5.QtWidgets import *

7 from PyQT5.QtGui import *

8 from PyQT5.QtCore import *

log: Sending CONNECT (d1, p1, w0, w0, c1, k0) client_id=b''

log: Sending SUBSCRIBE (d0, m1) [(b'pr/home/8542547/sts', 0)]

log: Received CONNACK (0, 0)

connected OK

log: Received SUBACK

log: Received PUBLISH (d0, q0, r0, m0), 'pr/home/8542547/sts', ... (4 bytes)

message from:pr/home/8542547/sts test

log: Received PUBLISH (d0, q0, r0, m0), 'pr/home/8542547/sts', ... (4 bytes)

message from:pr/home/8542547/sts test

log: Received PUBLISH (d0, q0, r0, m0), 'pr/home/8542547/sts', ... (4 bytes)

message from:pr/home/8542547/sts test

Ln 91, Col 58 Spaces: 4 UTF-8 CR/LF Python 3.12.4 64-bit Go Live

Test 3:

```
Select Command Prompt - C:\Python312\python.exe "c:/Users/User/Downloads/Hands-on 4a/BUTTON.py"
Microsoft Windows [Version 10.0.19045.4894]
(c) Microsoft Corporation. All rights reserved.

C:\Users\User>C:\Python312\python.exe "c:/Users/User/Downloads/Hands-on 4a/BUTTON.py"
c:/Users/User/Downloads/Hands-on 4a/BUTTON.py:99: DeprecationWarning: Callback API version 1 is deprecated, update to latest version
  self.client = mqtt.Client(mqtt.CallbackAPIVersion.VERSION1, self.clientname, clean_session=True) # create new client instance
Connecting to broker 3.78.27.200
log: Sending CONNECT (u1, p1, w0, w0, w0, c1, k50) client_id=b''
log: Received CONNACK (0, 0)
connected OK
```

BT BUTTON (Not Responding)

Connect

Turn On/Off

Sub topic

Button

```
Command Prompt - C:\Python312\python.exe "c:/Users/User/Downloads/Hands-on 4a/RELAY.py"
Microsoft Windows [Version 10.0.19045.4894]
(c) Microsoft Corporation. All rights reserved.

C:\Users\User>C:\Python312\python.exe "c:/Users/User/Downloads/Hands-on 4a/RELAY.py"
c:/Users/User/Downloads/Hands-on 4a/RELAY.py:95: DeprecationWarning: Callback API version 1 is deprecated, update to latest version
  self.client = mqtt.Client(mqtt.CallbackAPIVersion.VERSION1, self.clientname, clean_session=True) # create new client instance
Connecting to broker 3.78.27.200
log: Sending CONNECT (u1, p1, w0, w0, w0, c1, k50) client_id=b''
log: Sending SUBSCRIBE (d0, m1) [[b'pr/home/1837420/sts', 0]]
log: Received CONNACK (0, 0)
connected OK
log: Received SUBACK
log: Sending PINGREQ
log: Received PINGRESP
log: Sending PINGREQ
log: Received PINGRESP
log: Sending PINGREQ
```

RELAY

Connect

Turn On/Off

Sub topic

Status