

## PYTHON CODE TO PUBLISH DATA TO IBM CLOUD

Assignment Date	10 November 2022
Team ID	PNT2022TMID52392
Project Name	Gas Leakage Monitoring and Alerting System

### **Python Code:**

```
#IBM Watson IOT Platform
```

```
#pip install wiotp-sdk
```

```
import wiotp.sdk.device
```

```
import time
```

```
import random
```

```
myConfig = {
```

```
    "identity": {
```

```
        "orgId": "0tus0f",
```

```
        "typeId": "ESP32",
```

```
        "deviceId": "01"
```

```
    },
```

```
    "auth": {
```

```
        "token": "Gowth@m@nk18"
```

```
    }
```

```
}
```

```
def myCommandCallback(cmd):
```

```
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
```

```
    m=cmd.data['command']
```

```
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
```

```
client.connect()
```

while True:

```
    temp=random.randint(-20,125)
```

```
    hum=random.randint(0,100)
```

```
    myData={'temperature':temp, 'humidity':hum}
```

```
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)
```

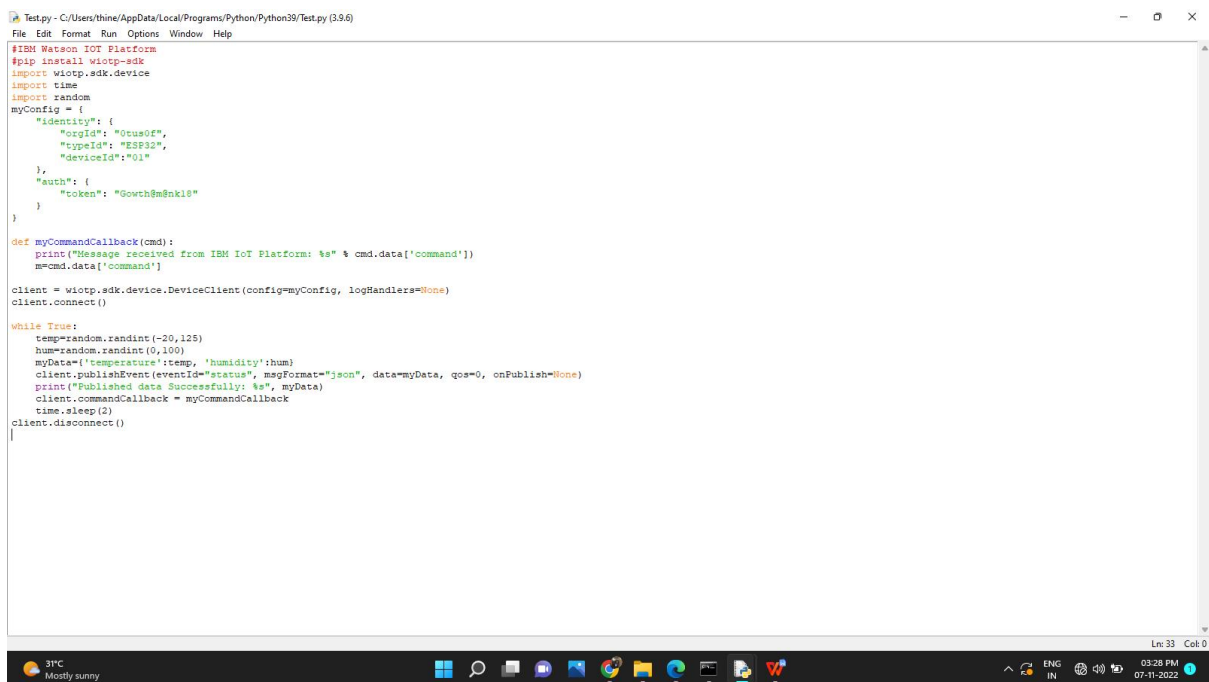
```
    print("Published data Successfully: %s", myData)
```

```
    client.commandCallback = myCommandCallback
```

```
    time.sleep(2)
```

```
client.disconnect()
```

## PYTHON CODE:



```
Test.py - C:/Users/thine/AppData/Local/Programs/Python/Python39/Test.py (3.9.6)
File Edit Format Run Options Window Help

#IBM Watson IoT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random

myConfig = {
    "identity": {
        "orgId": "0tus06f",
        "typeId": "ESP32",
        "deviceId": "01"
    },
    "auth": {
        "token": "Gowth@mBnk18"
    }
}

def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']

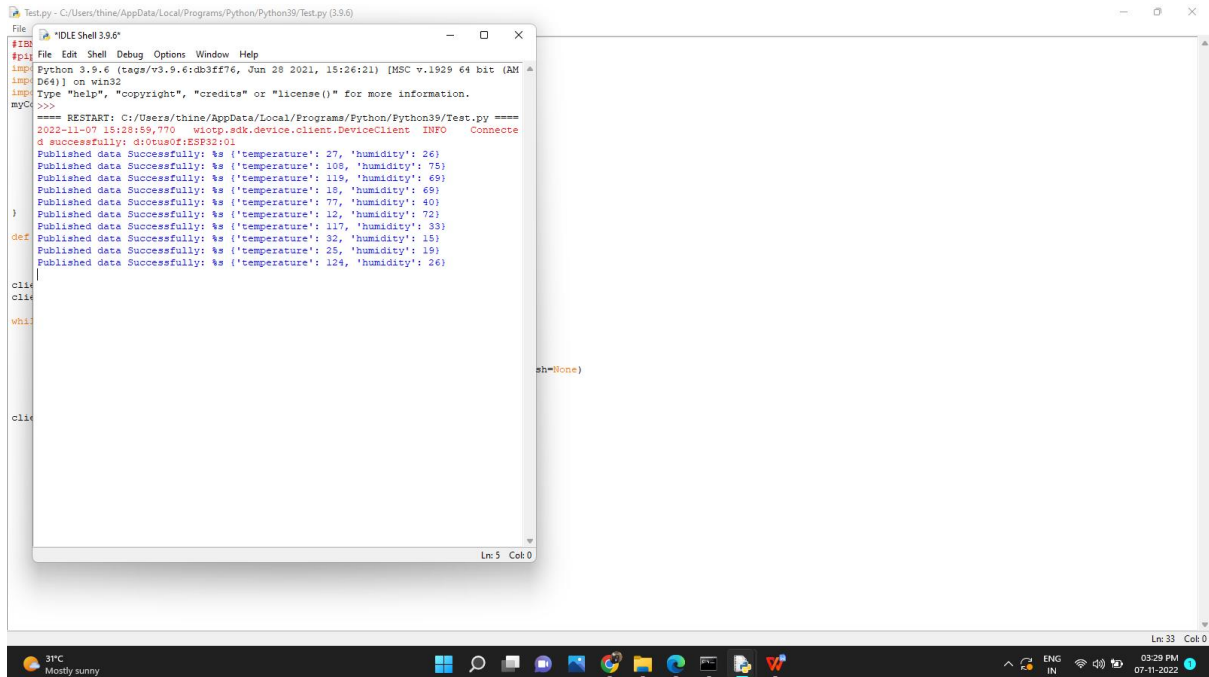
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()

while True:
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    myData={'temperature':temp, 'humidity':hum}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
client.disconnect()
```

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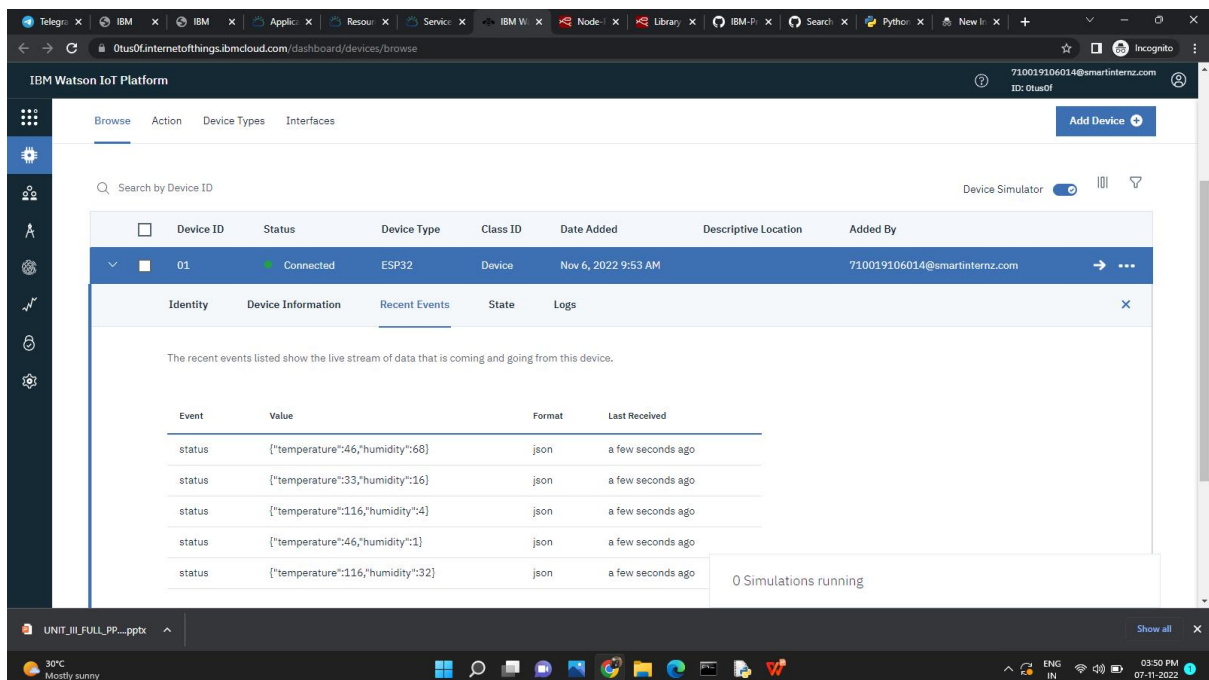
## PYTHON OUTPUT:



The screenshot shows a Python IDE window titled "Test.py - C:/Users/thine/AppData/Local/Programs/Python/Python39/Test.py (3.9.6)". The code is a simple test script that prints the output of a device client. The output shows a successful connection and several data points being published successfully.

```
File Edit Shell Debug Options Window Help
Python 3.9.6 (tags/v3.9.6:db3ff76, Jun 28 2021, 15:26:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/thine/AppData/Local/Programs/Python/Python39/Test.py =====
2022-11-07 15:28:59,770 wiotp.sdk.device.client.DeviceClient INFO Connecte
d successfully: d:0tus0f:ESP32:01
Published data Successfully: %s ('temperature': 27, 'humidity': 26)
Published data Successfully: %s ('temperature': 108, 'humidity': 75)
Published data Successfully: %s ('temperature': 119, 'humidity': 69)
Published data Successfully: %s ('temperature': 18, 'humidity': 69)
Published data Successfully: %s ('temperature': 77, 'humidity': 40)
Published data Successfully: %s ('temperature': 12, 'humidity': 72)
Published data Successfully: %s ('temperature': 117, 'humidity': 33)
Published data Successfully: %s ('temperature': 32, 'humidity': 15)
Published data Successfully: %s ('temperature': 25, 'humidity': 19)
Published data Successfully: %s ('temperature': 124, 'humidity': 26)
>>>
```

## Watson Cloud IBM:



The screenshot shows the IBM Watson IoT Platform dashboard. The main section displays a table of devices, with one device selected and its details shown in a sidebar. The details include a table of recent events, which are live stream data points coming from the device.

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By
01	Connected	ESP32	Device	Nov 6, 2022 9:53 AM		710019106014@smartinternz.com

Event	Value	Format	Last Received
status	["temperature":46,"humidity":68]	json	a few seconds ago
status	["temperature":33,"humidity":16]	json	a few seconds ago
status	["temperature":116,"humidity":4]	json	a few seconds ago
status	["temperature":46,"humidity":1]	json	a few seconds ago
status	["temperature":116,"humidity":32]	json	a few seconds ago

0 Simulations running