

## SPRINT-1:

Date	29 October 2022
Team ID	PNT2022TMID04540
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application

## PYTHON PROGRAM TO GET CONNECTED WITH IBM IOT WATSON PLATFORM:

### Python code:

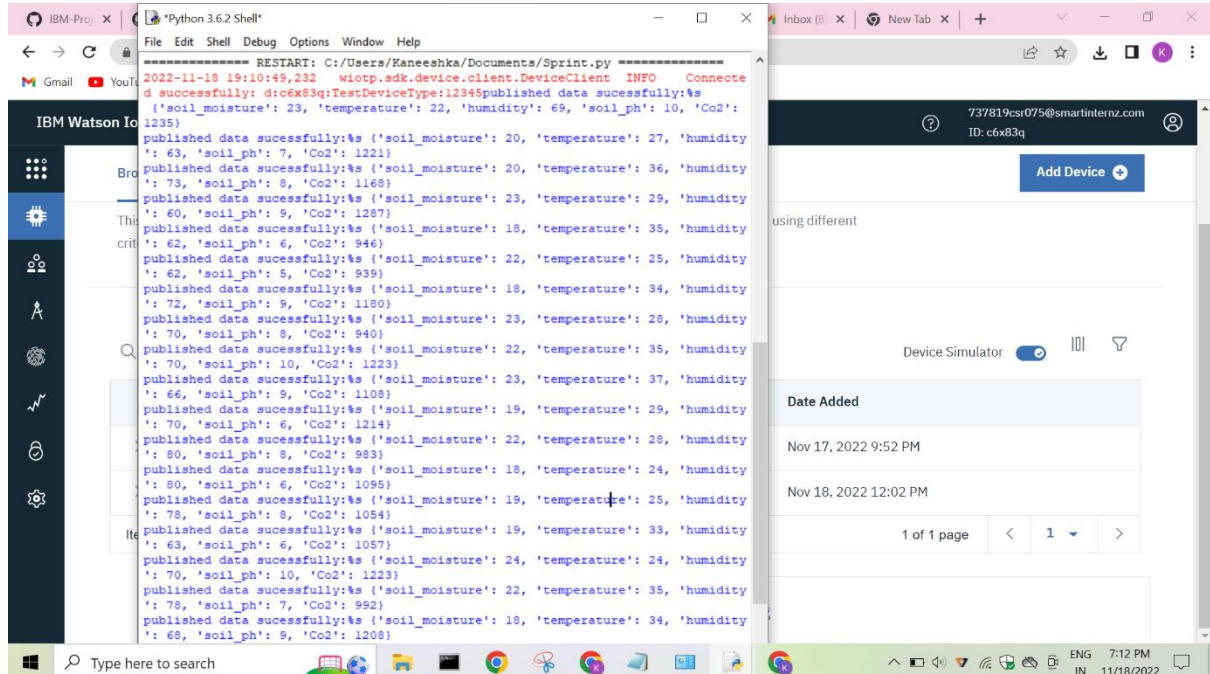
```
import wiotp.sdk.device
import time
import datetime
import random
myConfig = {
    "identity": {
        "orgId": "c6x83q",
        "typeId": "TestDeviceType",
        "deviceId": "12345"
    },
    "auth": {
        "token": "QZvsZ3UmMlicuzf0Gt"
    }
}

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

def myCommandCallback(cmd):
    print("Message received from IBM IOT platform: %s" % cmd.data ['command'])
    m=cmd.data['command']
    if(m=="motoron"):
        print("Motor is switched on")
    elif(m=="motoroff"):
        print("Motor is switched off")
    print(" ")
while True:
    soil=random.randint(18,24)
    temp=random.randint(21,37)
    hum=random.randint(60,80)
    soil_ph=random.randint(5,10)
    Co2=random.randint(900,1300)
    myData={'soil_moisture':soil,'temperature':temp,'humidity':hum,'soil_ph':soil_ph,'Co2':Co2}
    client.publishEvent(eventId="status",msgFormat="json",data=myData,qos=0,onPublish=None)
    print("published data successfully:%s",myData)
    time.sleep(5)
```

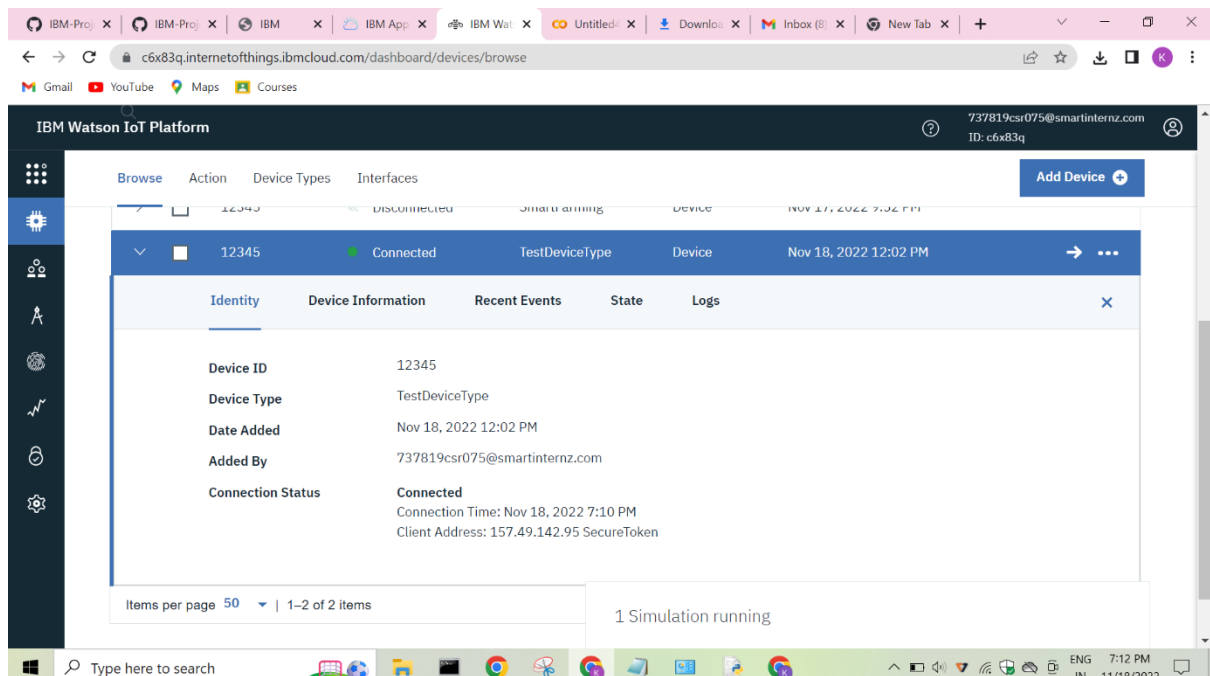
```
client.commandCallback=myCommandCallback
client.disconnect()
```

## OUTPUT:



The screenshot shows a Python 3.6.2 Shell window with the following output:

```
===== RESTART: C:/Users/Kaneeshka/Documents/Sprint.py =====
2022-11-18 19:10:49,232 wiotp.sdk.device.client.DeviceClient INFO Connecte
d successfully: d:c6x83q:TestDeviceType:12345published data successfully:
('soil_moisture': 23, 'temperature': 22, 'humidity': 69, 'soil_ph': 10, 'Co2':
1235)
published data successfully:('soil_moisture': 20, 'temperature': 27, 'humidity
': 63, 'soil_ph': 7, 'Co2': 1221)
published data successfully:('soil_moisture': 20, 'temperature': 36, 'humidity
': 73, 'soil_ph': 8, 'Co2': 1168)
published data successfully:('soil_moisture': 23, 'temperature': 29, 'humidity
': 60, 'soil_ph': 9, 'Co2': 1287)
published data successfully:('soil_moisture': 18, 'temperature': 35, 'humidity
': 62, 'soil_ph': 6, 'Co2': 946)
published data successfully:('soil_moisture': 22, 'temperature': 25, 'humidity
': 62, 'soil_ph': 5, 'Co2': 939)
published data successfully:('soil_moisture': 18, 'temperature': 34, 'humidity
': 72, 'soil_ph': 9, 'Co2': 1180)
published data successfully:('soil_moisture': 23, 'temperature': 28, 'humidity
': 70, 'soil_ph': 8, 'Co2': 940)
published data successfully:('soil_moisture': 22, 'temperature': 35, 'humidity
': 70, 'soil_ph': 10, 'Co2': 1223)
published data successfully:('soil_moisture': 23, 'temperature': 37, 'humidity
': 66, 'soil_ph': 9, 'Co2': 1108)
published data successfully:('soil_moisture': 19, 'temperature': 29, 'humidity
': 70, 'soil_ph': 6, 'Co2': 1214)
published data successfully:('soil_moisture': 22, 'temperature': 28, 'humidity
': 80, 'soil_ph': 8, 'Co2': 983)
published data successfully:('soil_moisture': 18, 'temperature': 24, 'humidity
': 80, 'soil_ph': 6, 'Co2': 1095)
published data successfully:('soil_moisture': 19, 'temperature': 25, 'humidity
': 78, 'soil_ph': 8, 'Co2': 1054)
published data successfully:('soil_moisture': 19, 'temperature': 33, 'humidity
': 63, 'soil_ph': 6, 'Co2': 1057)
published data successfully:('soil_moisture': 24, 'temperature': 24, 'humidity
': 70, 'soil_ph': 10, 'Co2': 1223)
published data successfully:('soil_moisture': 22, 'temperature': 35, 'humidity
': 78, 'soil_ph': 7, 'Co2': 992)
published data successfully:('soil_moisture': 18, 'temperature': 34, 'humidity
': 68, 'soil_ph': 9, 'Co2': 1208)
```



The screenshot shows the IBM Watson IoT Platform dashboard. The device '12345' is highlighted, and its details are shown in a modal window. The details include:

Identity	Device Information	Recent Events	State	Logs
Device ID	12345			
Device Type	TestDeviceType			
Date Added	Nov 18, 2022 12:02 PM			
Added By	737819csr075@smartinternz.com			
Connection Status	Connected			
	Connection Time: Nov 18, 2022 7:10 PM			
	Client Address: 157.49.142.95 SecureToken			