

## SPRINT-1:

Date	29 October 2022
Team ID	PNT2022TMID04463
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application

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

### Python code:

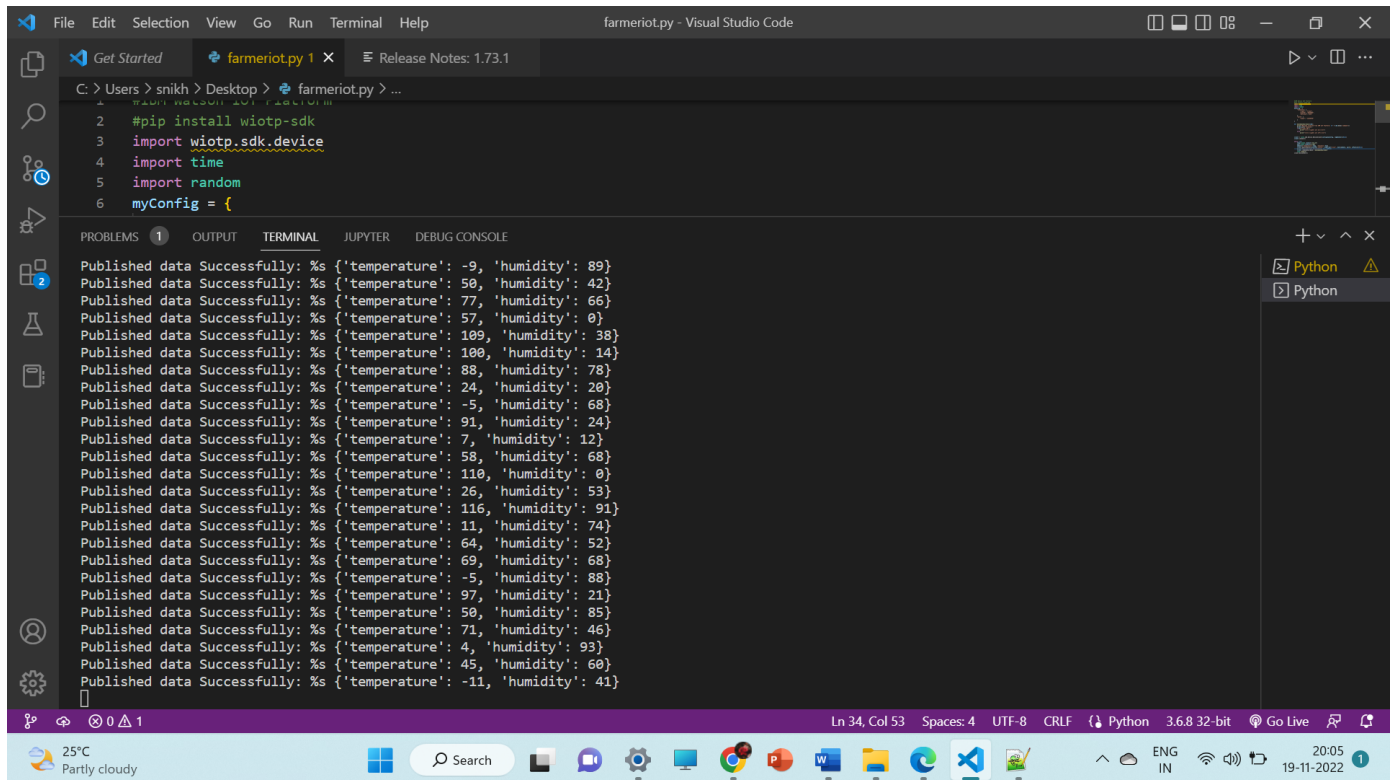
```
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "f1rqoy",
        "typeId": "NodeMCU",
        "deviceId": "1234"
    },
    "auth": {
        "token": "12345678"
    }
}

def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']
    if(m=="Light ON"):
        print("****///Lights are on///****")
    else:
        print("****///Lights are off///****")

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()
```

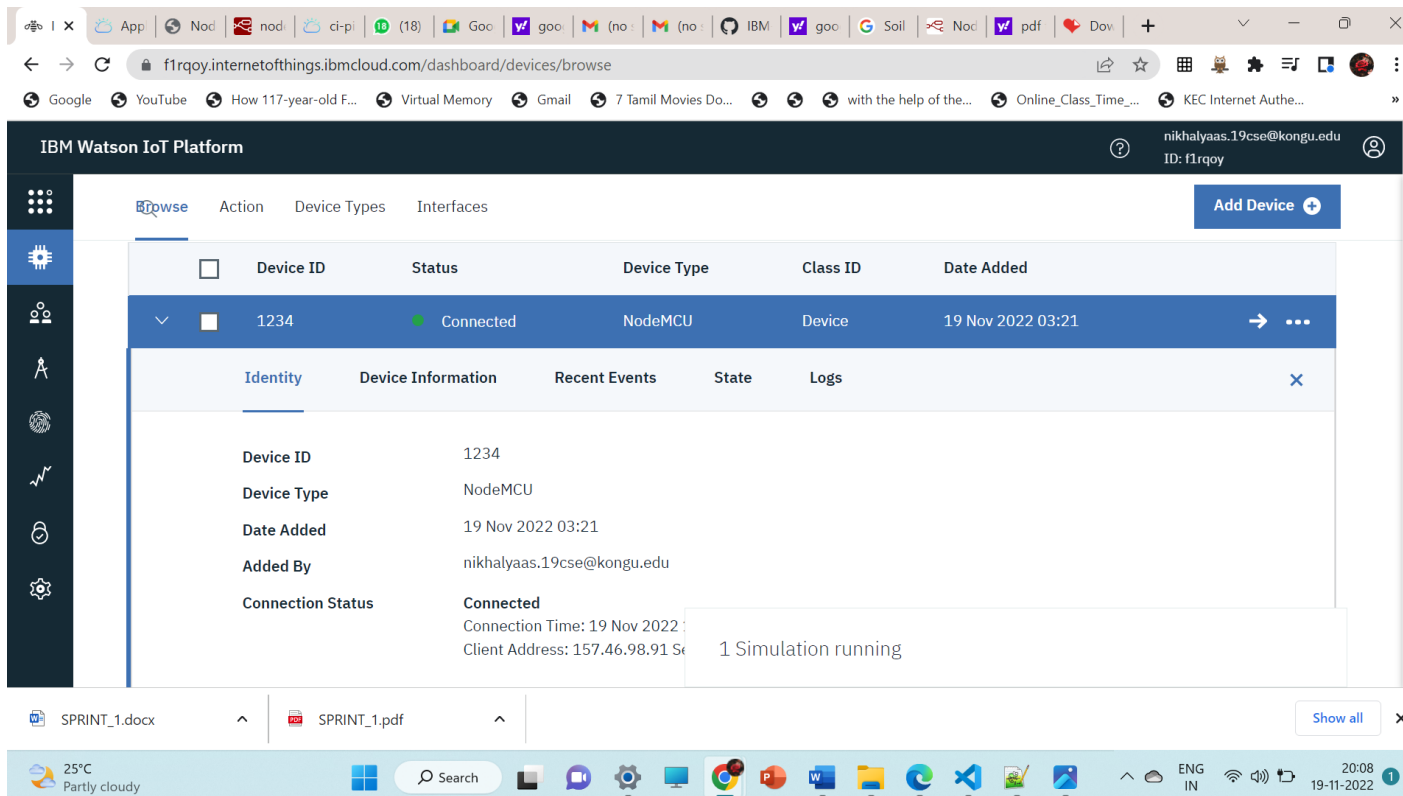
## OUTPUT:



```
1 # Import Watson IoT Platform
2 #pip install wiotp-sdk
3 import wiotp.sdk.device
4 import time
5 import random
6 myConfig = {
7     'url': 'https://api.us-south.iot.watsoncloud.ibm.com:443/api/v1/devices',
8     'apikey': 'apikey',
9     'organization': 'organization',
10    'type_id': 'type_id'
11 }
12 device = wiotp.sdk.Device(myConfig['url'], myConfig['apikey'], myConfig['organization'], myConfig['type_id'])
13
14 # Publish data to the IoT Platform
15 for i in range(20):
16     temperature = random.randint(-10, 100)
17     humidity = random.randint(0, 100)
18     data = {'temperature': temperature, 'humidity': humidity}
19     device.publish(data)
20     time.sleep(1)
```

Published data Successfully: %s {'temperature': -9, 'humidity': 89}  
Published data Successfully: %s {'temperature': 50, 'humidity': 42}  
Published data Successfully: %s {'temperature': 77, 'humidity': 66}  
Published data Successfully: %s {'temperature': 57, 'humidity': 0}  
Published data Successfully: %s {'temperature': 109, 'humidity': 38}  
Published data Successfully: %s {'temperature': 100, 'humidity': 14}  
Published data Successfully: %s {'temperature': 88, 'humidity': 78}  
Published data Successfully: %s {'temperature': 24, 'humidity': 20}  
Published data Successfully: %s {'temperature': -5, 'humidity': 68}  
Published data Successfully: %s {'temperature': 91, 'humidity': 24}  
Published data Successfully: %s {'temperature': 7, 'humidity': 12}  
Published data Successfully: %s {'temperature': 58, 'humidity': 68}  
Published data Successfully: %s {'temperature': 110, 'humidity': 0}  
Published data Successfully: %s {'temperature': 26, 'humidity': 53}  
Published data Successfully: %s {'temperature': 116, 'humidity': 91}  
Published data Successfully: %s {'temperature': 11, 'humidity': 74}  
Published data Successfully: %s {'temperature': 64, 'humidity': 52}  
Published data Successfully: %s {'temperature': 69, 'humidity': 68}  
Published data Successfully: %s {'temperature': -5, 'humidity': 88}  
Published data Successfully: %s {'temperature': 97, 'humidity': 21}  
Published data Successfully: %s {'temperature': 50, 'humidity': 85}  
Published data Successfully: %s {'temperature': 71, 'humidity': 46}  
Published data Successfully: %s {'temperature': 4, 'humidity': 93}  
Published data Successfully: %s {'temperature': 45, 'humidity': 60}  
Published data Successfully: %s {'temperature': -11, 'humidity': 41}

The device shows connected status in IBM Watson IOT Platform



IBM Watson IoT Platform

1234

Device ID	Status	Device Type	Class ID	Date Added
1234	Connected	NodeMCU	Device	19 Nov 2022 03:21

Identity	Device Information	Recent Events	State	Logs
Device ID	1234			
Device Type	NodeMCU			
Date Added	19 Nov 2022 03:21			
Added By	nikhalyaas.19cse@kongu.edu			
Connection Status	Connected			
	Connection Time: 19 Nov 2022 03:21			
	Client Address: 157.46.98.91			

1 Simulation running