

Sprint 3

TEAM ID	PNT2022TMID22829
Project Name	IoT Based smart crop Protection system for agriculture
Maximum mark	20 marks

PYTHON CODE:

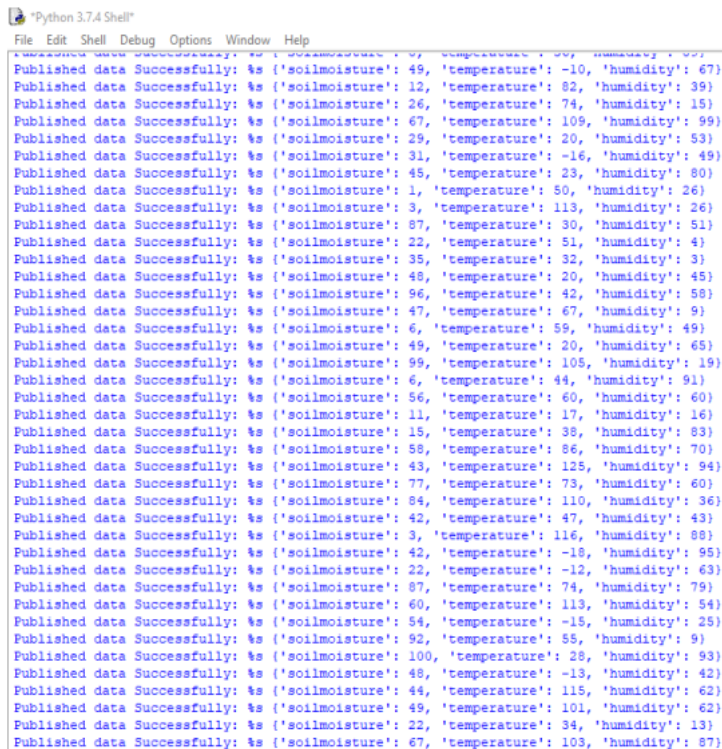
```
import wiotp.sdk.device
import time import os
import datetime
import random
myconfig = {
    "identity": {
        "orgId": "eop5qk",
        "typeId": "NodeMCU",
        "deviceId": "12345"
    },
    "auth": {
        "token": "ei0i7Fp@6V!LE5PWdN"
    }
}
client = wiotp.sdk.device.DeviceClient(config=myconfig, 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 & sprinkler is switched on")
    elif(m=="motoroff"):
        print("motor & sprinkler is switched OFF")
    print(" ")
    while True:
        soil=random.randint(0,100)
        temp=random.randint(-20,125)
        hum=random.randint(0,100)
```

```

myData={'soilmoisture':soil, 'temperature':temp, 'humidity':hum}
client.publishEvent(eventId="status", msgFormat="json",
data=myData, qos=0, onPublish=None)
print("Published data Successfully: %s", myData)
time.sleep(2)
client.myCommandCallback = myCommandCallback
client.disconnect ()

```

OUTPUT:



```

Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Published data Successfully: %s ('soilmoisture': 49, 'temperature': -10, 'humidity': 67)
Published data Successfully: %s ('soilmoisture': 12, 'temperature': 82, 'humidity': 39)
Published data Successfully: %s ('soilmoisture': 26, 'temperature': 74, 'humidity': 15)
Published data Successfully: %s ('soilmoisture': 67, 'temperature': 109, 'humidity': 99)
Published data Successfully: %s ('soilmoisture': 29, 'temperature': 20, 'humidity': 53)
Published data Successfully: %s ('soilmoisture': 31, 'temperature': -16, 'humidity': 49)
Published data Successfully: %s ('soilmoisture': 45, 'temperature': 23, 'humidity': 80)
Published data Successfully: %s ('soilmoisture': 1, 'temperature': 50, 'humidity': 26)
Published data Successfully: %s ('soilmoisture': 3, 'temperature': 113, 'humidity': 26)
Published data Successfully: %s ('soilmoisture': 87, 'temperature': 30, 'humidity': 51)
Published data Successfully: %s ('soilmoisture': 22, 'temperature': 51, 'humidity': 4)
Published data Successfully: %s ('soilmoisture': 35, 'temperature': 32, 'humidity': 3)
Published data Successfully: %s ('soilmoisture': 48, 'temperature': 20, 'humidity': 45)
Published data Successfully: %s ('soilmoisture': 96, 'temperature': 42, 'humidity': 58)
Published data Successfully: %s ('soilmoisture': 47, 'temperature': 67, 'humidity': 9)
Published data Successfully: %s ('soilmoisture': 6, 'temperature': 59, 'humidity': 49)
Published data Successfully: %s ('soilmoisture': 49, 'temperature': 20, 'humidity': 65)
Published data Successfully: %s ('soilmoisture': 99, 'temperature': 105, 'humidity': 19)
Published data Successfully: %s ('soilmoisture': 6, 'temperature': 44, 'humidity': 91)
Published data Successfully: %s ('soilmoisture': 56, 'temperature': 60, 'humidity': 60)
Published data Successfully: %s ('soilmoisture': 11, 'temperature': 17, 'humidity': 16)
Published data Successfully: %s ('soilmoisture': 15, 'temperature': 38, 'humidity': 83)
Published data Successfully: %s ('soilmoisture': 58, 'temperature': 86, 'humidity': 70)
Published data Successfully: %s ('soilmoisture': 43, 'temperature': 125, 'humidity': 94)
Published data Successfully: %s ('soilmoisture': 77, 'temperature': 73, 'humidity': 60)
Published data Successfully: %s ('soilmoisture': 84, 'temperature': 110, 'humidity': 36)
Published data Successfully: %s ('soilmoisture': 42, 'temperature': 47, 'humidity': 43)
Published data Successfully: %s ('soilmoisture': 3, 'temperature': 116, 'humidity': 88)
Published data Successfully: %s ('soilmoisture': 42, 'temperature': -18, 'humidity': 95)
Published data Successfully: %s ('soilmoisture': 22, 'temperature': -12, 'humidity': 63)
Published data Successfully: %s ('soilmoisture': 87, 'temperature': 74, 'humidity': 79)
Published data Successfully: %s ('soilmoisture': 60, 'temperature': 113, 'humidity': 54)
Published data Successfully: %s ('soilmoisture': 54, 'temperature': -15, 'humidity': 25)
Published data Successfully: %s ('soilmoisture': 92, 'temperature': 55, 'humidity': 9)
Published data Successfully: %s ('soilmoisture': 100, 'temperature': 28, 'humidity': 93)
Published data Successfully: %s ('soilmoisture': 48, 'temperature': -13, 'humidity': 42)
Published data Successfully: %s ('soilmoisture': 44, 'temperature': 115, 'humidity': 62)
Published data Successfully: %s ('soilmoisture': 49, 'temperature': 101, 'humidity': 62)
Published data Successfully: %s ('soilmoisture': 22, 'temperature': 34, 'humidity': 13)
Published data Successfully: %s ('soilmoisture': 67, 'temperature': 103, 'humidity': 87)

```

Building a blocks to connect with Node red and Mobile app:

