

# PROJECT DEVELOPMENT PHASE

Team ID	PNT2022TMID06235
Project Name	Project - IoT Based Smart Crop Protection System for Agriculture

## SPRINT – 4:

### PROGRAM:

```
import json
import wiotp.sdk.device
import time
import random
import ibmiotf.application
import ibmiotf.device

myConfig = {
    "identity": {
        "orgId": "vwcvi9",
        "typeId": "ESP32",
        "deviceId": "12345"
    },
    "auth": {
        "token": "12345678"
    }
}

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="lighton":
        print ("light is on")
    elif status == "lightoff":
        print ("light is off")
    elif status == "motoron":
        print ("motor is on")
    elif status == "motoroff":
        print ("motor is off")
    else :
        print ("please send proper command")

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

while True:
```

```

soil=random.randint(0,30)
humid=random.randint(0,200)
temp=random.randint(1,100)
pir=random.randint(0,1)

```

```

myData={'SoilMoisture':soil,'Humidity':humid,'Temperature':temp,'PIRmotion':pir}
    client.publishEvent(eventId="status", msgFormat="json", data=myData,
qos=0, onPublish=None)
print("Published data Successfully: ", myData)
time.sleep(20)

client.commandCallback = myCommandCallback

client.disconnect()

```

```

soilpython.py - C:\python\Python37\soilpython.py (3.7.4)
File Edit Format Run Options Window Help

import json
import websocket
import time
import random
import argparse, application
import mosquitto.device

myConfig = {
    "clientId": "myDevice",
    "topic": "topic",
    "deviceid": "12345",
    "auth": {
        "username": "username",
        "password": "password"
    }
}

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="lighton":
        print("light is on")
    elif status=="lightoff":
        print("light is off")
    elif status=="motoron":
        print("motor is on")
    elif status=="motoroff":
        print("motor is off")
    else:
        print("please send proper command")

client = websocket.device.DeviceClient(config=myConfig, logHandler=None)
client.connect()

while True:
    soil=random.randint(0,30)
    humid=random.randint(0,200)
    temp=random.randint(1,100)
    pir=random.randint(0,1)
    myData={'SoilMoisture':soil,'Humidity':humid,'Temperature':temp,'PIRmotion':pir}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0)
    time.sleep(20)

```

