

Sprint 2

Date	31 October 2022
Team ID	PNT2022TMID42171
Project Name	Project - IoT Based Smart Crop Protection System for Agriculture

PROGRAM:

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

myConfig = {
    "identity": {
        "orgId": "gtlwge",
        "typeId": "NodeMCU",
        "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()

```

Output:

```
Python 3.7.9 Shell
File Edit Shell Debug Options Window Help
Python 3.7.9 (tags/v3.7.9:13c94747c, Aug 17 2020, 18:58:18) [MSC v.1900 64 bit (AMD64)] on win32
Type "help()", "copyright()", "credits()" or "license()" for more information.
>>>
===== RESTART: C:\Users\rthan\AppData\Local\Programs\Python\Python37\havya.py =====
2022-11-16 15:43:24.569 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:\wccvi9\ESP32\12345
Published data Successfully: ('SoilMoisture': 12, 'Humidity': 5, 'Temperature': 24, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 9, 'Humidity': 136, 'Temperature': 51, 'PIRmotion': 0)
Published data Successfully: ('SoilMoisture': 15, 'Humidity': 75, 'Temperature': 72, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 21, 'Humidity': 85, 'Temperature': 18, 'PIRmotion': 0)
Published data Successfully: ('SoilMoisture': 9, 'Humidity': 67, 'Temperature': 33, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 6, 'Humidity': 144, 'Temperature': 58, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 18, 'Humidity': 89, 'Temperature': 49, 'PIRmotion': 0)
Published data Successfully: ('SoilMoisture': 21, 'Humidity': 87, 'Temperature': 9, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 26, 'Humidity': 171, 'Temperature': 65, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 3, 'Humidity': 99, 'Temperature': 57, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 11, 'Humidity': 70, 'Temperature': 47, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 27, 'Humidity': 152, 'Temperature': 36, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 6, 'Humidity': 199, 'Temperature': 56, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 22, 'Humidity': 79, 'Temperature': 73, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 9, 'Humidity': 142, 'Temperature': 36, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 6, 'Humidity': 167, 'Temperature': 71, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 19, 'Humidity': 61, 'Temperature': 89, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 10, 'Humidity': 127, 'Temperature': 42, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 26, 'Humidity': 83, 'Temperature': 19, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 13, 'Humidity': 130, 'Temperature': 27, 'PIRmotion': 0)
Published data Successfully: ('SoilMoisture': 11, 'Humidity': 44, 'Temperature': 13, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 17, 'Humidity': 88, 'Temperature': 6, 'PIRmotion': 0)
Published data Successfully: ('SoilMoisture': 30, 'Humidity': 102, 'Temperature': 73, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 5, 'Humidity': 173, 'Temperature': 70, 'PIRmotion': 0)
Published data Successfully: ('SoilMoisture': 9, 'Humidity': 22, 'Temperature': 71, 'PIRmotion': 0)
Published data Successfully: ('SoilMoisture': 0, 'Humidity': 45, 'Temperature': 56, 'PIRmotion': 0)
Published data Successfully: ('SoilMoisture': 21, 'Humidity': 121, 'Temperature': 28, 'PIRmotion': 0)
Published data Successfully: ('SoilMoisture': 12, 'Humidity': 194, 'Temperature': 89, 'PIRmotion': 0)
Published data Successfully: ('SoilMoisture': 23, 'Humidity': 180, 'Temperature': 11, 'PIRmotion': 0)
Published data Successfully: ('SoilMoisture': 4, 'Humidity': 63, 'Temperature': 45, 'PIRmotion': 0)
Published data Successfully: ('SoilMoisture': 14, 'Humidity': 187, 'Temperature': 58, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 1, 'Humidity': 2, 'Temperature': 38, 'PIRmotion': 1)
Published data Successfully: ('SoilMoisture': 8, 'Humidity': 120, 'Temperature': 59, 'PIRmotion': 0)
Published data Successfully: ('SoilMoisture': 27, 'Humidity': 151, 'Temperature': 24, 'PIRmotion': 1)
```

