

# SPRINT-1

## Python Code

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| Date         | 03 October 2022                                       |
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| Project Name | SMART FARMER – IOT ENABLED SMART FARMING APPLICATIONS |

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#IBM Watson IoT Platform
#pip install wiotp.sdk
import wiotp.sdk.device
import time
import random

myConfig = {
    "identity": {
        "orgid": "41mir6",
        "typeId": "TestDeviceType",
        "deviceId": "12345"
    },
    "auth": {
        "token": "dxV#NSUcZhSp4lc6*U"
    }
}

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=="MotoroOff"):
        print("Motor is switched OFF")
    print(" ")

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

while True:
    soil=random.randint(0,100)
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    myData = {'soil_moisture':soil,'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()
```

### Process of code:

- ✓ Open python idle and import “wiotp.sdk.device”, time, random libraries
- ✓ In :myConfig” function we have given all the credential details about userdevice
- ✓ In “myCommandCallback” function message will be received from user device, this function will decide the action wheather the motor shouldbe on or off.
- ✓ Device client from “wiotp.sdk.device” library is passes “myConfig” functions parameter into config attribute and taken in variable named as client.
- ✓ At while loop statement the values of soil, temperature, humidity is taken and these values will be sent through the message to the user.
- ✓ Then the user will command the device to make motor on or off through the message.
- ✓ Then the action will be done by the device and the device disconnected.