

SPRINT 1

PYTHON CODE

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| TEAM ID | PNT2022TMID02463 |
| PROJECT NAME | IoT Based Smart Crop Protection System for Agriculture |

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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@N9UtEhSp4lc6*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=="motroff"):
        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 user device

In myCommandCallback function message will be received from user device, this function will decide the action wheather the motor should be on or off.

- ☐ Deviceclient from wiotp.sdk.device library is passes myConfig function as parameter into config attribute and taken in variable named as client.
- ☐ At while loop statement the values of soil, temperature, humidity are 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