DEVELOP A PYTHON SCRIPT

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Date	12 Oct 2022
Team ID	PNT2022TMID17431
Project Name	Project -Smart farmer-IOT enabled smart
	Farming Application

Step:1 Python Program

```
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random
ms=0
status='light off'
myConfig = {
  "identity": {
    "orgId": "17lsro",
    "typeId": "MyDeviceType",
    "deviceId":"12345"
  },
  "auth": {
    "token": "GkatKdiUS?UVHKvnAD"
  }
}
```

def myCommandCallback(cmd):

```
print("Message received from IBM IoT Platform: %s" %
cmd.data['command'])
  m=cmd.data['command']
  if(m=="MOTOR ON"):
    print("MOTOR IS ON")
    status='motor on'
    myData={'temperature':temp,
'humidity':hum,'soilmoisture':sm percentage,'status':status}
    client.publishEvent(eventId="status", msgFormat="json", data=myData,
qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    time.sleep(2)
 elif(m=="MOTOR OFF"):
    print("MOTOR IS OFF")
    status='motor off'
    myData={'temperature':temp,
'humidity':hum,'soilmoisture':sm_percentage,'status':status}
    client.publishEvent(eventId="status", msgFormat="json", data=myData,
gos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    time.sleep(2)
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
```

```
while True:
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    soilmoisture=random.randint(0,1023)#analog sensor
    sm_percentage=(soilmoisture/1023)*100
    sm_percentage=int(sm_percentage)
    myData={'temperature':temp, 'humidity':hum,'soilmoisture':sm_percentage}
    client.publishEvent(eventId="status", msgFormat="json", data=myData,
    qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)

time.sleep(2)
```

Step:2 Run the Program

```
File Edit Shell Debug Options Window Help

Python 3.8.10 (tags/v3.8.10:3d8993a, May 3 2021, 11:48:03) [MSC v.1928 64 bit (AMD64)] on win32

Type "help", "copyright", "credits" or "license()" for more information.

>>>

= RESTART: C:\Users\B.SOMESHWARAN\Desktop\IBM\Project Development Phase\sprint -1\python code ibm.py.txt

2022-11-10 11:33:11,239 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:17lsro:MyDeviceType:12345

Published data Successfully: %s ('temperature': 29, 'humidity': 16, 'soilmoisture': 97)

Published data Successfully: %s ('temperature': 13, 'humidity': 79, 'soilmoisture': 43)

Published data Successfully: %s ('temperature': 97, 'humidity': 15, 'soilmoisture': 22)

Published data Successfully: %s ('temperature': 41, 'humidity': 66, 'soilmoisture': 44)

Published data Successfully: %s ('temperature': -14, 'humidity': 66, 'soilmoisture': 68)

Published data Successfully: %s ('temperature': 3, 'humidity': 64, 'soilmoisture': 68)

Published data Successfully: %s ('temperature': 3, 'humidity': 64, 'soilmoisture': 69)

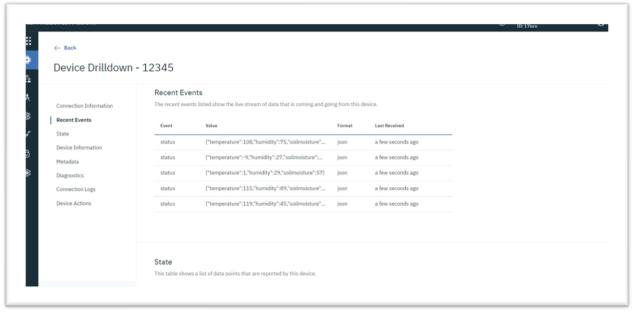
Published data Successfully: %s ('temperature': 3, 'humidity': 68, 'soilmoisture': 69)

Published data Successfully: %s ('temperature': 3, 'humidity': 68, 'soilmoisture': 69)

Published data Successfully: %s ('temperature': 33, 'humidity': 68, 'soilmoisture': 69)

Published data Successfully: %s ('temperature': 33, 'humidity': 68, 'soilmoisture': 58)
```

Step:3 Go To IBM WATSON IOT Platform, Under The Devices See the Status



of Output