

SPRINT - 1

Date	28 October 2022
Team ID	PNT2022TMID21342
Project Name	Project – Smart Farmer- IoT based Smart Farming Application

OBJECTIVE:

Connecting Sensors with Arduino.

PYTHON CODE:

```
import time
import random
#import ibmiotf.application
import ibmiotf.device
import sys

config={
    "org":"nq4lh2",
    "type" : "abcd",
    "id": "123",
    "auth-method": "token",
    "auth-token": "123456789"
}
client= ibmiotf.device.Client (config)
client.connect()

def myCommandCallback (cmd):
    a=cmd.data
    if len(a["command"])==0:
        pass
    else:
```

```

        print(a["command"])
def pub (data):
    client.publishEvent(event="status",
msgFormat="json",data=data, qos=0)
    print("Published data Successfully: %s",data)
while True:
    s=random.randint(0,100)
    h=random.randint(0,100)
    t=random.randint(0,100)
    data={"sm":s,"hum":h,"temp":t}
    pub(data)
    client.commandCallback = myCommandCallback
client.disconnect()

```

OUTPUT:

The screenshot displays a Visual Studio Code workspace with a Python file named `akash.py`. The code implements an IBM IoT client that connects to a device, sets up a command callback, and publishes data in a loop. The terminal output shows the following sequence of events:

```

Published data Successfully: %s {'sm': 66, 'hum': 70, 'temp': 0}
Published data Successfully: %s {'sm': 6, 'hum': 95, 'temp': 14}
Published data Successfully: %s {'sm': 61, 'hum': 51, 'temp': 30}
Published data Successfully: %s {'sm': 53, 'hum': 31, 'temp': 50}
Published data Successfully: %s {'sm': 1, 'hum': 69, 'temp': 77}
Published data Successfully: %s {'sm': 54, 'hum': 20, 'temp': 70}
Published data Successfully: %s {'sm': 75, 'hum': 99, 'temp': 83}
Published data Successfully: %s {'sm': 7, 'hum': 97, 'temp': 71}
Published data Successfully: %s {'sm': 76, 'hum': 2, 'temp': 34}
Published data Successfully: %s {'sm': 39, 'hum': 44, 'temp': 47}
Published data Successfully: %s {'sm': 31, 'hum': 39, 'temp': 80}
Published data Successfully: %s {'sm': 1, 'hum': 49, 'temp': 44}

```

The code in `akash.py` is as follows:

```

1 #import ibmiotf.application
2 #port ibmiotf.device
3 import sys
4
5 config={
6     "org":"mq4lh2",
7     "type":"abcd",
8     "id":"123",
9     "auth-method":"token",
10    "auth-token":"123456789"
11 }
12 client= ibmiotf.device.Client (config)
13 client.connect()
14
15 def myCommandCallback (cmd):
16     a=cmd.data
17     if len(a["command"])==0:
18         pass
19     else:
20         print(a["command"])
21
22 def pub (data):
23     client.publishEvent (event="status", msgformat="json",data=data, qos=0)
24     print("Published data Successfully: %s",data)
25
26 while True:

```

