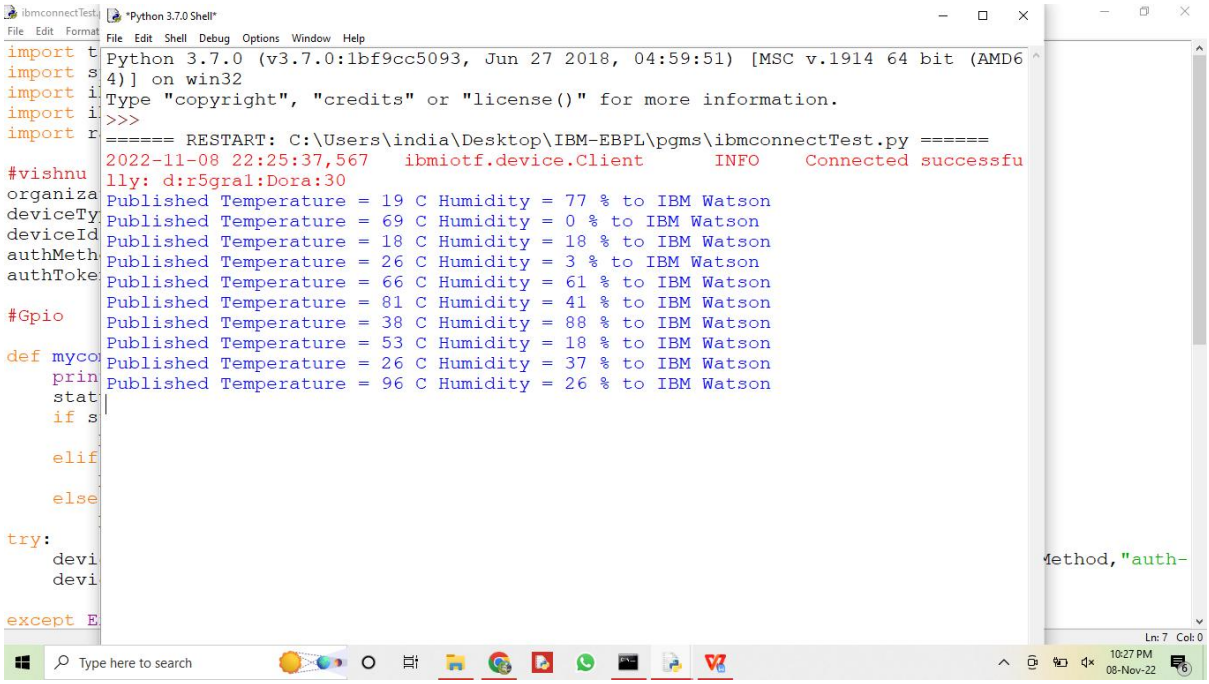
DEVELOP A PYTHON SCRIPT TO PUBLISH AND SUBSCRIBE TO IBM IOT PLATFORM

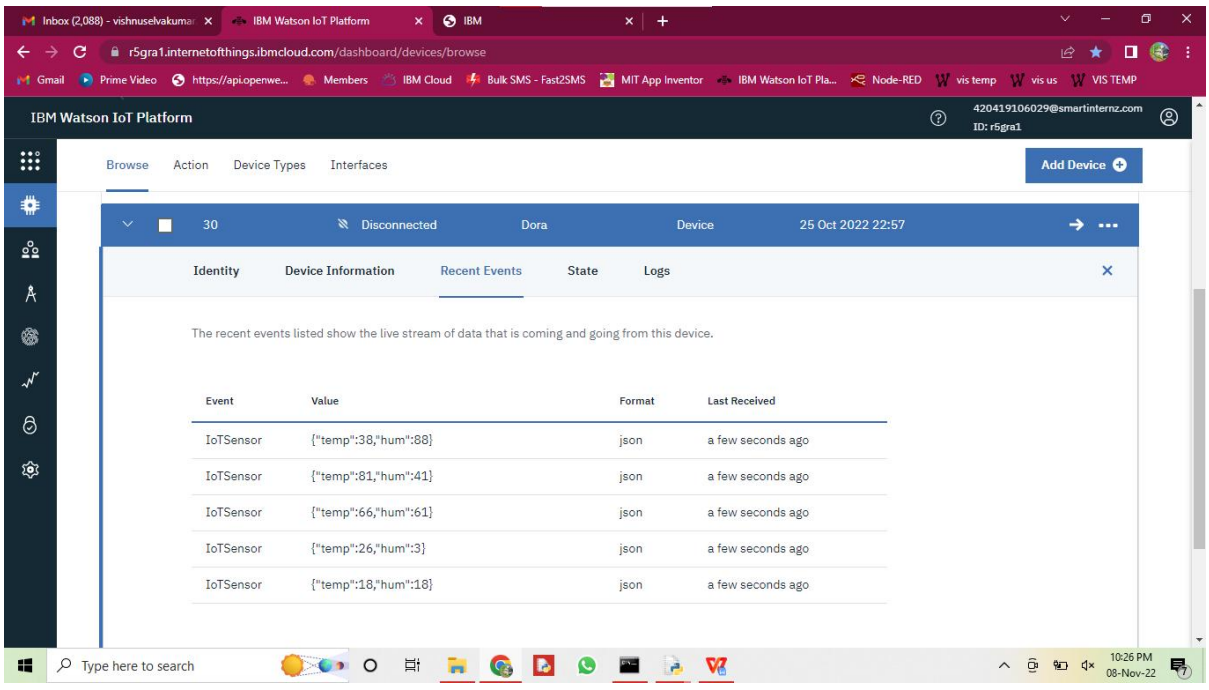
Date	08 November 2022
Team ID	PNT2022TMID38652
Project Name	SmartFarmer - IoT Enabled Smart Farming Application

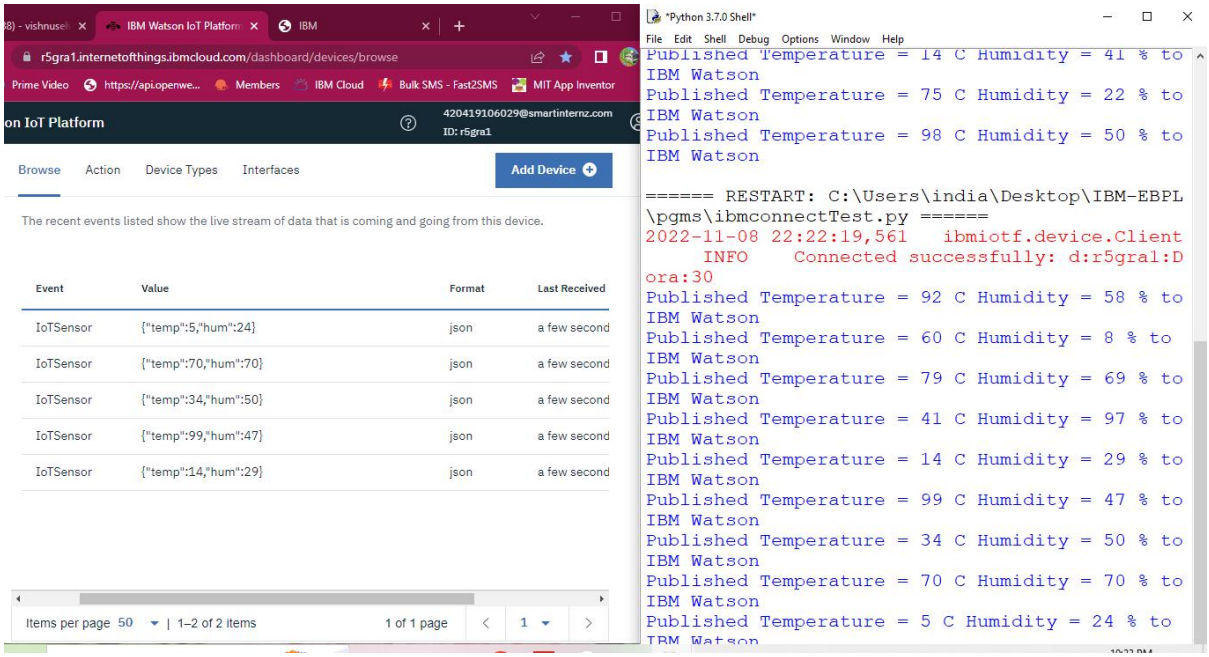
CODE:

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

#vishnu IBM
organization = "r5gra1"
deviceType = "Dora"
deviceId = "30"
authMethod = "token"
authToken = "12345678"

#Gpio

def mycommandCallback(cmd):
    print("Command Received: %s" %cmd.data['command'])
    status = cmd.data['command']
    if status=="lighton":
        print("LED is ON")
    elif status=="lightoff":
        print("LED is OFF")
    else:
        print("please send proper command")
```

```
try:
    deviceOptions = {"org":organization,"type":deviceType,"id":deviceId,"auth-
method":authMethod,"auth-token":authToken}
    deviceCli = ibmiotf.device.Client(deviceOptions)


except Exception as e:
    print("Caught exception connecting device: %s" %str(e))
    sys.exit()


#CONNECT
deviceCli.connect()


while True:
    temp=random.randint(0,100)
    hum=random.randint(0,100)


    data={'temp':temp,'hum':hum}


    def myOnPublishCallback():
        print("Published Temperature = %s C"%temp,"Humidity = %s %%" %hum, "to IBM
Watson")


    success = deviceCli.publishEvent("IoTSensor","json",data,qos=0,
on_publish=myOnPublishCallback)
    if not success:
        print("Not connected to IoTF")
    time.sleep(10)


    deviceCli.commandCallback = mycommandCallback


#Disconnect


deviceCli.disconnect()
```


Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
====== RESTART: C:\Users\india\Desktop\IBM-EBPL\pgms\ibmconnectTest.py ======
2022-11-08 22:25:37,567 ibmiotf.device.Client INFO Connected successfully: d:r5gra1:Dora:30
Published Temperature = 19 C Humidity = 77 % to IBM Watson
Published Temperature = 69 C Humidity = 0 % to IBM Watson
Published Temperature = 18 C Humidity = 18 % to IBM Watson
Published Temperature = 26 C Humidity = 3 % to IBM Watson
Published Temperature = 66 C Humidity = 61 % to IBM Watson
Published Temperature = 81 C Humidity = 41 % to IBM Watson
Published Temperature = 38 C Humidity = 88 % to IBM Watson
Published Temperature = 53 C Humidity = 18 % to IBM Watson
Published Temperature = 26 C Humidity = 37 % to IBM Watson
Published Temperature = 96 C Humidity = 26 % to IBM Watson
Type here to search
10:27 PM
08-Nov-22


IBM Watson IoT Platform
r5gra1.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
420419106029@smartinternz.com
ID: r5gra1
Browse
Action
Device Types
Interfaces
Add Device
30
Disconnected
Dora
Device
25 Oct 2022 22:57
Identity
Device Information
Recent Events
State
Logs
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
Format
Last Received
IoTSensor {"temp":38,"hum":88} json a few seconds ago
IoTSensor {"temp":81,"hum":41} json a few seconds ago
IoTSensor {"temp":66,"hum":61} json a few seconds ago
IoTSensor {"temp":26,"hum":3} json a few seconds ago
IoTSensor {"temp":18,"hum":18} json a few seconds ago
Type here to search
10:26 PM
08-Nov-22


IBM Watson IoT Platform
IBM
r5gra1.internetofthings.ibmcloud.com/dashboard/devices/browse
Prime Video
https://api.openwe...
Members
IBM Cloud
Bulk SMS - Fast2SMS
MIT App Inventor
on IoT Platform
420419106029@smartinternz.com
ID: r5gra1
Browse
Action
Device Types
Interfaces
Add Device
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
Format
Last Received
IoTSensor
{"temp":5,"hum":24}
json
a few second
IoTSensor
{"temp":70,"hum":70}
json
a few second
IoTSensor
{"temp":34,"hum":50}
json
a few second
IoTSensor
{"temp":99,"hum":47}
json
a few second
IoTSensor
{"temp":14,"hum":29}
json
a few second
Items per page 50
1–2 of 2 items
1 of 1 page
1
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Published Temperature = 14 C Humidity = 41 % to
IBM Watson
Published Temperature = 75 C Humidity = 22 % to
IBM Watson
Published Temperature = 98 C Humidity = 50 % to
IBM Watson
====== RESTART: C:\Users\india\Desktop\IBM-EBPL
\pgms\ibmconnectTest.py ======
2022-11-08 22:22:19,561 ibmiotf.device.Client
INFO Connected successfully: d:r5gra1:D
ora:30
Published Temperature = 92 C Humidity = 58 % to
IBM Watson
Published Temperature = 60 C Humidity = 8 % to
IBM Watson
Published Temperature = 79 C Humidity = 69 % to
IBM Watson
Published Temperature = 41 C Humidity = 97 % to
IBM Watson
Published Temperature = 14 C Humidity = 29 % to
IBM Watson
Published Temperature = 99 C Humidity = 47 % to
IBM Watson
Published Temperature = 34 C Humidity = 50 % to
IBM Watson
Published Temperature = 70 C Humidity = 70 % to
IBM Watson
Published Temperature = 5 C Humidity = 24 % to
IBM Watson