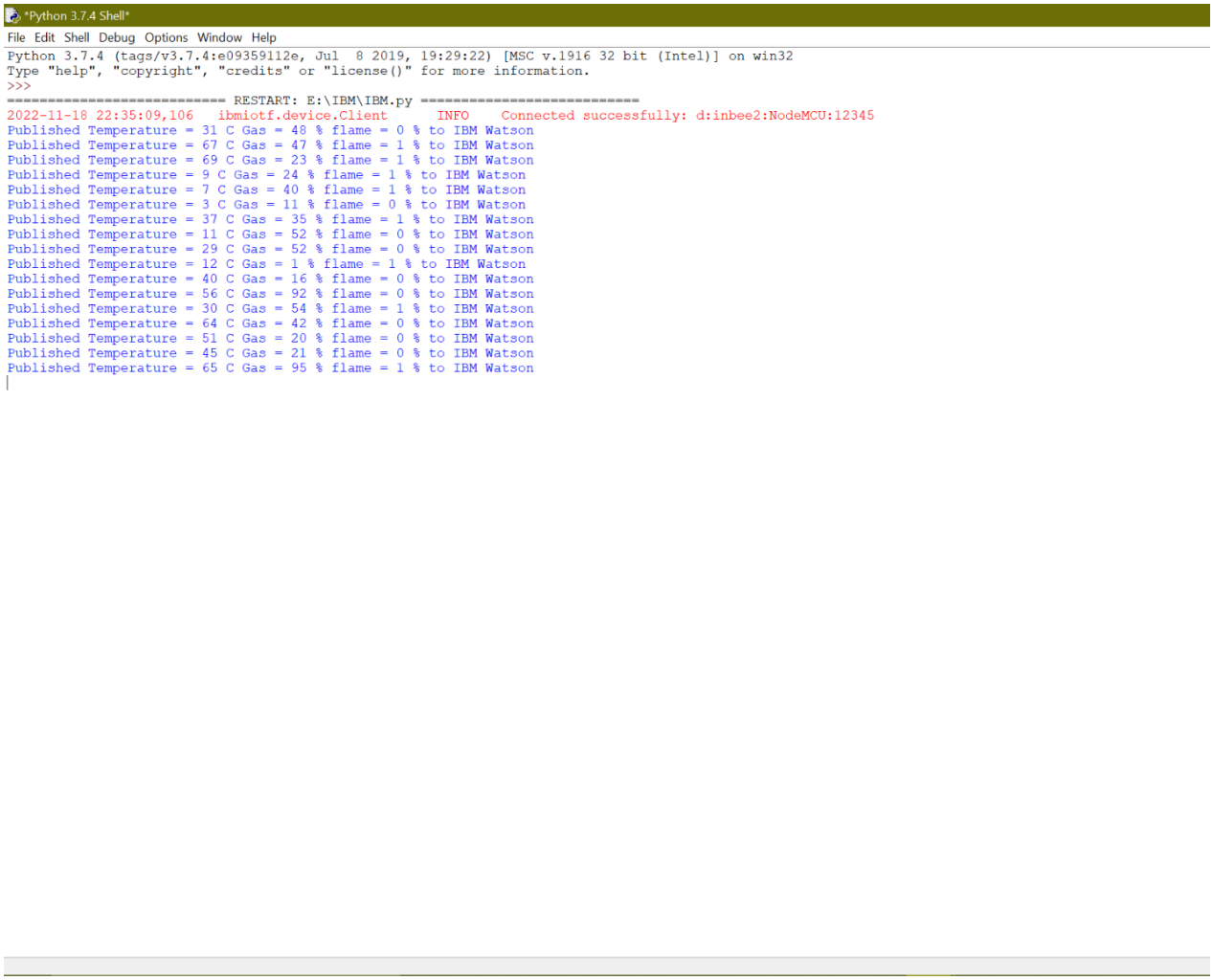
TEAM ID	PNT2022TMID04587
PROJECT NAME	Industry - specific intelligent fire management system

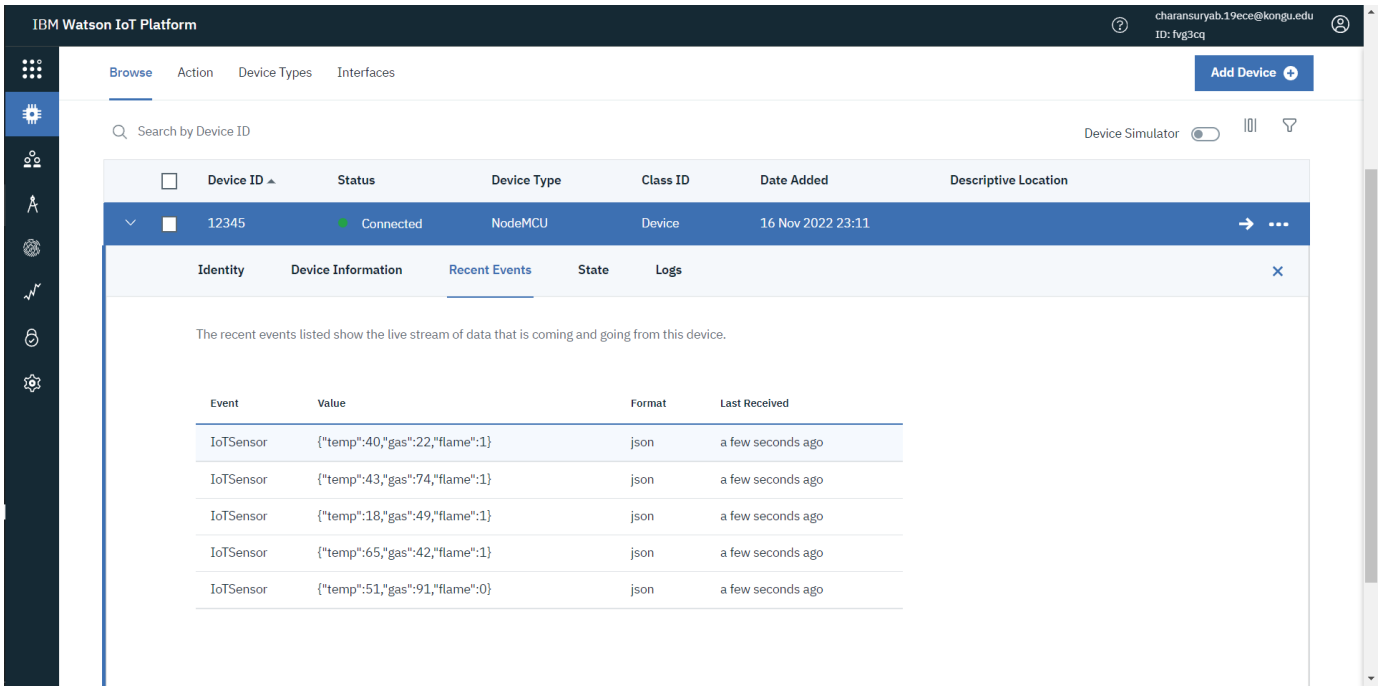
PYTHON TO IBM CLOUD

CODE:

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

organization = "fvg3cq"
deviceType = "NodeMCU"
deviceId = "12345"
authMethod = "token"
authToken = "12345678"

def myCommandCallback1(cmd):
    print("Command received: %s" % cmd.data['command'])
    status = cmd.data['command']
    if status == "sprinkleron":
        print("sprinkler is on")
    else:
        print("sprinkler is off")

    print(cmd)

def myCommandCallback2(cmd):
     print("Command received: %s" % cmd.data['command'])
     status = cmd.data['command']
     if status == "fanon":
         print("fan is on")
     else:
         print("fan is off")
     print(cmd)
```

```
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 and send a datapoint "hello" with value "world" into the cloud as an event of
type "greeting" 10 times
deviceCli.connect()

while True:
    #Get Sensor Data from DHT11
    temp=random.randint(0,70)
    gas=random.randint(0,100)
    flame=random.randint(0,1)
    data = { 'temp' : temp, 'gas': gas, 'flame': flame }
    #print data
    def myOnPublishCallback():
        print ("Published Temperature = %s C" % temp, "Gas = %s %%" %
gas, "flame = %s %%" % flame,"to IBM Watson")
    success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)
    if not success:
        print("Not connected to IoTF")
    time.sleep(1)
    deviceCli.commandCallback1 = myCommandCallback1
    deviceCli.commandCallback2 = myCommandCallback2
# Disconnect the device and application from the cloud
deviceCli.disconnect()
```


Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul 8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: E:\IBM\IBM.py ==========
2022-11-18 22:35:09,106 ibmiotf.device.Client INFO Connected successfully: d:inbee2:NodeMCU:12345
Published Temperature = 31 C Gas = 48 % flame = 0 % to IBM Watson
Published Temperature = 67 C Gas = 47 % flame = 1 % to IBM Watson
Published Temperature = 69 C Gas = 23 % flame = 1 % to IBM Watson
Published Temperature = 9 C Gas = 24 % flame = 1 % to IBM Watson
Published Temperature = 7 C Gas = 40 % flame = 1 % to IBM Watson
Published Temperature = 3 C Gas = 11 % flame = 0 % to IBM Watson
Published Temperature = 37 C Gas = 35 % flame = 1 % to IBM Watson
Published Temperature = 11 C Gas = 52 % flame = 0 % to IBM Watson
Published Temperature = 29 C Gas = 52 % flame = 0 % to IBM Watson
Published Temperature = 12 C Gas = 1 % flame = 1 % to IBM Watson
Published Temperature = 40 C Gas = 16 % flame = 0 % to IBM Watson
Published Temperature = 56 C Gas = 92 % flame = 0 % to IBM Watson
Published Temperature = 30 C Gas = 54 % flame = 1 % to IBM Watson
Published Temperature = 64 C Gas = 42 % flame = 0 % to IBM Watson
Published Temperature = 51 C Gas = 20 % flame = 0 % to IBM Watson
Published Temperature = 45 C Gas = 21 % flame = 0 % to IBM Watson
Published Temperature = 65 C Gas = 95 % flame = 1 % to IBM Watson


IBM Watson IoT Platform
charansuryab.19ece@kongu.edu
ID: fvg3cq
Browse
Action
Device Types
Interfaces
Add Device
Search by Device ID
Device Simulator
Device ID
Status
Device Type
Class ID
Date Added
Descriptive Location
12345
Connected
NodeMCU
Device
16 Nov 2022 23:11
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":40,"gas":22,"flame":1}
json
a few seconds ago
IoTSensor
{"temp":43,"gas":74,"flame":1}
json
a few seconds ago
IoTSensor
{"temp":18,"gas":49,"flame":1}
json
a few seconds ago
IoTSensor
{"temp":65,"gas":42,"flame":1}
json
a few seconds ago
IoTSensor
{"temp":51,"gas":91,"flame":0}
json
a few seconds ago