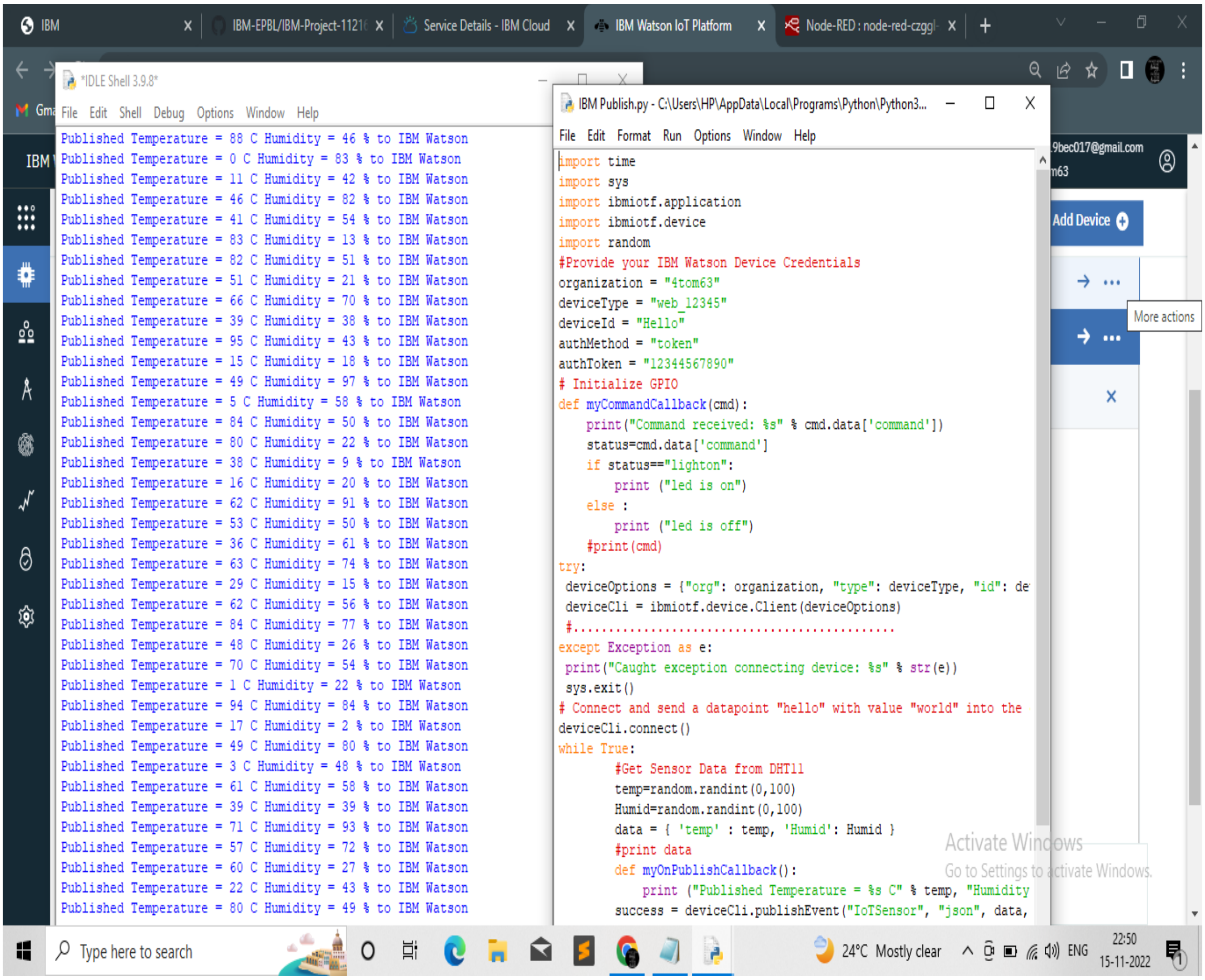
Date	15 NOVEMBER 2022
Team ID	PNT2022TMID07313
Project Name	Gas leakage monitoring & Alerting system for Industries

Source Code

```
import time

import sys

import ibmiotf.application

import ibmiotf.device

import random

#Provide your IBM Watson Device Credentials

organization = "4tom63"

deviceType = "web_12345"

deviceId = "Hello"

authMethod = "token"

authToken = "12344567890"

# Initialize GPIO

def myCommandCallback(cmd):

    print("Command received: %s" % cmd.data['command'])

    status=cmd.data['command']

    if status=="lighton":

        print ("led is on")

    else :

        print ("led is off")

    #print(cmd)
```

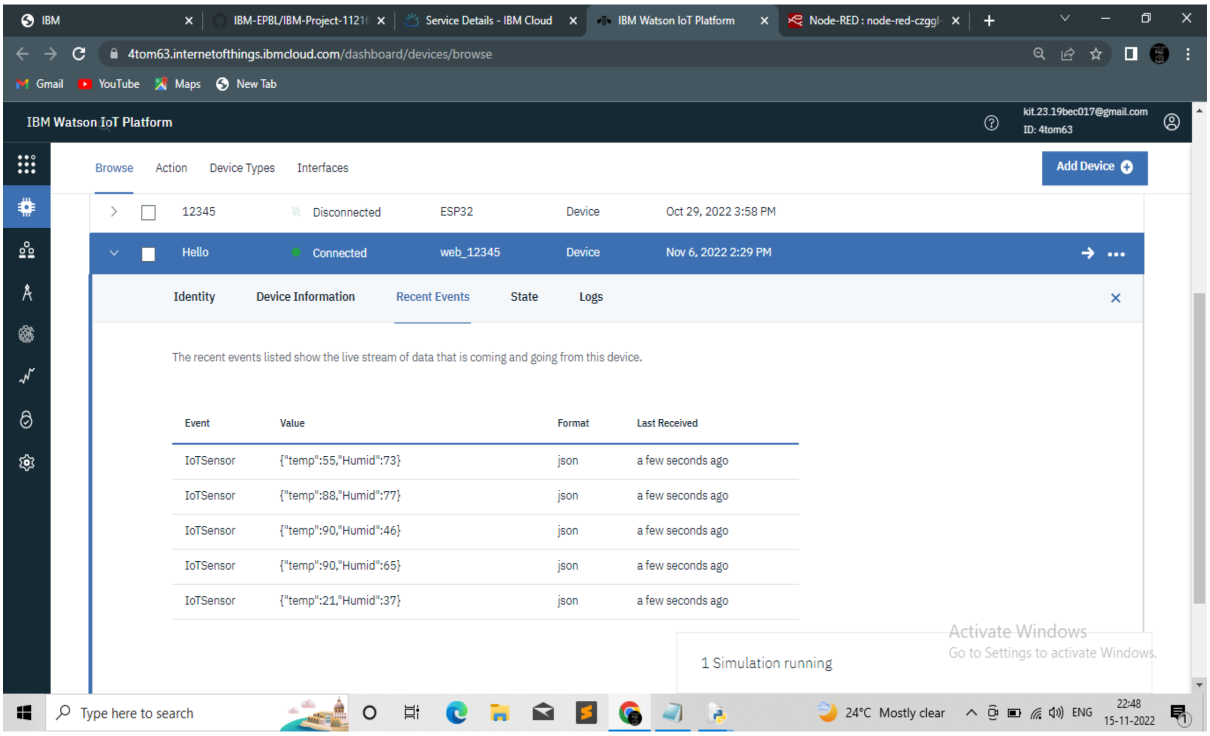
```
try:
 deviceOptions = {"org": organization, "type": deviceType, "id": deviceId,
"auth-method": authMethod, "auth-token": authToken}
 deviceCli = ibmiotf.device.Client(deviceOptions)
 #..............................................
except Exception as e:
 print("Caught exception connecting device: %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(0,100)
        Humid=random.randint(0,100)
        data = { 'temp' : temp, 'Humid': Humid }
        #print data
        def myOnPublishCallback():
            print ("Published Temperature = %s C" % temp, "Humidity = %s %%" %
Humid, "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.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud

deviceCli.disconnect()
```



IBM
IBM-EPBL/IBM-Project-1121(
Service Details - IBM Cloud
IBM Watson IoT Platform
Node-RED : node-red-czggl-
IDLE Shell 3.9.8
File Edit Shell Debug Options Window Help
IBM Publish.py - C:\Users\HP\AppData\Local\Programs\Python\Python3...
File Edit Format Run Options Window Help
9bec017@gmail.com
m63
Add Device
More actions
Activate Windows
Go to Settings to activate Windows.
Type here to search
24°C Mostly clear
ENG
22:50
15-11-2022

```
Published Temperature = 88 C Humidity = 46 % to IBM Watson
Published Temperature = 0 C Humidity = 83 % to IBM Watson
Published Temperature = 11 C Humidity = 42 % to IBM Watson
Published Temperature = 46 C Humidity = 82 % to IBM Watson
Published Temperature = 41 C Humidity = 54 % to IBM Watson
Published Temperature = 83 C Humidity = 13 % to IBM Watson
Published Temperature = 82 C Humidity = 51 % to IBM Watson
Published Temperature = 51 C Humidity = 21 % to IBM Watson
Published Temperature = 66 C Humidity = 70 % to IBM Watson
Published Temperature = 39 C Humidity = 38 % to IBM Watson
Published Temperature = 95 C Humidity = 43 % to IBM Watson
Published Temperature = 15 C Humidity = 18 % to IBM Watson
Published Temperature = 49 C Humidity = 97 % to IBM Watson
Published Temperature = 5 C Humidity = 58 % to IBM Watson
Published Temperature = 84 C Humidity = 50 % to IBM Watson
Published Temperature = 80 C Humidity = 22 % to IBM Watson
Published Temperature = 38 C Humidity = 9 % to IBM Watson
Published Temperature = 16 C Humidity = 20 % to IBM Watson
Published Temperature = 62 C Humidity = 91 % to IBM Watson
Published Temperature = 53 C Humidity = 50 % to IBM Watson
Published Temperature = 36 C Humidity = 61 % to IBM Watson
Published Temperature = 63 C Humidity = 74 % to IBM Watson
Published Temperature = 29 C Humidity = 15 % to IBM Watson
Published Temperature = 62 C Humidity = 56 % to IBM Watson
Published Temperature = 84 C Humidity = 77 % to IBM Watson
Published Temperature = 48 C Humidity = 26 % to IBM Watson
Published Temperature = 70 C Humidity = 54 % to IBM Watson
Published Temperature = 1 C Humidity = 22 % to IBM Watson
Published Temperature = 94 C Humidity = 84 % to IBM Watson
Published Temperature = 17 C Humidity = 2 % to IBM Watson
Published Temperature = 49 C Humidity = 80 % to IBM Watson
Published Temperature = 3 C Humidity = 48 % to IBM Watson
Published Temperature = 61 C Humidity = 58 % to IBM Watson
Published Temperature = 39 C Humidity = 39 % to IBM Watson
Published Temperature = 71 C Humidity = 93 % to IBM Watson
Published Temperature = 57 C Humidity = 72 % to IBM Watson
Published Temperature = 60 C Humidity = 27 % to IBM Watson
Published Temperature = 22 C Humidity = 43 % to IBM Watson
Published Temperature = 80 C Humidity = 49 % to IBM Watson
```

```python
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random
#Provide your IBM Watson Device Credentials
organization = "4tom63"
deviceType = "web_12345"
deviceId = "Hello"
authMethod = "token"
authToken = "12344567890"
# Initialize GPIO
def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="lighton":
        print ("led is on")
    else :
        print ("led is off")
    #print(cmd)
try:
 deviceOptions = {"org": organization, "type": deviceType, "id": de
 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
deviceCli.connect()
while True:
        #Get Sensor Data from DHT11
        temp=random.randint(0,100)
        Humid=random.randint(0,100)
        data = { 'temp' : temp, 'Humid': Humid }
        #print data
        def myOnPublishCallback():
            print ("Published Temperature = %s C" % temp, "Humidity
        success = deviceCli.publishEvent("IoTSensor", "json", data,
```



12345	Disconnected	ESP32	Device	Oct 29, 2022 3:58 PM	
Hello	Connected	web_12345	Device	Nov 6, 2022 2:29 PM	

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":55,"Humid":73}	json	a few seconds ago
IoTSensor	{"temp":88,"Humid":77}	json	a few seconds ago
IoTSensor	{"temp":90,"Humid":46}	json	a few seconds ago
IoTSensor	{"temp":90,"Humid":65}	json	a few seconds ago
IoTSensor	{"temp":21,"Humid":37}	json	a few seconds ago