PYTHON CODE FOR GAS, TEMPERATURE AND HUMIDITY

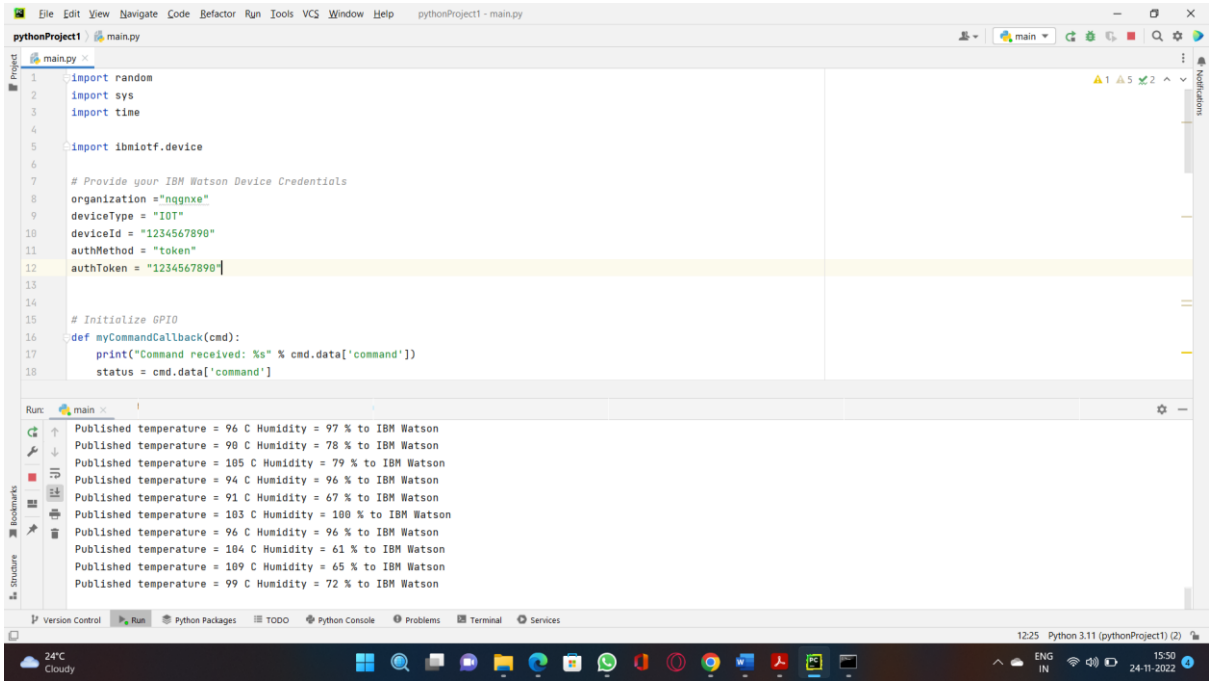
Date	24 NOV 2022
Team ID	PNT2022TMID47518
Project Name	Project - Gas Leakage monitoring & Alerting system for Industries

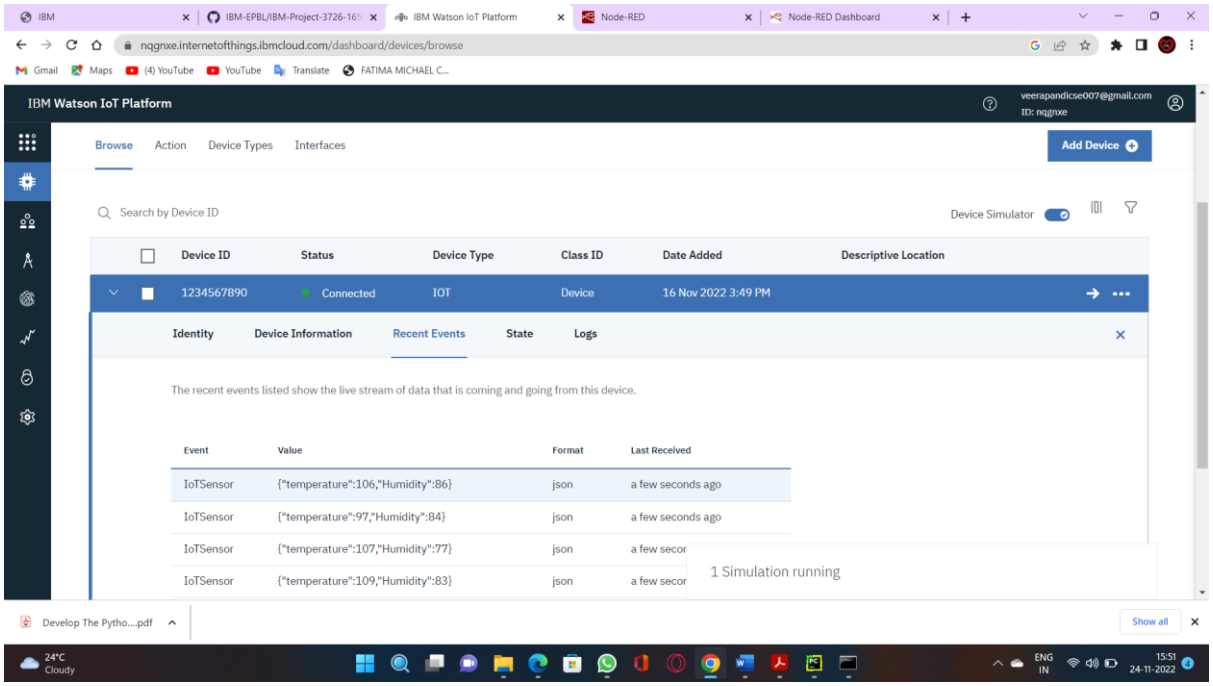
CODING:

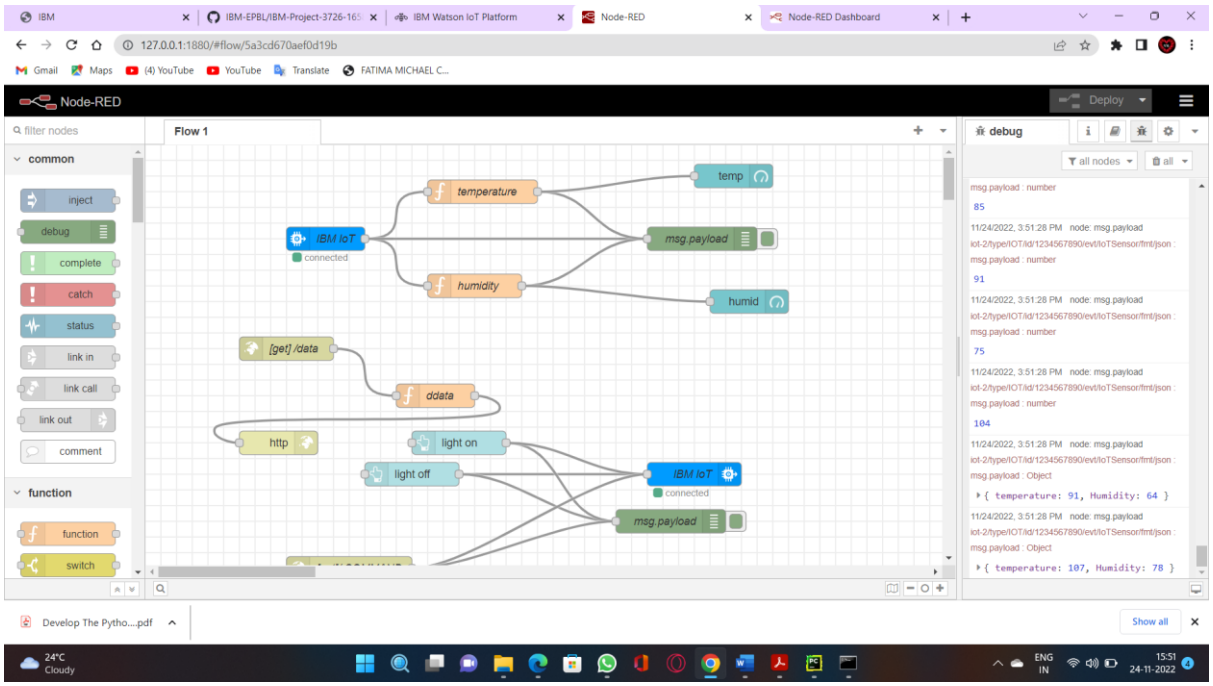
```
import random
import sys
import time

import ibmiotf.device

# Provide your IBM Watson Device Credentials
organization ="nqgnxe"
deviceType = "IOT"
deviceId = "1234567890"
authMethod = "token"
authToken = "1234567890"


# Initialize 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 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
    temperature = random.randint(90, 110)
    Humidity = random.randint(60, 100)
```

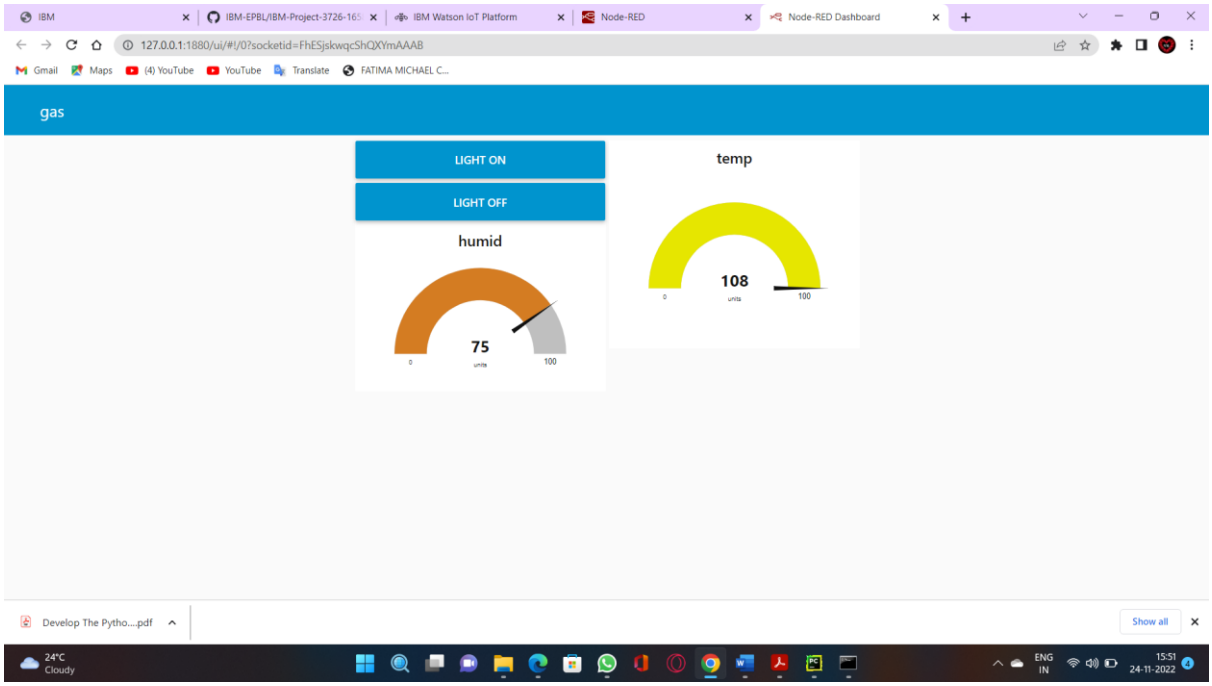
```
    data = {'temperature': temperature, 'Humidity': Humidity}


    # print data
    def myOnPublishCallback():
        print("Published temperature = %s C" % temperature, "Humidity = %s
%%" % Humidity, "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
deviceCli.disconnect()
```

OUTPUT:




IBM Watson IoT Platform
Browse
Action
Device Types
Interfaces
Add Device
Search by Device ID
Device Simulator
Device ID
Status
Device Type
Class ID
Date Added
Descriptive Location
1234567890
Connected
IOT
Device
16 Nov 2022 3:49 PM
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
{"temperature":106,"Humidity":86}
json
a few seconds ago
IoTSensor
{"temperature":97,"Humidity":84}
json
a few seconds ago
IoTSensor
{"temperature":107,"Humidity":77}
json
IoTSensor
{"temperature":109,"Humidity":83}
json
1 Simulation running


Node-RED
Flow 1
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
function
switch
temperature
humidity
IBM IoT
connected
temp
msg.payload
humid
[get] /data
ddata
http
light on
light off
IBM IoT
connected
msg.payload
debug
85
91
75
104
{ temperature: 91, Humidity: 64 }
{ temperature: 107, Humidity: 78 }


IBM
IBM-EPBL/IBM-Project-3726-16
IBM Watson IoT Platform
Node-RED
Node-RED Dashboard
127.0.0.1:1880/ui/#!/0?socketid=FhESjskwqcShQXYmAAAB
Gmail
Maps
(4) YouTube
YouTube
Translate
FATIMA MICHAEL C...
gas
LIGHT ON
LIGHT OFF
humid
75
0
units
100
temp
108
0
units
100
Develop The Pytho....pdf
Show all
24°C
Cloudy
ENG
IN
15:51
24-11-2022