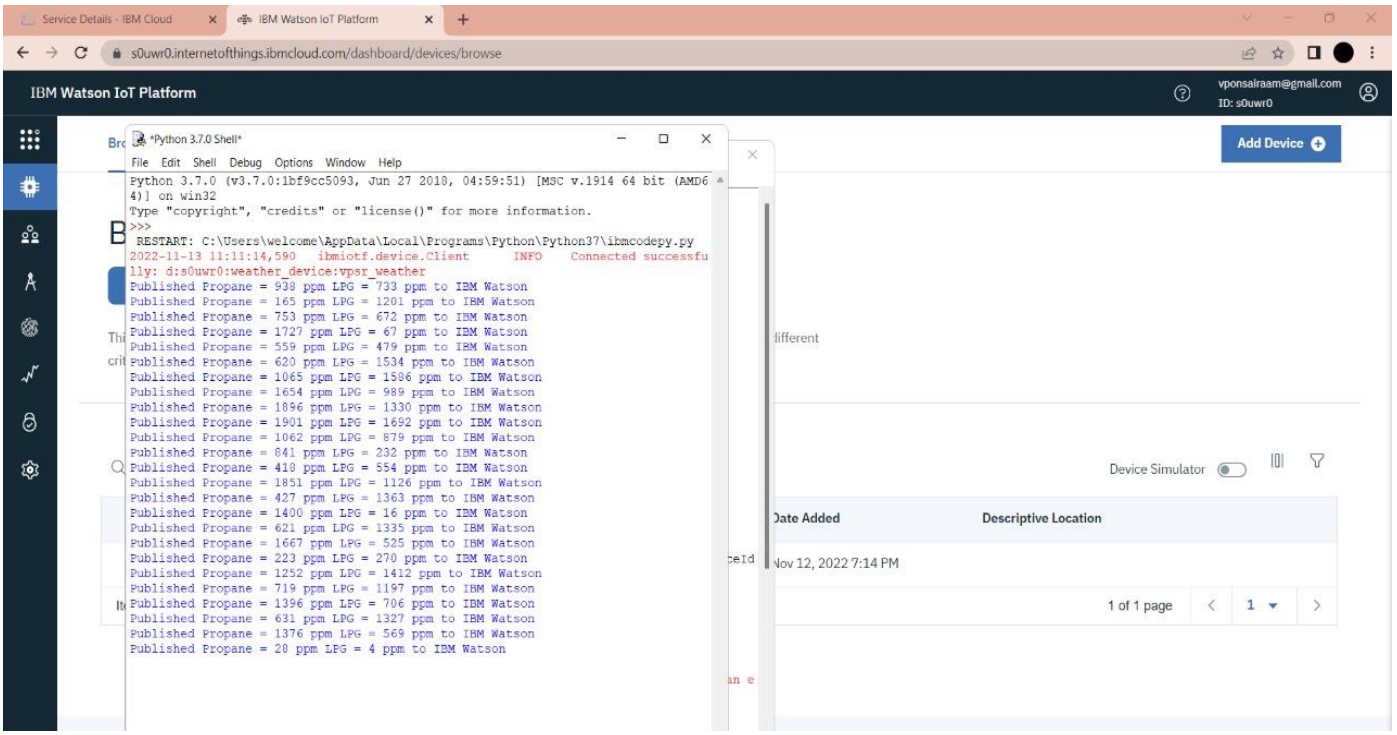
PYTHON CODE TO PUBLISH DATA TO IBM CLOUD

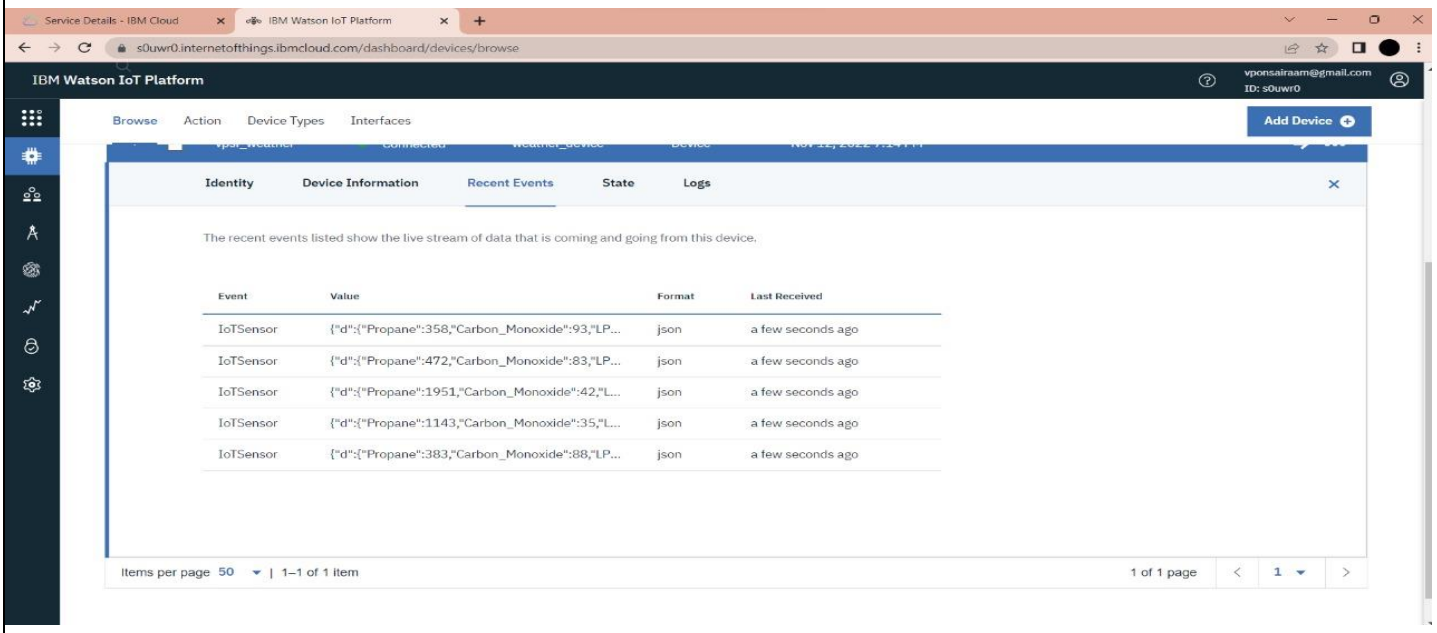
Date	19 NOVEMBER2022
Team ID	PNT2022TMID52392
Project Name	GAS LEAKAGE MONITORING AND ALERTING SYSTEM FOR INDUSTRIES

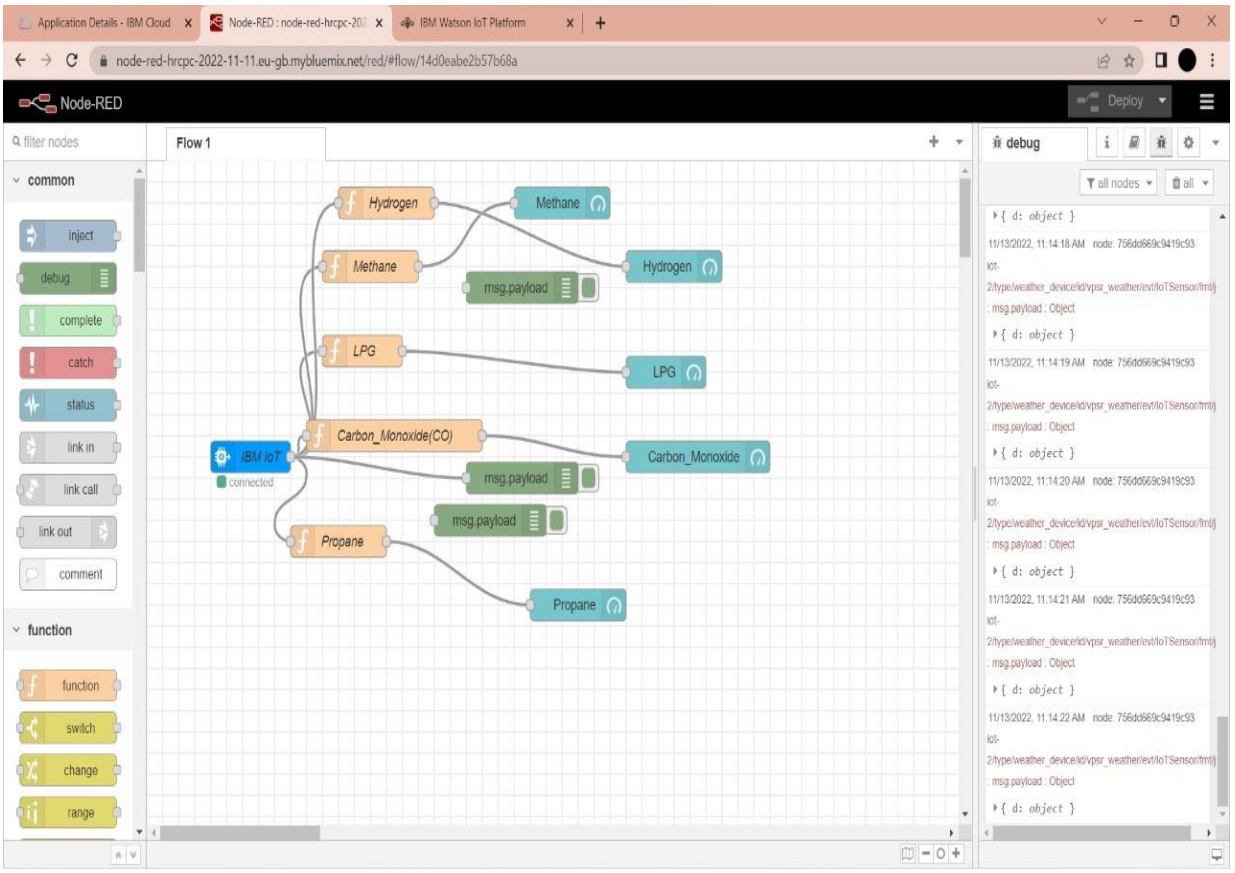
Code:

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

#Provide your IBM Watson Device Credentials
organization = "s0uwr0"
deviceType = "weather_device"
deviceId = "vpsr_weather"
authMethod = "token"
authToken = "9mMbsPkwZ-NtBMUAPc"

# Initialize GPIO



def myCommandCallback(cmd):
  print("Command received: %s" % cmd.data['command'])
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
      Propane =  random.randint(0, 2000);
      Carbon_Monoxide = random.randint(0, 100);
      LPG= random.randint(0, 2000);
      Methane = random.randint(0, 1000);
      Hydrogen= random.randint(0, 5000);
      data = {"d":{
   "Propane": Propane,
 "Carbon_Monoxide": Carbon_Monoxide,
  "LPG": LPG,
  "Methane": Methane,
   "Hydrogen":Hydrogen
     }
    }
      #print data
      def myOnPublishCallback():
         print ("Published Propane = %s ppm" % Propane, "LPG = %s ppm" % LPG, "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()
```


Service Details - IBM Cloud
IBM Watson IoT Platform
s0uwr0.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
vponsairaam@gmail.com
ID: s0uwr0
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\welcome\AppData\Local\Programs\Python\Python37\ibmcodepy.py
2022-11-13 11:11:14,590 ibmiotf.device.Client INFO Connected successfully: d:s0uwr0:weather_device:vpsr_weather
Published Propane = 938 ppm LPG = 733 ppm to IBM Watson
Published Propane = 165 ppm LPG = 1201 ppm to IBM Watson
Published Propane = 753 ppm LPG = 672 ppm to IBM Watson
Published Propane = 1727 ppm LPG = 67 ppm to IBM Watson
Published Propane = 559 ppm LPG = 479 ppm to IBM Watson
Published Propane = 620 ppm LPG = 1534 ppm to IBM Watson
Published Propane = 1065 ppm LPG = 1586 ppm to IBM Watson
Published Propane = 1654 ppm LPG = 989 ppm to IBM Watson
Published Propane = 1896 ppm LPG = 1330 ppm to IBM Watson
Published Propane = 1901 ppm LPG = 1692 ppm to IBM Watson
Published Propane = 1062 ppm LPG = 879 ppm to IBM Watson
Published Propane = 641 ppm LPG = 232 ppm to IBM Watson
Published Propane = 418 ppm LPG = 554 ppm to IBM Watson
Published Propane = 1851 ppm LPG = 1126 ppm to IBM Watson
Published Propane = 427 ppm LPG = 1363 ppm to IBM Watson
Published Propane = 1400 ppm LPG = 16 ppm to IBM Watson
Published Propane = 621 ppm LPG = 1335 ppm to IBM Watson
Published Propane = 1667 ppm LPG = 525 ppm to IBM Watson
Published Propane = 223 ppm LPG = 270 ppm to IBM Watson
Published Propane = 1252 ppm LPG = 1412 ppm to IBM Watson
Published Propane = 719 ppm LPG = 1197 ppm to IBM Watson
Published Propane = 1396 ppm LPG = 706 ppm to IBM Watson
Published Propane = 631 ppm LPG = 1327 ppm to IBM Watson
Published Propane = 1376 ppm LPG = 569 ppm to IBM Watson
Published Propane = 20 ppm LPG = 4 ppm to IBM Watson
Add Device
Device Simulator
Date Added
Descriptive Location
Nov 12, 2022 7:14 PM
1 of 1 page


Service Details - IBM Cloud
IBM Watson IoT Platform
s0uwr0.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
vponsairaam@gmail.com
ID: s0uwr0
Browse
Action
Device Types
Interfaces
Add Device
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 {"d":{"Propane":358,"Carbon_Monoxide":93,"LP... json a few seconds ago
IoTSensor {"d":{"Propane":472,"Carbon_Monoxide":83,"LP... json a few seconds ago
IoTSensor {"d":{"Propane":1951,"Carbon_Monoxide":42,"L... json a few seconds ago
IoTSensor {"d":{"Propane":1143,"Carbon_Monoxide":35,"L... json a few seconds ago
IoTSensor {"d":{"Propane":383,"Carbon_Monoxide":88,"LP... json a few seconds ago
Items per page 50
1–1 of 1 item
1 of 1 page


Application Details - IBM Cloud
Node-RED : node-red-hrcpc-20
IBM Watson IoT Platform
node-red-hrcpc-2022-11-11.eu-gb.mybluemix.net/red/#flow/14d0eabe2b57b68a
Node-RED
Deploy
filter nodes
Flow 1
debug
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
function
switch
change
range
Hydrogen
Methane
Hydrogen
Methane
msg.payload
LPG
LPG
Carbon_Monoxide(CO)
Carbon_Monoxide
IBM IoT
connected
msg.payload
msg.payload
Propane
Propane
all nodes
all
{ d: object }
11/13/2022, 11:14:18 AM node: 756dd669c9419c93
iot-2/type/weather_device/id/vpsr_weather/evt/IoTSensor/fmt/j
: msg.payload : Object
{ d: object }
11/13/2022, 11:14:19 AM node: 756dd669c9419c93
iot-2/type/weather_device/id/vpsr_weather/evt/IoTSensor/fmt/j
: msg.payload : Object
{ d: object }
11/13/2022, 11:14:20 AM node: 756dd669c9419c93
iot-2/type/weather_device/id/vpsr_weather/evt/IoTSensor/fmt/j
: msg.payload : Object
{ d: object }
11/13/2022, 11:14:21 AM node: 756dd669c9419c93
iot-2/type/weather_device/id/vpsr_weather/evt/IoTSensor/fmt/j
: msg.payload : Object
{ d: object }
11/13/2022, 11:14:22 AM node: 756dd669c9419c93
iot-2/type/weather_device/id/vpsr_weather/evt/IoTSensor/fmt/j
: msg.payload : Object
{ d: object }