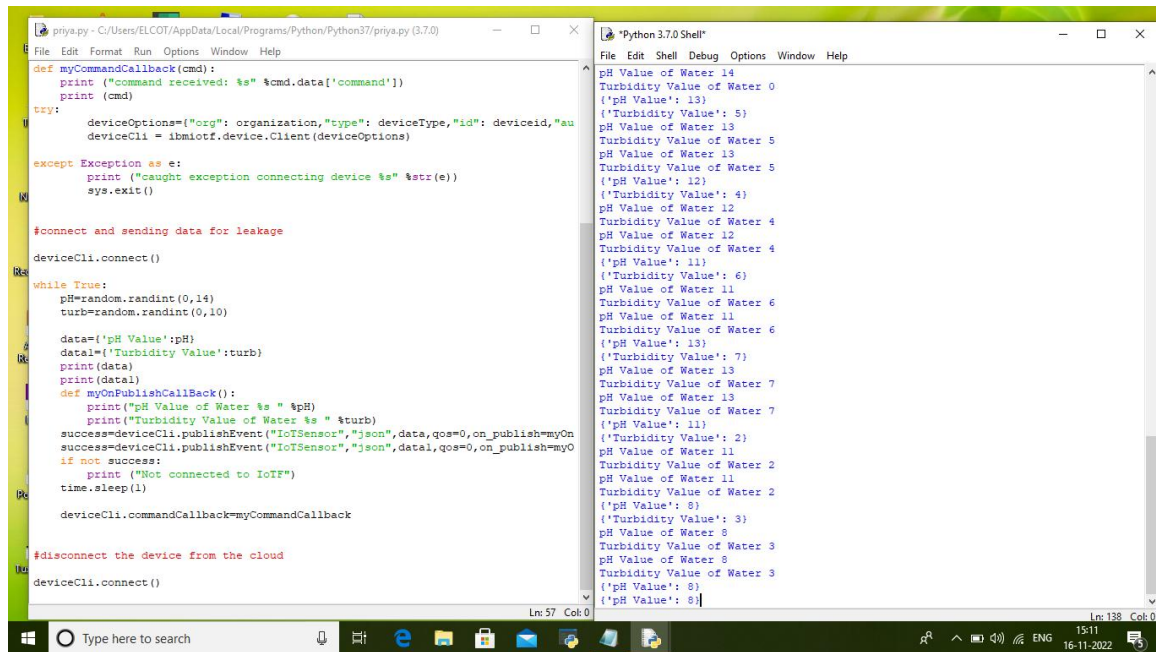


Publish data to cloud

Date	20October2022
Team id	PNT2022TMID41415
Project Title	Real Time River Water Quality Monitor and control system
Marks	



The image shows a Windows desktop environment. On the left, a text editor window titled 'priya.py' contains a Python script. The script defines a function 'myCommandCallback' that prints received commands. It then initializes an 'ibmiotf.device.Client' and enters a loop where it generates random pH and turbidity values, formats them into a JSON string, and publishes the event to the cloud. On the right, a 'Python 3.7.0 Shell' window displays the output of the script, showing a series of JSON objects representing the published data points, such as {'pH Value': 14, 'Turbidity Value of Water 0': {'pH Value': 13, 'Turbidity Value': 5}}.

```
def myCommandCallback(cmd):
    print ("command received: %s" %cmd.data['command'])
    print (cmd)

try:
    deviceOptions={"org": organization,"type": deviceType,"id": deviceid,"au
    deviceCli = ibmiotf.device.Client(deviceOptions)

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

#connect and sending data for leakage

deviceCli.connect()

while True:
    pH=random.randint(0,14)
    turb=random.randint(0,10)

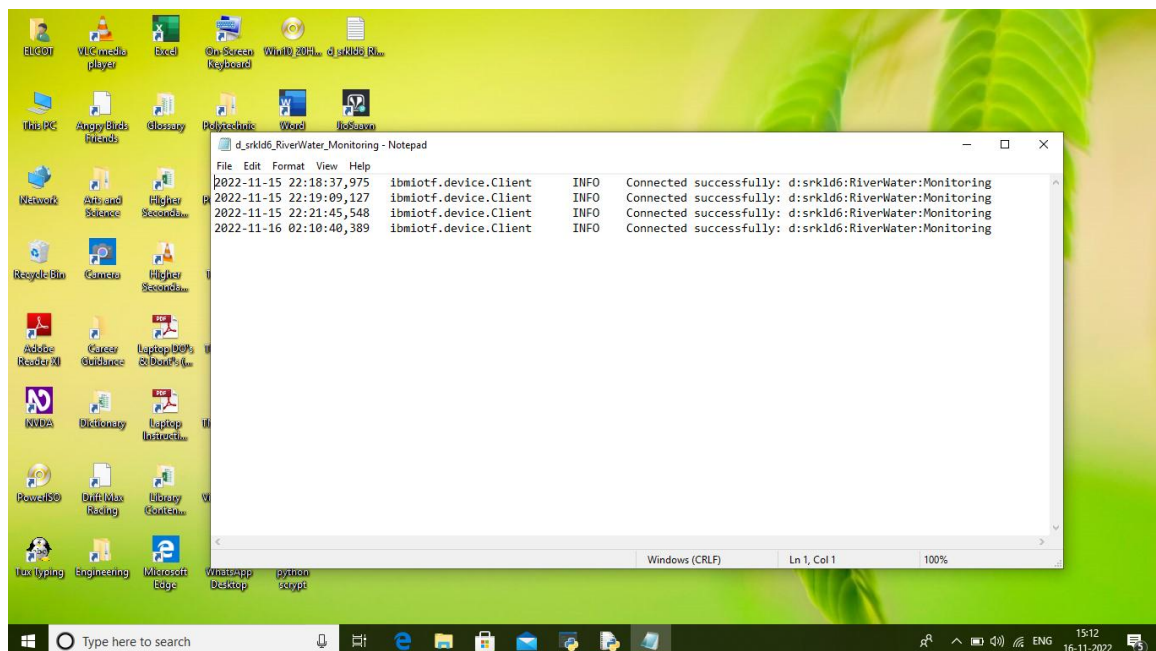
    data={'pH Value':pH}
    data['Turbidity Value':turb}
    print(data)
    print(data)
    def myOnPublishCallback():
        print("pH Value of Water %s " %pH)
        print("Turbidity Value of Water %s " %turb)
        success=deviceCli.publishEvent("IoTSensor","json",data,qos=0,on_publish=myOn
        success=deviceCli.publishEvent("IoTSensor","json",data,qos=0,on_publish=myO
    if not success:
        print ("Not connected to IoT")
        time.sleep(1)

    deviceCli.commandCallback=myCommandCallback

#disconnect the device from the cloud

deviceCli.connect()
```

```
pH Value of Water 14
Turbidity Value of Water 0
{'pH Value': 13}
{'Turbidity Value': 5}
pH Value of Water 13
Turbidity Value of Water 5
pH Value of Water 13
Turbidity Value of Water 5
{'pH Value': 12}
{'Turbidity Value': 4}
pH Value of Water 12
Turbidity Value of Water 4
pH Value of Water 12
Turbidity Value of Water 4
{'pH Value': 11}
{'Turbidity Value': 6}
pH Value of Water 11
Turbidity Value of Water 6
pH Value of Water 11
Turbidity Value of Water 6
{'pH Value': 13}
{'Turbidity Value': 7}
pH Value of Water 13
Turbidity Value of Water 7
pH Value of Water 13
Turbidity Value of Water 7
{'pH Value': 11}
{'Turbidity Value': 2}
pH Value of Water 11
Turbidity Value of Water 2
pH Value of Water 11
Turbidity Value of Water 2
{'pH Value': 8}
{'Turbidity Value': 3}
pH Value of Water 8
Turbidity Value of Water 3
pH Value of Water 8
Turbidity Value of Water 3
{'pH Value': 8}
{'pH Value': 8}
```



The image shows a Windows desktop environment. A Notepad window titled 'd_srkl6_RiverWater_Monitoring - Notepad' is open, displaying a log of successful connections. The log entries show the date and time of each connection, followed by the client ID and the message 'Connected successfully: d_srkl6:RiverWater:Monitoring'.

```
File Edit Format View Help
2022-11-15 22:18:37,975 ibmiotf.device.Client INFO Connected successfully: d_srkl6:RiverWater:Monitoring
2022-11-15 22:19:09,127 ibmiotf.device.Client INFO Connected successfully: d_srkl6:RiverWater:Monitoring
2022-11-15 22:21:45,548 ibmiotf.device.Client INFO Connected successfully: d_srkl6:RiverWater:Monitoring
2022-11-16 02:10:48,389 ibmiotf.device.Client INFO Connected successfully: d_srkl6:RiverWater:Monitoring
```

Application Details - IBM Cloud x Node-RED: node-red-hvji-2022 x IBM Watson IoT Platform x Python 3.7.0 Shell

srkld6.internetofthings.ibmcloud.com/dashboard/devices/browse

IBM Watson IoT Platform

Browse Action Device Types Interfaces

Browse Devices

All Devices Diagnose

This table shows a summary of all devices that have been added. It can be filtered by various criteria. To get started, you can add devices by using the Add Device button.

Search by Device ID

Device ID	Status
2811	Disconnected
Monitoring	Connected

Items per page 50 | 1-2 of 2 items

```
Turbidity Value of Water 89
pH Value of Water 0
Turbidity Value of Water 89
('pH Value': 0)
('Turbidity Value': 84)
pH Value of Water 0
Turbidity Value of Water 54
pH Value of Water 0
Turbidity Value of Water 54
('pH Value': 14)
('Turbidity Value': 91)
pH Value of Water 14
Turbidity Value of Water 91
pH Value of Water 14
Turbidity Value of Water 91
('pH Value': 14)
('Turbidity Value': 62)
pH Value of Water 14
Turbidity Value of Water 62
pH Value of Water 14
Turbidity Value of Water 62
('pH Value': 3)
('Turbidity Value': 66)
pH Value of Water 3
Turbidity Value of Water 66
pH Value of Water 3
Turbidity Value of Water 66
('pH Value': 13)
('Turbidity Value': 66)
pH Value of Water 13
Turbidity Value of Water 66
pH Value of Water 13
Turbidity Value of Water 66
('pH Value': 7)
('Turbidity Value': 60)
pH Value of Water 7
Turbidity Value of Water 60
pH Value of Water 7
Turbidity Value of Water 60
```

Ln: 81 Col: 0

data={ 'Turbidity Value': turb;

IBM Cloud Account Creation Progress x IBM Cloud Account

cloud.ibm.com/account/settings

Account settings

Search resources and products...

Account

priyanga's Account

ID: 7efd109055b6456fb880269ee5319031

Account Type

Trial (Free)

58 days remaining in Trial

Account upgrade

Pay-As-You-Go

Add your credit card to unlock the full power of IBM Cloud with a Pay-As-You-Go account. You'll still be eligible for free runtime and service allowances, and you'll be charged only for paid services that you use. [Learn more](#)

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Application Details - IBM Cloud x Node-RED: node-red-hvji-2022 x IBM Watson IoT Platform x IBM Cloud Account

srkld6.internetofthings.ibmcloud.com/dashboard/devices/browse

IBM Watson IoT Platform

Browse Action Device Types Interfaces

Device ID	Status	Device Type	Class ID
2811	Disconnected	NodeMCU	Device
Monitoring	Connected	RiverWater	Device

Identity Device Information Recent Events State

The recent events listed show the live stream of data that is coming and going from the device.

Event	Value	Format
IoT Sensor	{ "Turbidity Value": 63 }	json
IoT Sensor	{ "pH Value": 6 }	json
IoT Sensor	{ "Turbidity Value": 60 }	json
IoT Sensor	{ "pH Value": 11 }	json

```
Turbidity Value of Water 69
pH Value of Water 10
Turbidity Value of Water 69
('pH Value': 1)
('Turbidity Value': 65)
pH Value of Water 1
Turbidity Value of Water 65
pH Value of Water 1
Turbidity Value of Water 65
('pH Value': 3)
('Turbidity Value': 19)
pH Value of Water 3
Turbidity Value of Water 19
pH Value of Water 3
Turbidity Value of Water 19
('pH Value': 13)
('Turbidity Value': 75)
pH Value of Water 13
Turbidity Value of Water 75
pH Value of Water 13
Turbidity Value of Water 75
('pH Value': 12)
('Turbidity Value': 22)
pH Value of Water 12
Turbidity Value of Water 22
pH Value of Water 12
Turbidity Value of Water 22
('pH Value': 11)
('Turbidity Value': 60)
pH Value of Water 11
Turbidity Value of Water 60
pH Value of Water 11
Turbidity Value of Water 60
('pH Value': 6)
('Turbidity Value': 63)
pH Value of Water 6
Turbidity Value of Water 63
pH Value of Water 6
Turbidity Value of Water 63
```

data={ 'Turbidity Value': turb;