Develop the Python Script
Push Data to the Cloud

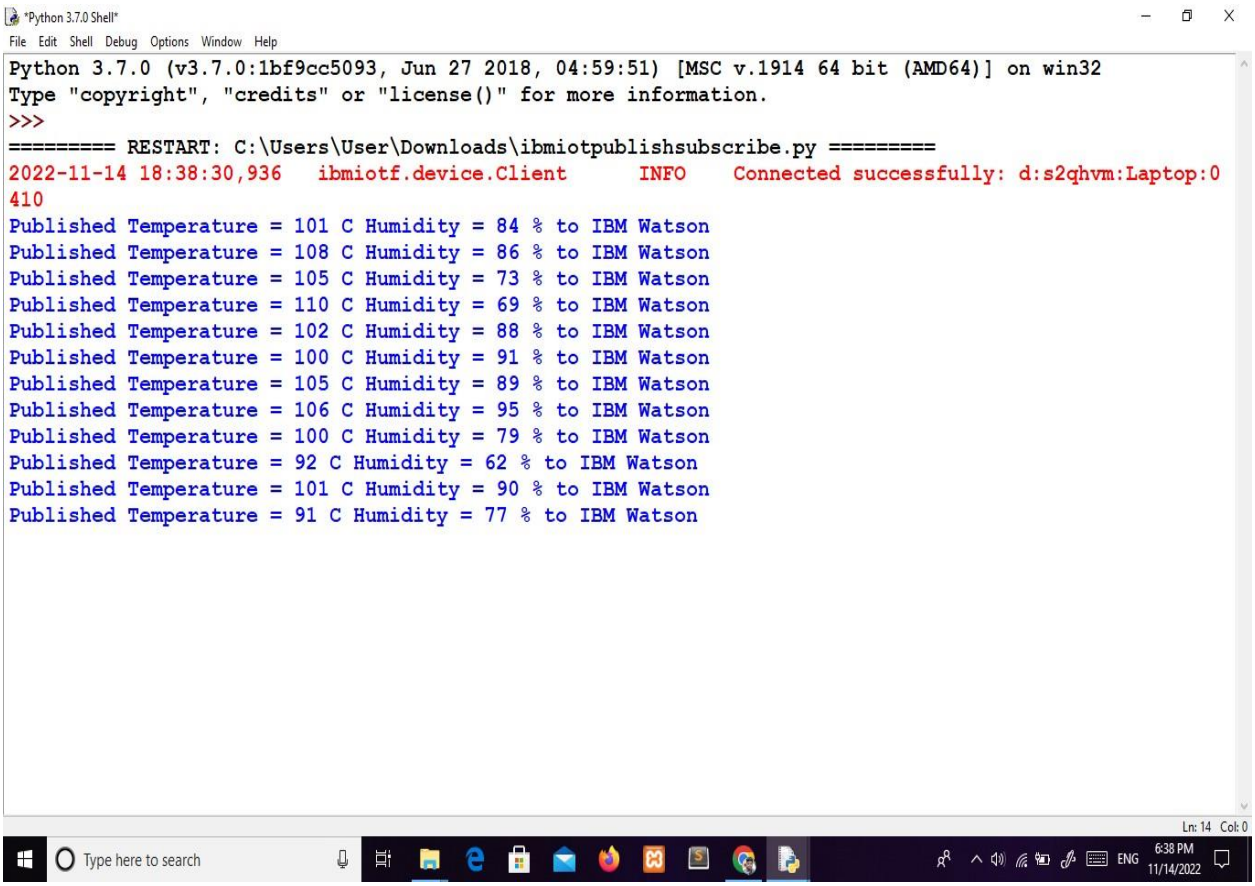
Team ID	**PNT2022TMID06458**
Project Name	**Real-Time River Water Quality Monitoring and Control System**

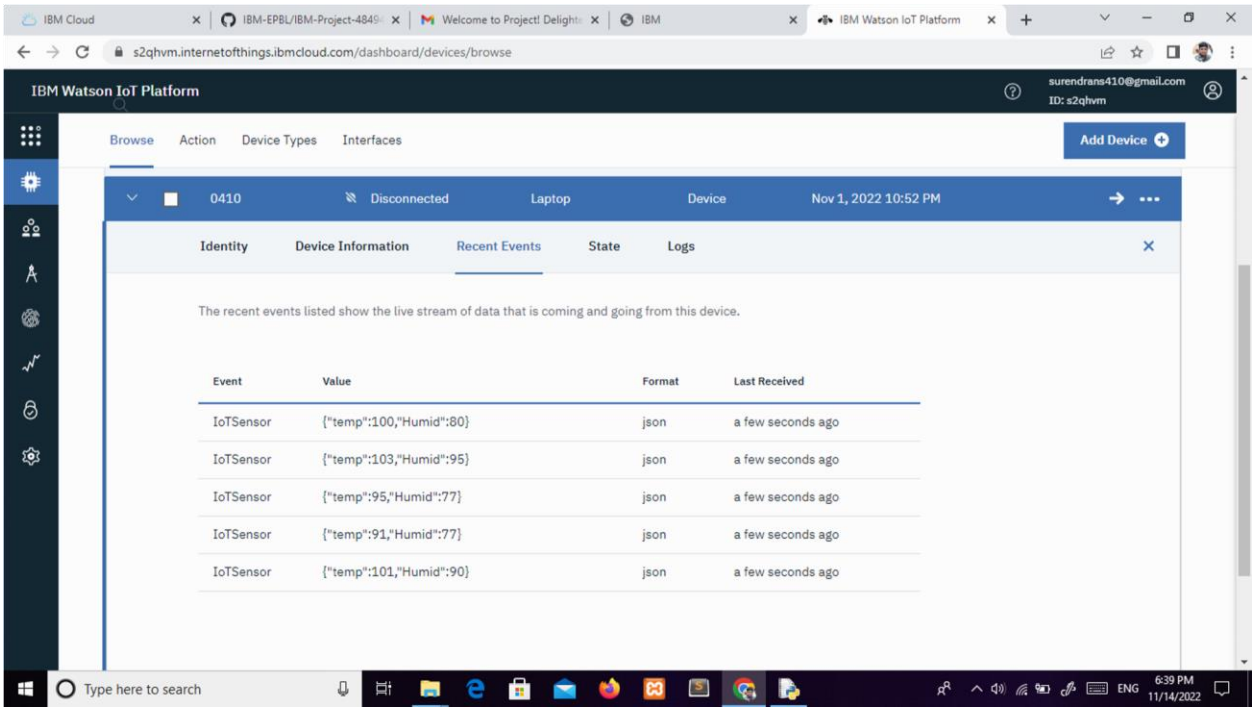
Python Code:

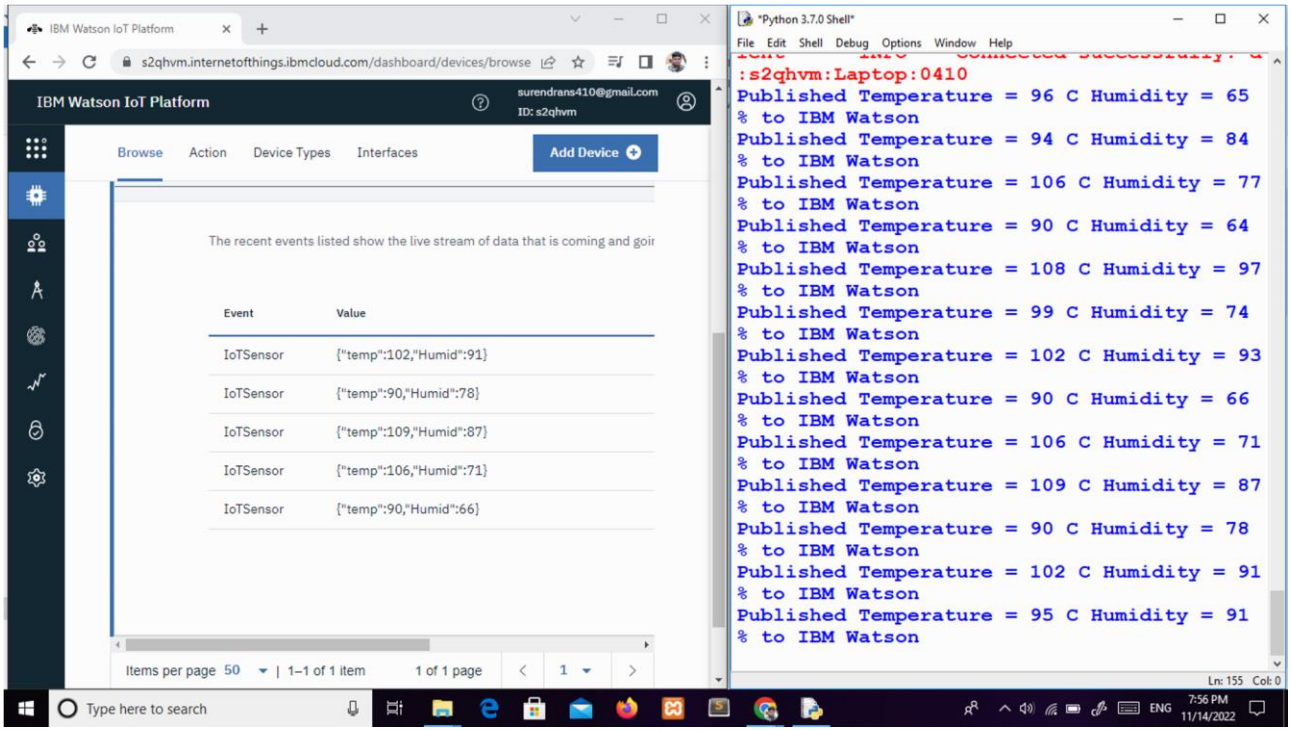
```
import time import sys
import ibmiotf.application
import ibmiotf.device
import random


#Provide your IBM Watson Device Credentials
organization = "s2qhvm" deviceType =
"Laptop" deviceId = "0410" authMethod =
"token" authToken = "20011004"


# 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 the proper 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


      PH=random.randint(90,110)
      Turbidity=random.randint(60,100)


      data = { 'PH' : PH, 'Turbidity': Turbidity }
      #print data        def
myOnPublishCallback():
         print ("Published PH value = %s C" % PH, "Turbidity= %s %%" %
Turbidity, "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()
```


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\User\Downloads\ibmiotpublishsubscribe.py =========
2022-11-14 18:38:30,936 ibmiotf.device.Client INFO Connected successfully: d:s2qhvm:Laptop:0
410
Published Temperature = 101 C Humidity = 84 % to IBM Watson
Published Temperature = 108 C Humidity = 86 % to IBM Watson
Published Temperature = 105 C Humidity = 73 % to IBM Watson
Published Temperature = 110 C Humidity = 69 % to IBM Watson
Published Temperature = 102 C Humidity = 88 % to IBM Watson
Published Temperature = 100 C Humidity = 91 % to IBM Watson
Published Temperature = 105 C Humidity = 89 % to IBM Watson
Published Temperature = 106 C Humidity = 95 % to IBM Watson
Published Temperature = 100 C Humidity = 79 % to IBM Watson
Published Temperature = 92 C Humidity = 62 % to IBM Watson
Published Temperature = 101 C Humidity = 90 % to IBM Watson
Published Temperature = 91 C Humidity = 77 % to IBM Watson
Ln: 14 Col: 0
Type here to search
ENG
6:38 PM
11/14/2022


IBM Watson IoT Platform
s2qhvm.internetofthings.ibmcloud.com/dashboard/devices/browse
surendrans410@gmail.com
ID: s2qhvm
Browse
Action
Device Types
Interfaces
Add Device
0410
Disconnected
Laptop
Device
Nov 1, 2022 10:52 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
{"temp":100,"Humid":80}
json
a few seconds ago
IoTSensor
{"temp":103,"Humid":95}
json
a few seconds ago
IoTSensor
{"temp":95,"Humid":77}
json
a few seconds ago
IoTSensor
{"temp":91,"Humid":77}
json
a few seconds ago
IoTSensor
{"temp":101,"Humid":90}
json
a few seconds ago
Type here to search
ENG
6:39 PM
11/14/2022


IBM Watson IoT Platform
s2qhvm.internetofthings.ibmcloud.com/dashboard/devices/browse
surendrans410@gmail.com
ID: s2qhvm
Browse
Action
Device Types
Interfaces
Add Device
The recent events listed show the live stream of data that is coming and goi
Event
Value
IoTSensor
{"temp":102,"Humid":91}
IoTSensor
{"temp":90,"Humid":78}
IoTSensor
{"temp":109,"Humid":87}
IoTSensor
{"temp":106,"Humid":71}
IoTSensor
{"temp":90,"Humid":66}
Items per page 50
1–1 of 1 item
1 of 1 page
"Python 3.7.0 Shell"
File Edit Shell Debug Options Window Help
:s2qhvm:Laptop:0410
Published Temperature = 96 C Humidity = 65 % to IBM Watson
Published Temperature = 94 C Humidity = 84 % to IBM Watson
Published Temperature = 106 C Humidity = 77 % to IBM Watson
Published Temperature = 90 C Humidity = 64 % to IBM Watson
Published Temperature = 108 C Humidity = 97 % to IBM Watson
Published Temperature = 99 C Humidity = 74 % to IBM Watson
Published Temperature = 102 C Humidity = 93 % to IBM Watson
Published Temperature = 90 C Humidity = 66 % to IBM Watson
Published Temperature = 106 C Humidity = 71 % to IBM Watson
Published Temperature = 109 C Humidity = 87 % to IBM Watson
Published Temperature = 90 C Humidity = 78 % to IBM Watson
Published Temperature = 102 C Humidity = 91 % to IBM Watson
Published Temperature = 95 C Humidity = 91 % to IBM Watson
Ln: 155 Col: 0
Type here to search
ENG
7:56 PM
11/14/2022