Develop the Python Script
Push Data to the Cloud

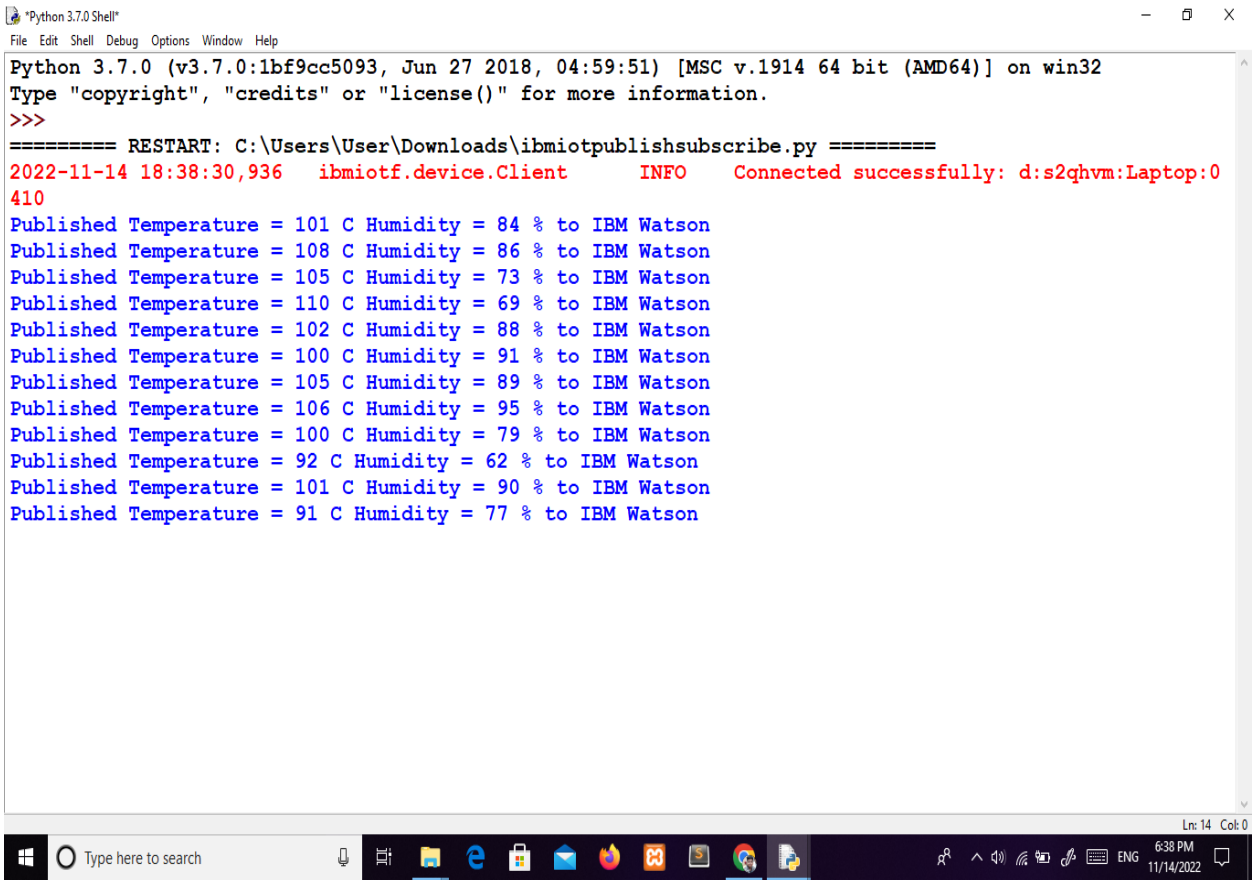
Team ID	**PNT2022TMID44989**
Project Name	**Real-Time River Water Quality Monitoring and Control System**

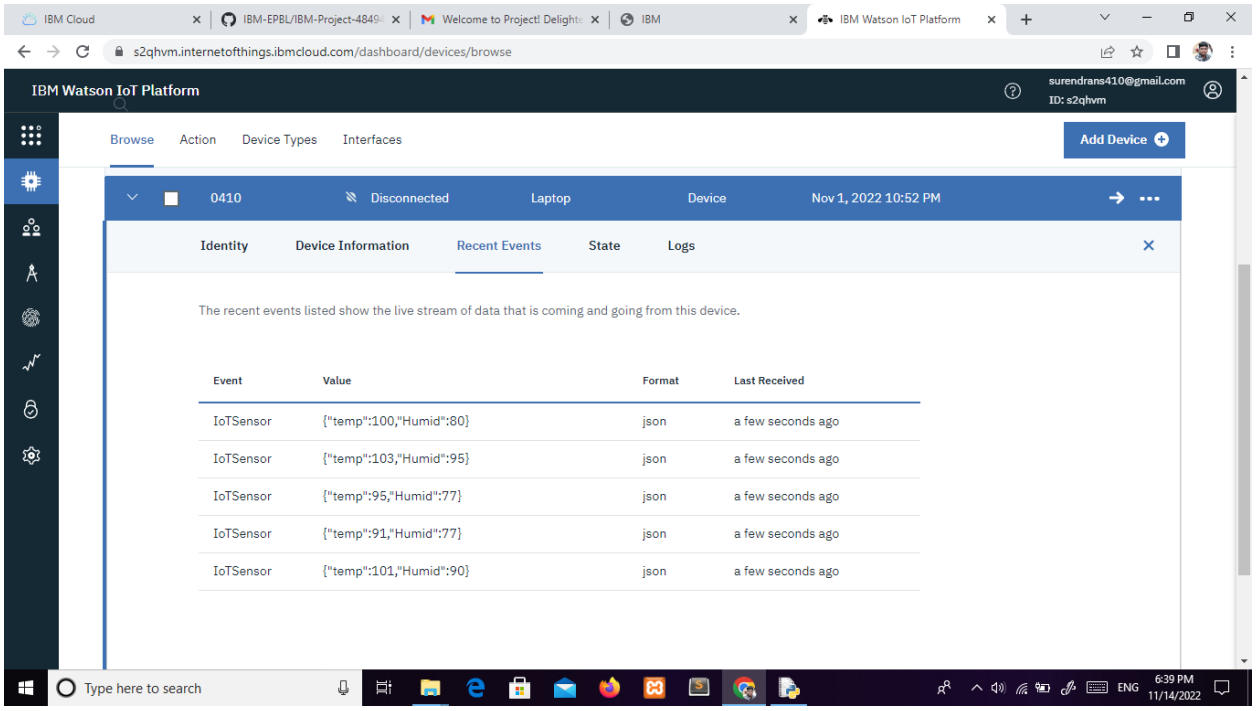
Python Code:

```
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()
```

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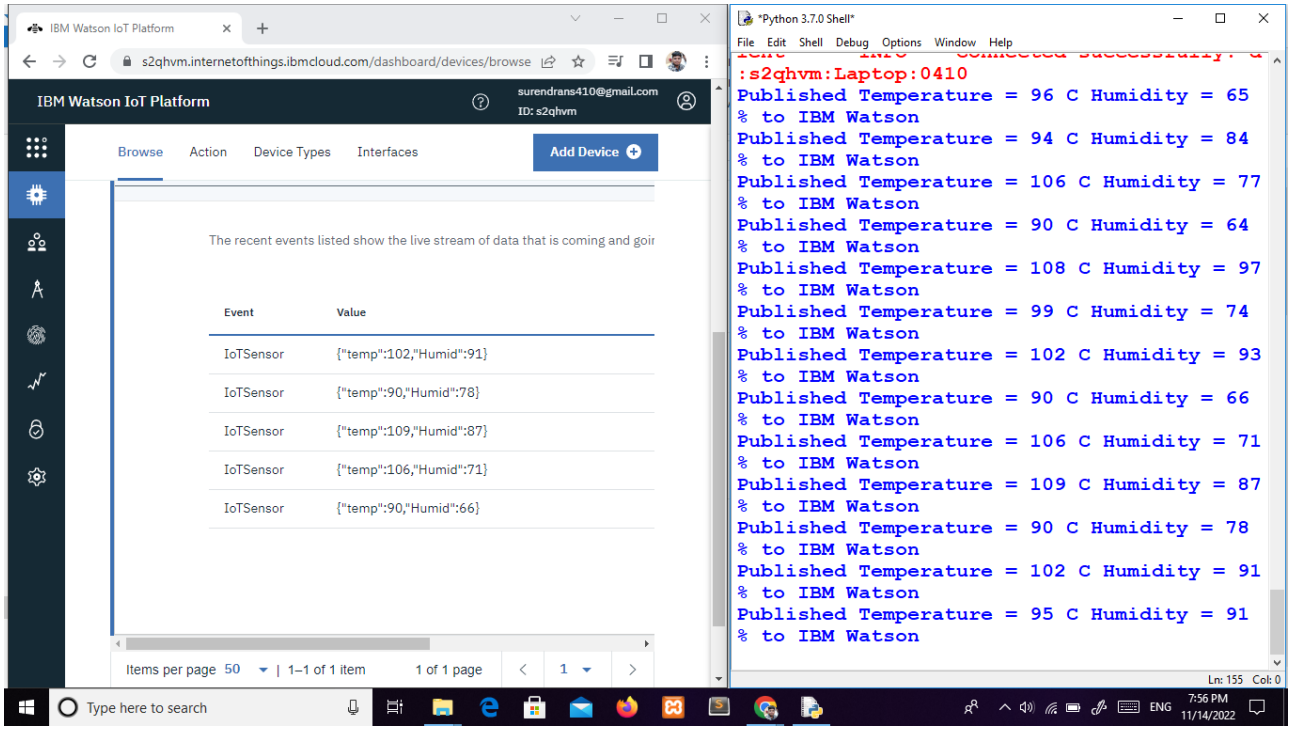
ID: s2qhvm
Browse
Action
Device Types
Interfaces
Add Device
0410
Disconnected
Laptop
Device
Nov 1, 2022 10:52 PM
Identity
Device Information
Recent Events
State
Logs
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
Format
Last Received
IoTSensor {"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
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 goir
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
7:56 PM
11/14/2022