Develop the Python Script
Push Data to the Cloud

Team ID	**PNT2022TMID05975**
Project Name	**Real-Time River Water Quality Monitoring and Control System**

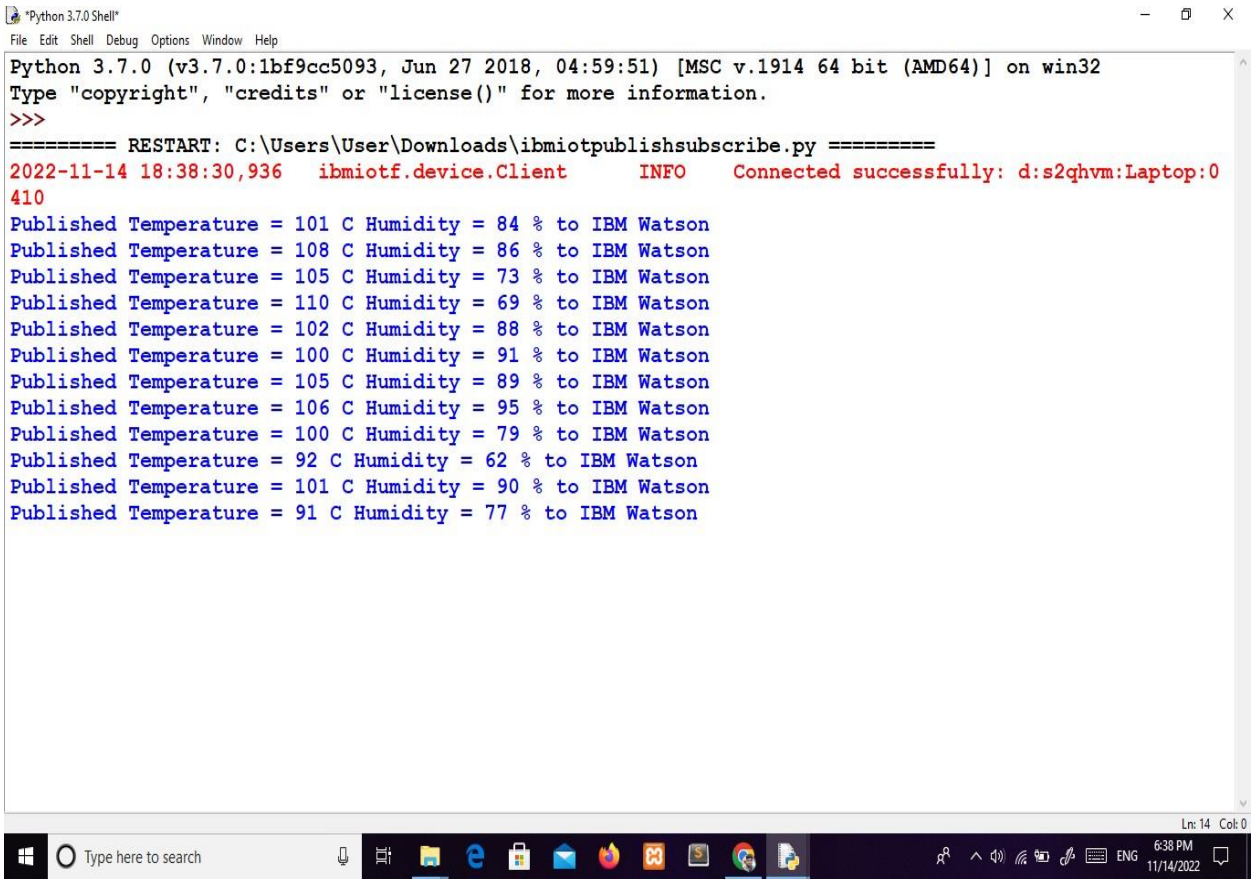
Python Code:

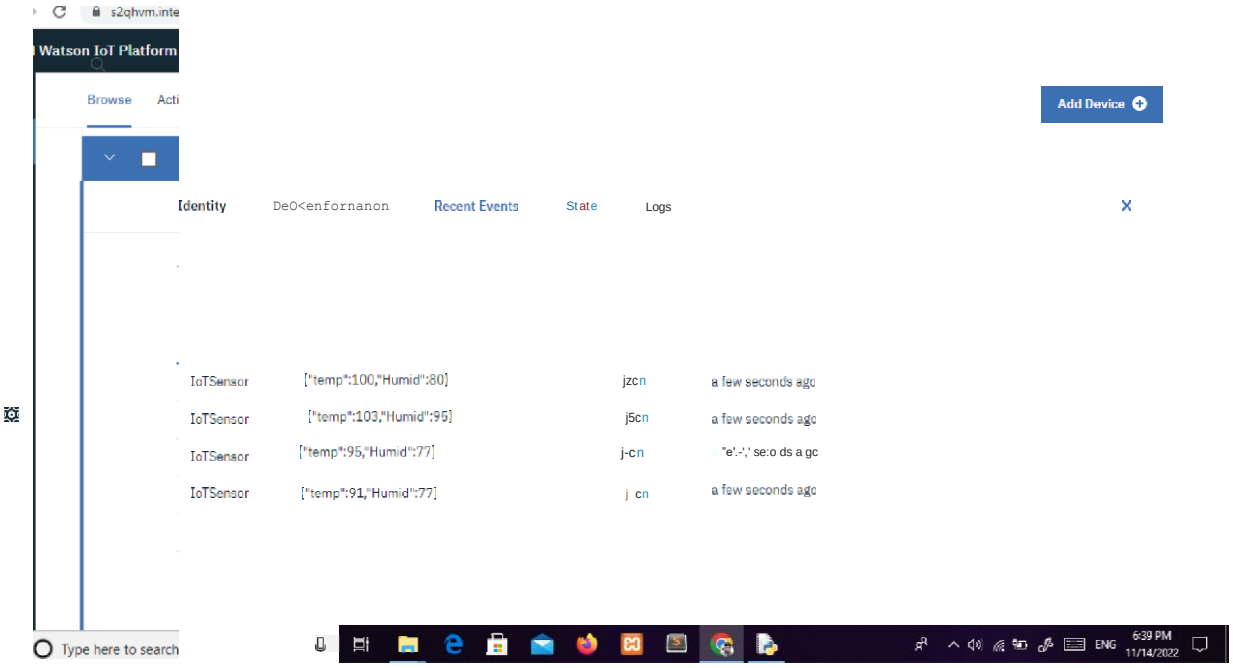
```
import
time
import sys
import
ibmiotf.application
import ibmiotf.device
import random

#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":
```

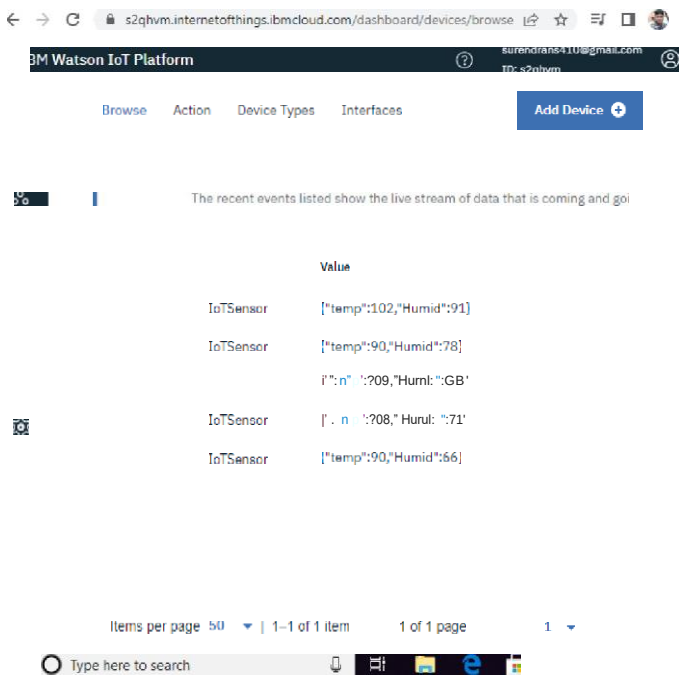
```
    print ("led is off")
else:
    print("please send the proper command")
```

```
   #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()
```








```
File Edit Sh ell D ebu g 0 p tio r \Y indow 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
```