Real-Time River Water Quality Monitoring and Control Systems

Develop a python script and upload to ibm cloud

Code:

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


# Provide your IBM Watson Device Credentials

organization = "uwujz1"  # repalce it with organization ID
deviceType = "ibm_iot"  # replace it with device type
deviceId = "Python_iot"  # repalce with device id
authMethod = "token"
authToken = "1234asdf"  # repalce with token


def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data)
    if cmd.data['command'] == 'lighton':
        print("LIGHT ON")
    elif cmd.data['command'] == 'lightoff':
        print("LIGHT OFF")


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()

deviceCli.connect()
```

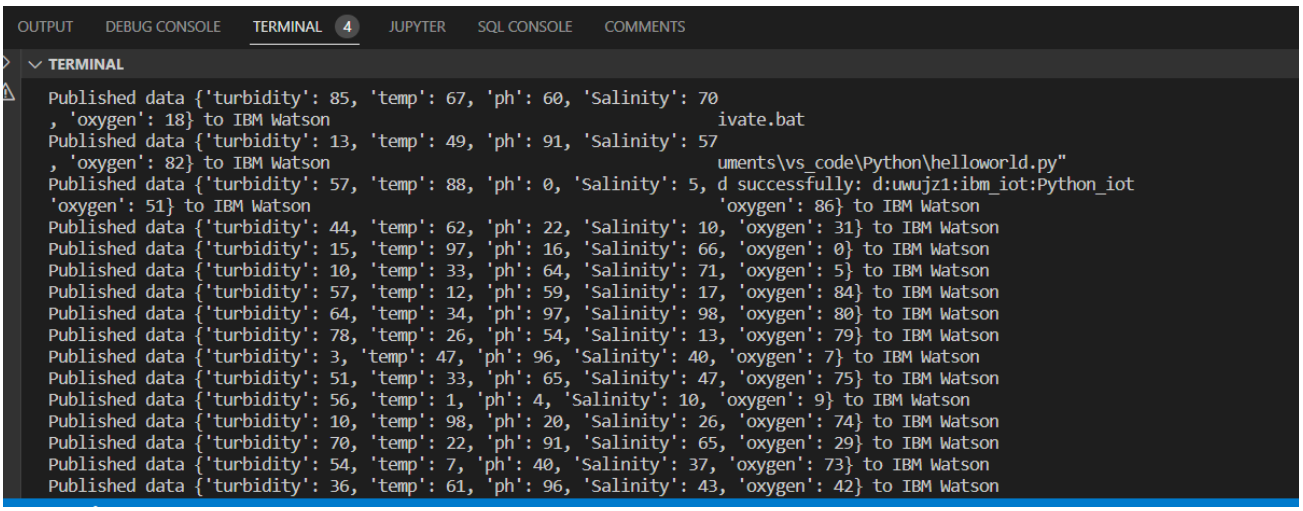
```
while True:
    pH = random.randint(0,100)
    conductivity = random.randint(0,100)
    T = random.randint(0,100)
    oxygen = random.randint(0,100)
    turbidity = random.randint(0,100)
    # Send Temperature & Humidity to IBM Watson
    data = {"turbidity":turbidity'temp':
T,'ph':pH,'Salinity':conductivity,'oxygen':oxygen}


    # print data
    def myOnPublishCallback():
        print("Published data",data, "to IBM Watson")


    success = deviceCli.publishEvent("event", "json", data, 0,
myOnPublishCallback)
    if not success:
        print("Not connected to IoTF")
    time.sleep(5)

    deviceCli.commandCallback = myCommandCallback
```

Output :



Ibm cloud output: