SPRINT 4

Date	17 November 2022
Team ID	PNT2022TMID32705
Project Name	Real time River Water Quality Monitoring And Control System

STEP 1 :

Python code to connect IBM WATSON

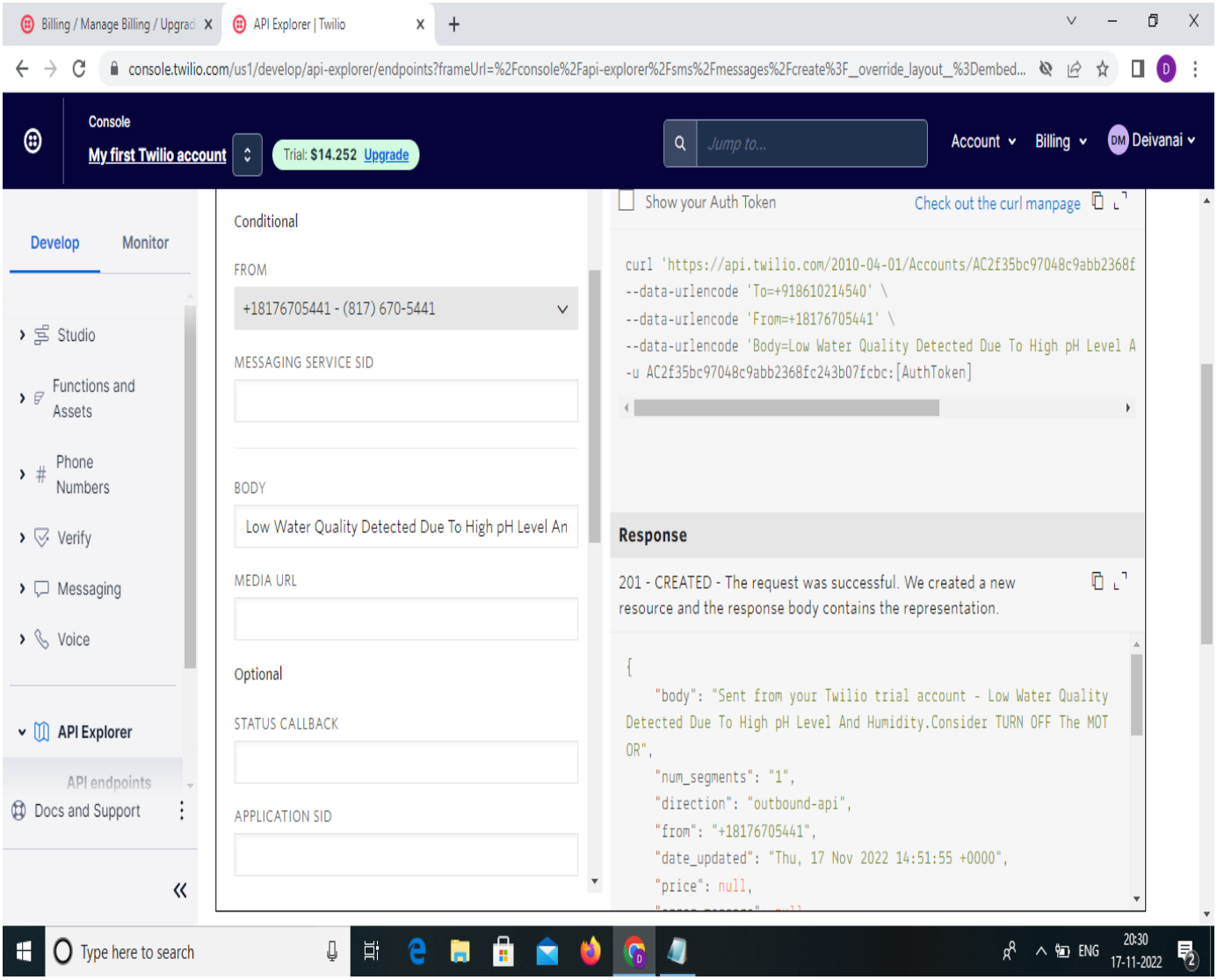
```
import wiotp.sdk.device
import time
import random
import requests
import os
from twilio.rest import Client


myconfig = {
    "identity": {
        "orgId": "pyvd3r",
        "typeId": "waterquality",
        "deviceId": "1357911"
        },
    "auth": {
        "token": "Aarthi0908"
        }
    }
def mycommandCallback(cmd) :
    print("Message received from IBM IOT Platform: %s" % cmd.data[ 'command' ])
    m=cmd.data[ 'command' ]
    client = wiotp.sdk.device.DeviceClient(config=myconfig, logHandlers=None)
    client.connect_apps()
    count=0
account_sid = "AC2f35bc97048c9abb2368fc243b07fcbc"
auth_token = "be94bf37c71bfbcc86e8f80542840fe7"
client = Client(account_sid, auth_token)
while True:
```

```
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    pH=random.randint(1,14)
    if(temp>90 and pH>8) :
        myData={'temperature':str(temp)+chr(176)+"C", 'humidity':str(hum)+" %",'pH
level':str(pH)+" %", 'condition':"Turn On Water Quality System" }
        message = client.messages \
            .create(
                body='Temperature:'+str(temp)+chr(176)+"C"+'\nHumidity:'+str(hum)+" %"+'\npH
level:'+str(pH)+" %"+"\nCondition:The Water quality Is Not Good",
                from_='+18176705441',
                to='+918610214540'
            )
        print(message.sid)
        print("Turn on Water Qualiy System")
    elif(temp<15 and pH>8) :
        myData={'temperature':str(temp)+chr(176)+"C", 'humidity':str(hum)+" %",'pH
level':str(pH)+" %", 'condition':"Turn On Water Quality System" }
        message = client.messages \
            .create(
                body='Temperature:'+str(temp)+chr(176)+"C"+'\nHumidity:'+str(hum)+" %"+'\npH
level:'+str(pH)+" %"+"\nCondition:The Water quality Is Not Good",
                from_='+18176705441',
                to='+918610214540'
            )
        print(message.sid)
        print("Turn on Water Qualiy System")
    else :
        myData={'temperature':str(temp)+chr(176)+"C", 'humidity':str(hum)+" %",'pH
level':str(pH)+" %", 'condition':"SAFE" }
        message = client.messages \
            .create(
                body='Temperature:'+str(temp)+chr(176)+"C"+'\nHumidity:'+str(hum)+" %"+'\npH
level:'+str(pH)+" %"+"\nCondition:SAFE DRINK",
                from_='+18176705441',
                to='+918610214540'
            )
```

```
        print(message.sid)
        print("SAFE DRINK")

    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(20)



client.disconnect()
```

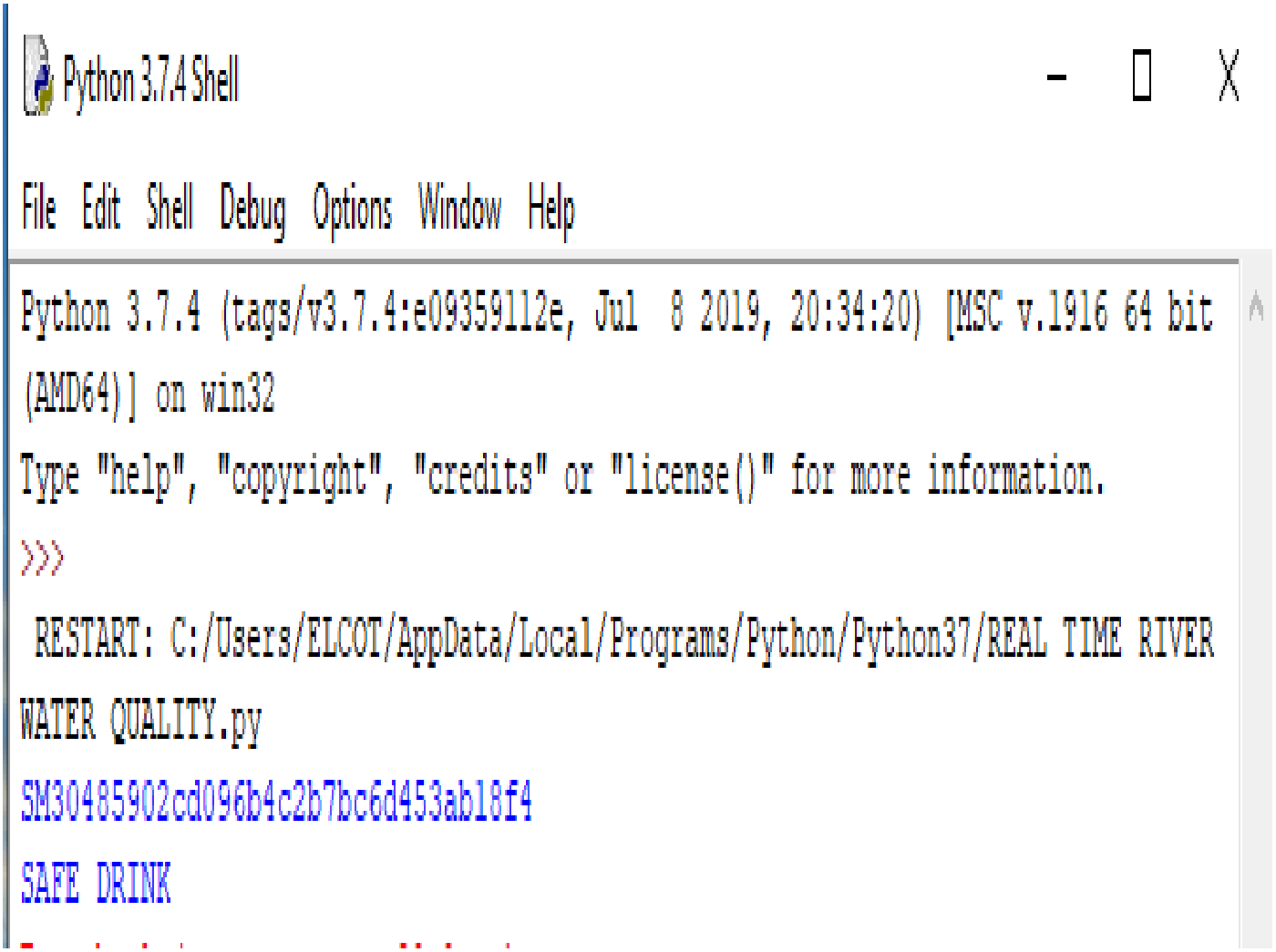
STEP 2 :

Information about the water quality sent from Twilio Account to Higher Authority via SMS



STEP 3 :

OUTPUT FOR PYTHON CODE:



STEP 4 :

MESSAGE SENT TO AUTHORITY WHETHER QUALITY OF WATER IS BAD OR SAFE :