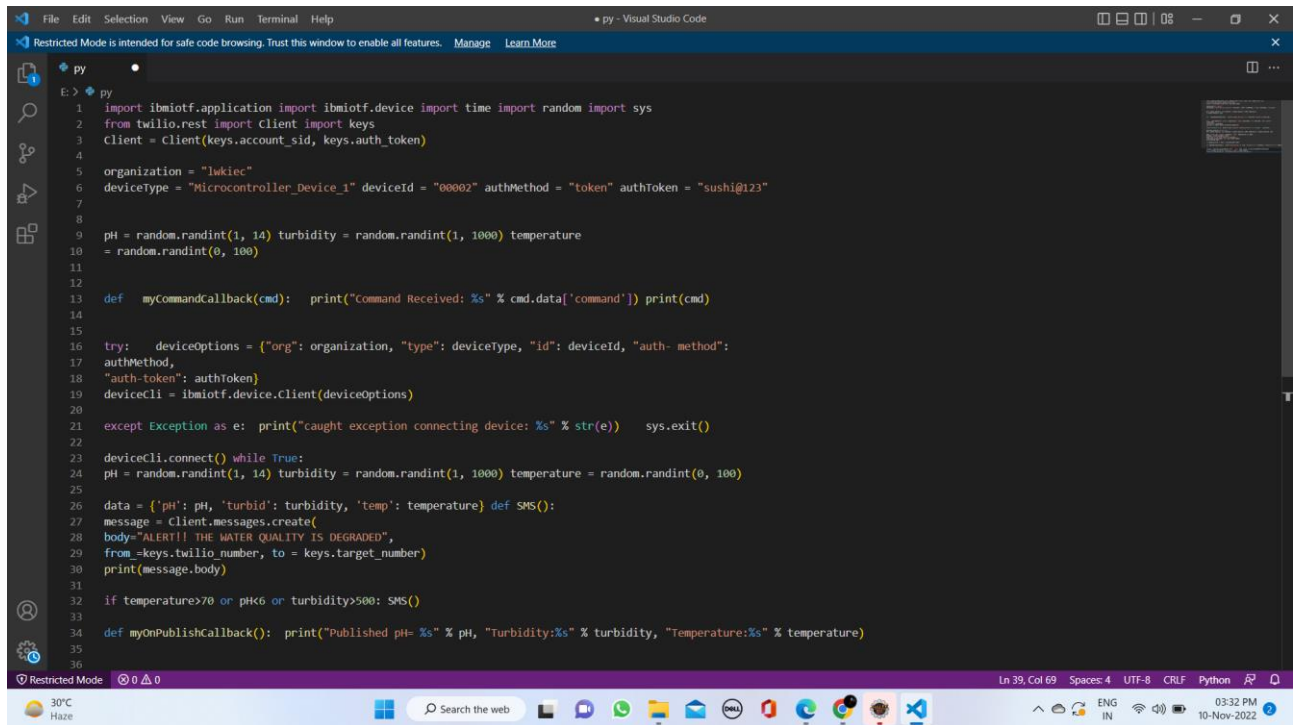
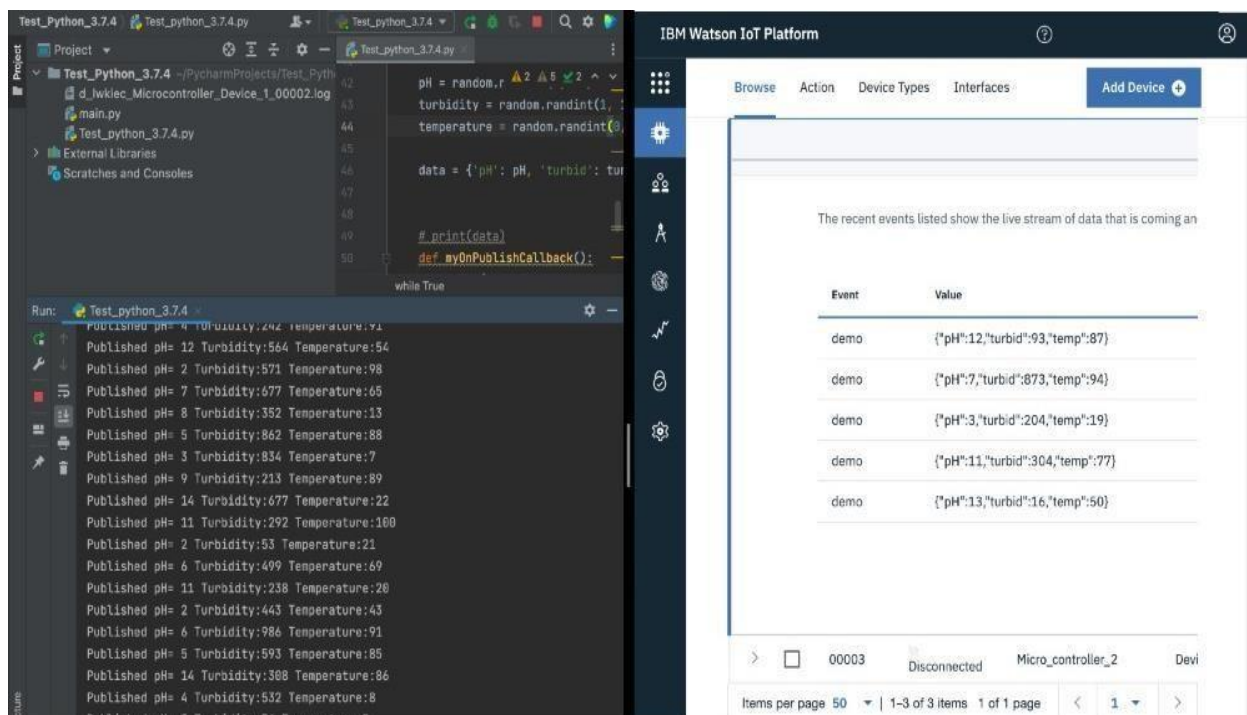


PUBLISH DATA ON IBM CLOUD

TEAM ID	PNT2022TMID23797
PROJECT NAME	REAL TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM



```
1 import ibmiotf.application import ibmiotf.device import time import random import sys
2 from twilio.rest import Client import keys
3 Client = Client(keys.account_sid, keys.auth_token)
4
5 organization = "lwkiec"
6 deviceType = "Microcontroller_Device_1" deviceId = "00002" authMethod = "token" authToken = "sushi@123"
7
8
9 pH = random.randint(1, 14) turbidity = random.randint(1, 1000) temperature
10 = random.randint(0, 100)
11
12
13 def myCommandCallback(cmd): print("Command Received: %s" % cmd.data['command']) print(cmd)
14
15
16 try: deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth- method":
17 authMethod,
18 "auth-token": authToken}
19 deviceCli = ibmiotf.device.Client(deviceOptions)
20
21 except Exception as e: print("caught exception connecting device: %s" % str(e)) sys.exit()
22
23 deviceCli.connect() while True:
24 pH = random.randint(1, 14) turbidity = random.randint(1, 1000) temperature = random.randint(0, 100)
25
26 data = {'pH': pH, 'turbid': turbidity, 'temp': temperature} def SMS():
27 message = Client.messages.create(
28 body="ALERT!! THE WATER QUALITY IS DEGRADED",
29 from_=keys.twilio_number, to = keys.target_number)
30 print(message.body)
31
32 if temperature>70 or pH<6 or turbidity>500: SMS()
33
34 def myOnPublishCallback(): print("Published pH= %s" % pH, "Turbidity:%s" % turbidity, "Temperature:%s" % temperature)
35
36
```



The screenshot displays the IBM Watson IoT Platform interface. On the left, a code editor shows the Python script from the previous image. The right pane shows the 'Event' tab of the 'Microcontroller_2' device, displaying a live stream of data events. The events are listed in a table with columns 'Event' and 'Value'.

Event	Value
demo	{"pH":12,"turbid":93,"temp":87}
demo	{"pH":7,"turbid":873,"temp":94}
demo	{"pH":3,"turbid":204,"temp":19}
demo	{"pH":11,"turbid":304,"temp":77}
demo	{"pH":13,"turbid":16,"temp":50}

At the bottom of the interface, there is a status bar showing the device ID '00003', its status 'Disconnected', and the device name 'Microcontroller_2'.