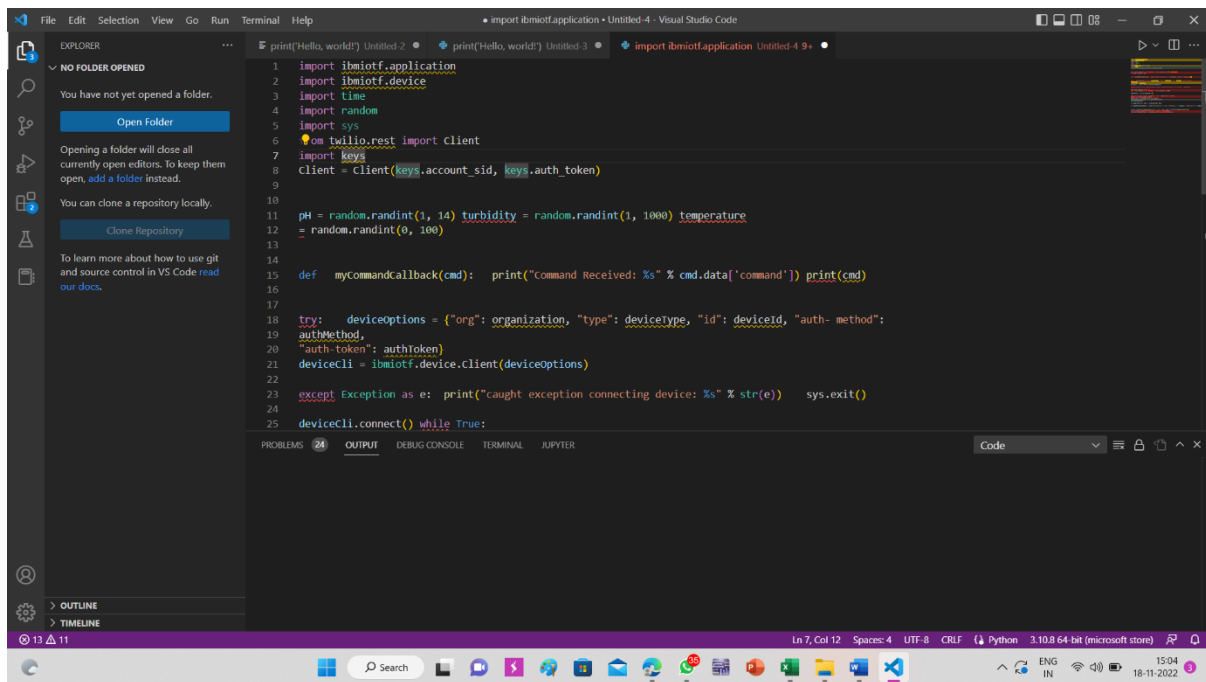


## SIMULATION OUTPUT

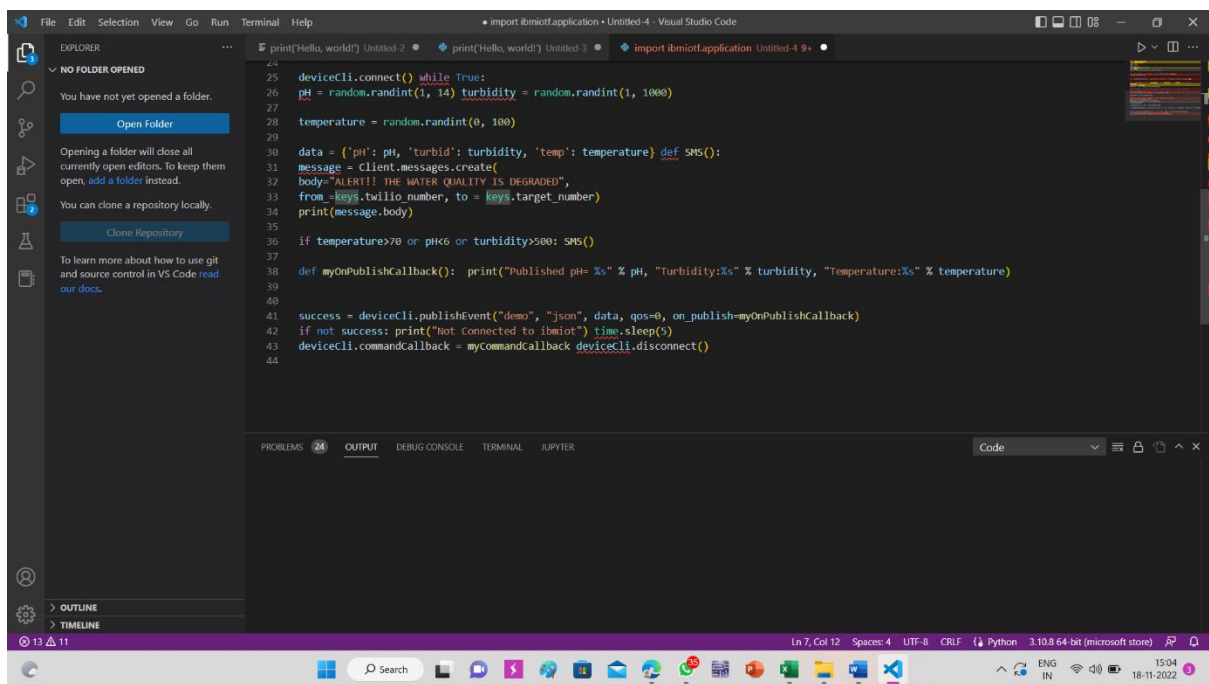
TEAM ID	PNT2022TMID23797
PROJECT NAME	REAL TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM

## SIMULATION OF PYTHON CODE

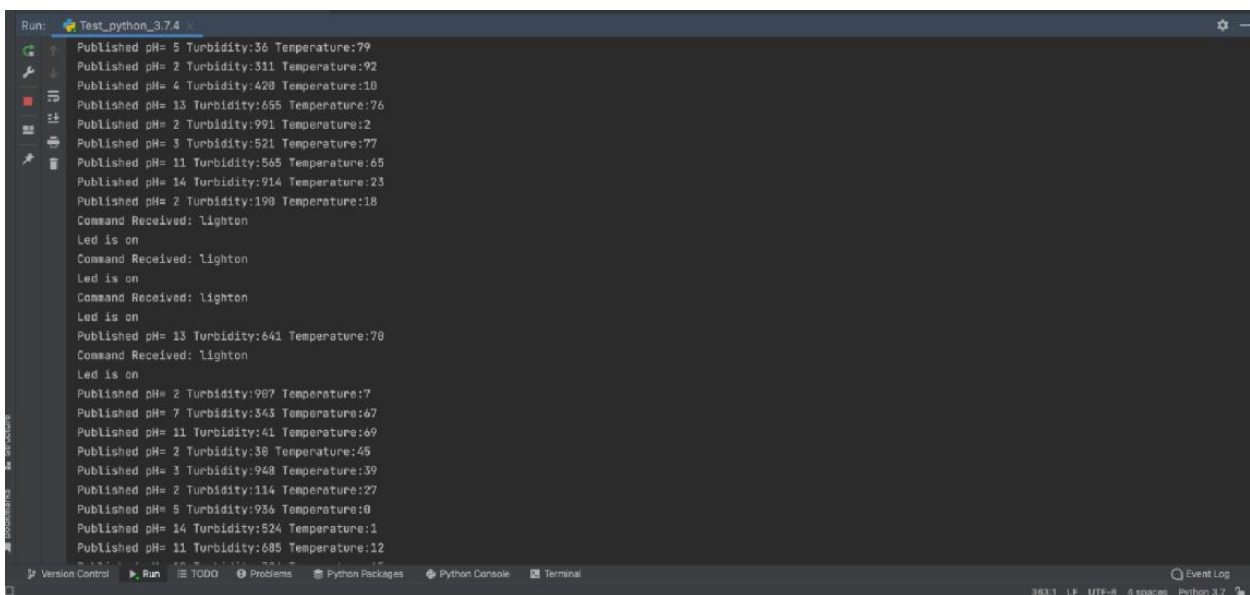


The screenshot displays the Visual Studio Code interface with a Python script open in the editor. The script is titled 'import ibmiotfApplication - Untitled-4 - Visual Studio Code'. The code includes imports for 'ibmiotf.application', 'ibmiotf.device', 'time', 'random', and 'sys'. It also imports 'twilio.rest' and 'Client' from 'twilio'. The script initializes a 'Client' object using 'keys.account\_sid' and 'keys.auth\_token'. It then generates random values for 'pH', 'turbidity', and 'temperature'. A function 'mycallback(cmd)' is defined to print the received command. The script attempts to connect to the device using 'devicecli.connect()' and enters a 'while True' loop. The status bar at the bottom indicates the file is at line 7, column 12, using UTF-8 encoding, CRLF line endings, and the Python 3.10.8 64-bit (microsoft store) interpreter.

```
1 import ibmiotf.application
2 import ibmiotf.device
3 import time
4 import random
5 import sys
6 from twilio.rest import Client
7 import keys
8 client = Client(keys.account_sid, keys.auth_token)
9
10
11 pH = random.randint(1, 14) turbidity = random.randint(1, 1000) temperature
12 = random.randint(0, 100)
13
14
15 def mycallback(cmd): print("Command Received: %s" % cmd.data['command']) print(cmd)
16
17
18 try: deviceOptions = {"org": organization, "type": deviceid, "id": deviceid, "auth-method":
19 authMethod,
20 "auth-token": authtoken}
21 devicecli = ibmiotf.device.client(deviceOptions)
22
23 except Exception as e: print("caught exception connecting device: %s" % str(e)) sys.exit()
24
25 devicecli.connect() while True:
```



## SIMULATION OUTPUT



```
Run: Test_python_3.7.4
Published pH= 6 Turbidity:699 Temperature:68
Published pH= 13 Turbidity:364 Temperature:70
Published pH= 10 Turbidity:629 Temperature:93
Published pH= 6 Turbidity:95 Temperature:79
Command Received: Lightoff
Led is off
Command Received: Lightoff
Led is off
Command Received: Lightoff
Led is off
Published pH= 13 Turbidity:517 Temperature:28
Published pH= 3 Turbidity:561 Temperature:20
Published pH= 9 Turbidity:487 Temperature:34
Published pH= 11 Turbidity:858 Temperature:51
Published pH= 1 Turbidity:719 Temperature:86
Published pH= 14 Turbidity:684 Temperature:48
Published pH= 9 Turbidity:79 Temperature:75
Published pH= 13 Turbidity:580 Temperature:76
Command Received: Lightoff
Led is off
Command Received: Lightoff
Led is off
Published pH= 3 Turbidity:386 Temperature:11
Published pH= 6 Turbidity:837 Temperature:72
Published pH= 11 Turbidity:389 Temperature:61
Published pH= 7 Turbidity:886 Temperature:11
Published pH= 4 Turbidity:648 Temperature:20
```