SPRINT 2

Date	19 November 2022
Team ID	PNT2022TMID04601
Project Name	Real Time River Water Quality Monitoring and Control System
Maximum Marks	20 marks

Python code:

```
import ibmiotf.device
import ibmiotf.application
import time import random
import sys
from twilio.rest import Client
import keys
Client = Client(keys.account_sid, keys.auth_token)

organization = "15rapi" deviceType
= "abc" deviceId
= "123" authMethod =
"token" authToken =
"12345678"


pH = random.randint(1, 14) turbidity =
random.randint(1, 1000)  temperature
= random.randint(0, 100)


def myCommandCallback(cmd):
    print("Command Received: %s" % cmd.data['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()

deviceCli.connect()

while True:

    pH = random.randint(1, 14)
turbidity = random.randint(1, 1000)
```

```
    temperature = random.randint(0, 100)

    data = {'pH': pH, 'turbid': turbidity, 'temp': temperature}

    def SMS():         message =
Client.messages.create()
            body="ALERT!! THE WATER QUALITY IS DEGRADED",
from_=keys.twilio_number,                  to = keys.target_number)
print(message.body)

    if temperature>70 or pH<6 or turbidity>500:
        SMS()

    def myOnPublishCallback():         print("Published pH= %s" % pH, "Turbidity:%s"
% turbidity, "Temperature:%s" % temperature)


    success = deviceCli.publishEvent("demo", "json", data, qos=0,
on_publish=myOnPublishCallback)
if not success:         print("Not
Connected to ibmiot")     time.sleep(5)
    deviceCli.commandCallback = myCommandCallback

deviceCli.disconnect()


#Twilio Account Credentials account_sid

='AC674a168fa92e54f2830009d96f9676dc' auth_token

='a0127bca9a184493c92a4f6e5db2c91b' twilio_number

='+15133275826' target_number

='+919345523274'
```

Data publish in IBM Watson Cloud: