

Sprint 2

Team ID	PNT2022TMID47935
Project Name	Real-time river water quality monitoring and control system

Python Final Script File

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

organization = "ks8pti"
deviceType = "rasberrypi"
deviceId = "12345"
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

=myCommandCallbackdeviceCli.disconnect()

```