

DEVELOP THE PYTHON SCRIPT

Team ID	TNT2022TMID46761
Team Name	Real-Time River Water Quality Monitoring and Control System

PROGRAM:

```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random

organization = "8egjb2"
deviceType = "monitoring"
deviceId = "monitoring123"
authMethod = "token"
authToken = "123456789"

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="Alert message":
        print ("Alert ON")
    elif status == "Alert OFF":
        print ("Alert Message")
    else :
        print ("please send proper command")

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:
```

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

```
    pH=random.randint(0,14)
```

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

```
    data = { 'Temp' : Temp, 'pH' : pH, 'Turbidity': Turbidity }
```

```
    def myOnPublishCallback():
```

```
        print ("Published, Temperature = %s %" % Temp, "pH_Value = %s  
pH" % pH, "Turbidity_Value = %s %" % Turbidity, "to IBM Watson")
```

```
        success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,  
on_publish=myOnPublishCallback)
```

```
        if not success:
```

```
            print("Not connected to IoT")
```

```
            time.sleep(10)
```

```
    deviceCli.commandCallback = myCommandCallback
```

```
deviceCli.disconnect()
```