

Date	21 November 2022
Team ID	PNT2022TMID49498
Project Name	Real Time River Water Quality Monitoring and Control System
Maximum Marks	4 Marks

CODING:

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

```
#Provide your IBM Watson Device Credentials
```

```
organization = "mw0wqj"
```

```
deviceType = "real"
```

```
deviceId = "realtime"
```

```
authMethod = "token"
```

```
authToken = "vasuki123"
```

```
# Initialize GPIO
```

```
def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="motoron":
        print ("motor is on")
    else :
        print ("motor is off")

    #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()

# Connect and send a datapoint "hello" with value "world" into the cloud as an event of
type "greeting" 10 times
deviceCli.connect()

while True:
    #Get Sensor Data from DHT11

    ph=random.randint(0,14)
    turb=random.randint(0,100)

    data = { 'ph' : ph, 'turb': turb }
    #print data
    def myOnPublishCallback():
        print ("Published PH Level = %s C" % ph, "Turbidity = %s C" % turb, "to IBM
Watson")

        success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)
        if not success:
            print("Not connected to IoTTF")
            time.sleep(5)

    deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud
deviceCli.disconnect()

```