SPRINT-1 DELIVERY

Date	October 29,2022
Team ID	PNT2022MID08171
Project Name	Real-Time River Water Quality Monitoring and Control System
Maximum Marks	

PYTHON PROGRAM:

```
import time

import sys

import ibmiotf.application

import ibmiotf.device

import random



#Provide your IBM Watson Device Credentials

organization = "7wqirt"

deviceType = "raspberrypi"

deviceId = "12345"

authMethod = "token"

authToken = "123456789"


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()
```

SPRINT-1 DELIVERY

```
while True:
#Get Sensor Data from randam value function

    temp=random.randint(0,50)
    ph=random.uniform(0.0,14.0)
    turb=random.uniform(0.0,3.0)

    data1={'temp':temp,'ph':ph,'turb':turb,'str1':"Not safe to drink"}
    data2={'temp':temp,'ph':ph,'turb':turb,'str2':"safe to drink"}

    #print data
    def myOnPublishCallback():
        print ("Published Temperature = %s C" % temp,"Ph = %.1f " % ph,"Turbidity = %.1f NTU" %
turb, "to IBM Watson")
        if((temp > 6 and temp < 20) and (ph > 6.5 and ph < 8.5) and turb < 1):
            print(data2)
        else:
            print(data1)


    success = deviceCli.publishEvent("IoTSensor", "json", data1 or data2, qos=2,
on_publish=myOnPublishCallback)


    if not success:
       print("Not connected to IoTF")
    time.sleep(20)


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

SPRINT-1 DELIVERY