WATER QUALITY TEST

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#program to publish data in ibm watson iot platform

import time

import sys

import ibmiotf.application

import ibmiotf.device

import random

#Provide your IBM Watson Device Credentials


#Org_ID

organization = "84708c"

#Device Type

deviceType = "abcd"

#device ID

deviceId = "12345"

#Method of Authentication

authMethod = "token"

#Auth-token

authToken = "12345678"


# exception handling method

#try block

try:

    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-
method":authMethod, "auth-token":authToken}

    deviceCli= ibmiotf.device.Client (deviceOptions)
```

```
#to handle the errors
except Exception as e:
        print ("Caught evention connecting device: %s" % str(e))
        sys.exit()
#device connection
deviceCli.connect()
#while Loop for getting the values
while True:
    Ph=random.randint (6,8)
    WaterTurbidity=random.randint (15,100)
    salinity=random.randint (500,1000)
    DissolvedOxygen=random.randint (60,130)
    conductivity=random.randint (100,1200)
    data = {'Ph' : Ph,
'WaterTurbidity':WaterTurbidity,'salinity':salinity,'DissolvedOxygen':DissolvedOxygen,'conductivity':cond
uctivity}
    #define myonpublishcallback function
    def myonPublishCallback():
        print ("Published Ph = %s" % Ph, "WaterTurbidity = %s %%" % WaterTurbidity,"salinity = %s" %
salinity,"DissolvedO2 = %s" % DissolvedOxygen,"conductivity = %s" % conductivity)
        if(Ph<7.4 and salinity < 600 and DissolvedOxygen < 80 and conductivity < 200):
            if(Ph>7.4 and salinity > 900 and DissolvedOxygen > 120 and conductivity > 1100):
                print("UNSAFE, THE VALUES OF PARAMETERS ARE NOT IN THE RANGE")
        else:
            print("Quality of River water is measured and its correct")
```

```
    success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0, on_publish = myonPublishCallback)
    if not success:
        print("Not connected to IOTF")
    #sleep time
    time.sleep(10)
#disconnect device
deviceCli.disconnect()
```