

Team ID : PNT2022TMID50177

Project Name: Smart waste management system for Metropolitan cities

PYTHON CODE:

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

#Provide your IBM Watson Device Credentials
organization="t5udfe"
deviceType="raspberrypi"
deviceId="12345"
authMethod="token"
authToken="12345678"

#Initialize GPIO

def myCommandCallback(cmd):
    print("Command received:%s"%cmd.data['command'])
    status=cmd.data['command']
    if status=="smartbinopened":
        print("The Smart Bin is Open now")
    else:
        print("The Smart Bin is Closed now")
    #print(cmd)

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

```

deviceCli=ibmiotf.device.Client(deviceOptions)

#.....

exceptExceptionase:

print("Caughtexceptionconnectingdevice:%s"%str(e))

sys.exit()


#Connectandsendadatapoint"hello"withvalue"world"intothecloudasan
eventoftype"greeting"10times

deviceCli.connect()

whileTrue:

#GetSensorDatafromDHT11

distance=random.randint(0,200)

weight=random.randint(0,10)

data={'distance':distance,'weight':weight}

#printdata


defmyOnPublishCallback():

print("PublishedDatatoIoTWatson:\n


Distance=%scm\n"%

distance,"Weight=%sKg\n"%weight)

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

ifnotsuccess:

print("NotconnectedtoIoT")

time.sleep(10)

deviceCli.commandCallback=myCommandCallback

#Disconnectthedeviceandapplicationfromthecloud

deviceCli.disconnect()

```