FINAL CODE

Smart waste management system for metropolitan cities

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Python code:

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

#Provide your IBM Watson Device Credentials
organization = "Q1tydj"
deviceType = "aaaa"
deviceId = "bbbb"
authMethod = "token"
authToken = "12345678"



# Initialize GPIO
def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="lighton":
```

```
        print ("led is on")
    else :
        print ("led 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


        weight=random.randint(0,100)
        level=random.randint(0,100)
```

```
        data = { 'weight' : weight, 'level':level  }
        #print data
        def myOnPublishCallback():
            print ("Published Weight = %s Kg" % weight, "level = %s %%" %
level, "to IBM Watson")

        success = deviceCli.publishEvent("IoTSensor", "json", data,
qos=0, on_publish=myOnPublishCallback)
        if not success:
            print("Not connected to IoTF")
        time.sleep(1)

        deviceCli.commandCallback = myCommandCallback

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