

## Develop a python script

Team id	PNT2022TMID46746
Project Name	PROJECT- SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES

### PROGRAM:

```
import ibmiotf.application
import ibmiotf.device
import time
import random
import sys
# watson device details
organization = "7tbblb"
devicType = "IBM1"
deviceId = "IBM1ID"
authMethod = "use-token-auth"
authToken = "123456789"
#generate random values for randomo variables (temperature&humidity)
def myCommandCallback(cmd):
    global a
    print("command recieved:%s"%cmd.data['command'])
    control=cmd.data['command']
    print(control)
try:
    deviceOptions={"org": organization, "type": devicType,"id":
deviceId,"authmethod":authMethod,"authtoken":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 "temp" with value integer value into the cloud as a type of
event for every 10 seconds
deviceCli.connect()
while True:
    distance= random.randint(10,70)
    loadcell= random.randint(5,15)
    data={'dist':distance,'load':loadcell}
    if loadcell < 13 and loadcell> 15:
        load = "90 %"
    elif loadcell < 8 and loadcell > 12:
        load = "60 %"
    elif loadcell < 4 and loadcell > 7:
        load = "40 %"
    else:
        load = "0 %"
    if distance < 15:
```

```

        dist = 'Risk warning:' 'Dumpster poundage getting high, Time to collect :) 90 %'
    elif distance < 40 and distance >16:
        dist = 'Risk warning:' 'dumpster is above 60%'
    elif distance < 60 and distance > 41:
        dist ='Risk warning:' '40 %'
    else:
        dist = 'Risk warning:' '17 %'
    if load == "90 %" or distance == "90 %":
        warn = 'alert : ' ' Dumpster poundage getting high, Time to collect :)'
    elif load == "60 %" or distance == "60 %":
        warn = 'alert : "dumpster is above 60%'
    else :
        warn = 'alert : ' 'No need to collect right now '
    def myOnPublishCallback(lat=10.678991,long=78.177731):
        print("Gandigramam, Karur")
        print("published distance = %s " %distance,"loadcell:%s "%loadcell,"lon = %s "
%long,"lat = %s" %lat)
        print(load)
        print(dist)
        print(warn)

    time.sleep(10)
    success=deviceCli.publishEvent
    ("IoTSensor","json",warn,qos=0,on_publish=myOnPublishCallback)
    success=deviceCli.publishEvent("IoTSensor","json",data,qos=0,on_publish=
myOnPublishCallback)
    if not success:
        print("not connected to ibmiot")
        time.sleep(30)

    deviceCli.commandCallback=myCommandCallback
    #disconnect the device deviceCli.disconnect

```

## python script:

```
test1.py Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
import Published Weight = 63 Kg level = 73 % to IBM Watson
import Published Weight = 82 Kg level = 19 % to IBM Watson
import Published Weight = 17 Kg level = 87 % to IBM Watson
import Published Weight = 12 Kg level = 88 % to IBM Watson
import Published Weight = 45 Kg level = 67 % to IBM Watson
# watso Published Weight = 21 Kg level = 81 % to IBM Watson
organiz Published Weight = 63 Kg level = 12 % to IBM Watson
deviceTy Published Weight = 84 Kg level = 9 % to IBM Watson
deviceI Published Weight = 74 Kg level = 22 % to IBM Watson
authMet Published Weight = 17 Kg level = 95 % to IBM Watson
authTok Published Weight = 38 Kg level = 28 % to IBM Watson
#genera Published Weight = 22 Kg level = 8 % to IBM Watson
def myC Published Weight = 38 Kg level = 95 % to IBM Watson
global Published Weight = 87 Kg level = 39 % to IBM Watson
print Published Weight = 54 Kg level = 73 % to IBM Watson
print Published Weight = 14 Kg level = 68 % to IBM Watson
contro Published Weight = 29 Kg level = 5 % to IBM Watson
print Published Weight = 86 Kg level = 49 % to IBM Watson
try: Published Weight = 98 Kg level = 54 % to IBM Watson
device Published Weight = 75 Kg level = 53 % to IBM Watson
device Published Weight = 87 Kg level = 96 % to IBM Watson
except Published Weight = 75 Kg level = 74 % to IBM Watson
print Published Weight = 85 Kg level = 64 % to IBM Watson
sys.exi Published Weight = 25 Kg level = 61 % to IBM Watson
#connec Published Weight = 96 Kg level = 23 % to IBM Watson
deviceC Published Weight = 56 Kg level = 27 % to IBM Watson
while T Published Weight = 64 Kg level = 98 % to IBM Watson
dis Published Weight = 91 Kg level = 52 % to IBM Watson
loa Published Weight = 37 Kg level = 9 % to IBM Watson
dat Published Weight = 0 Kg level = 64 % to IBM Watson
if Published Weight = 48 Kg level = 86 % to IBM Watson
Published Weight = 25 Kg level = 54 % to IBM Watson
eli Published Weight = 74 Kg level = 79 % to IBM Watson
Published Weight = 50 Kg level = 27 % to IBM Watson
eli Published Weight = 24 Kg level = 86 % to IBM Watson
```

## IBM CLOUD OUTPUT:

IBM Watson IoT Platform

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Browse Action Device Types Interfaces

Add Device

Identity Device Information Recent Events State Logs

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
IoTSensor	{"weight":61,"level":85}	json	a few seconds ago
IoTSensor	{"weight":76,"level":98}	json	a few seconds ago
IoTSensor	{"weight":84,"level":58}	json	a few seconds ago
IoTSensor	{"weight":54,"level":55}	json	a few seconds ago
IoTSensor	{"weight":24,"level":60}	json	a few seconds ago

Type here to search

Desktop 31°C 02:25 16-11-2022