

DEVELOP A PYTHON SCRIPT

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Project Name	Project - Smart Waste Management System for Metropolitan Cities

Step 1: Open python idle
Step2: Type the program
Step 3: Then click on file and save the document
Step 4: Then click on Run then Run Module
Step 5: output will be appeared in the idle window

PYTHON SCRIPT

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

```
# watson device details
```

```
organization = "4yi0vc"
devicType = "BIN1"
deviceId = "BIN1ID"
authMethod= "token"
authToken= "123456789"
```

```
#generate random values for random 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,"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 "temp" with value integer value into the cloud as a type of event for every 10 secondsdeviceCli.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
```

SCREENSHOTS PYTHON SCRIPT:

