DEVELOP A PYTHON SCRIPT

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Project Name	***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 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,"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 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
```

Screenshots Python script: