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

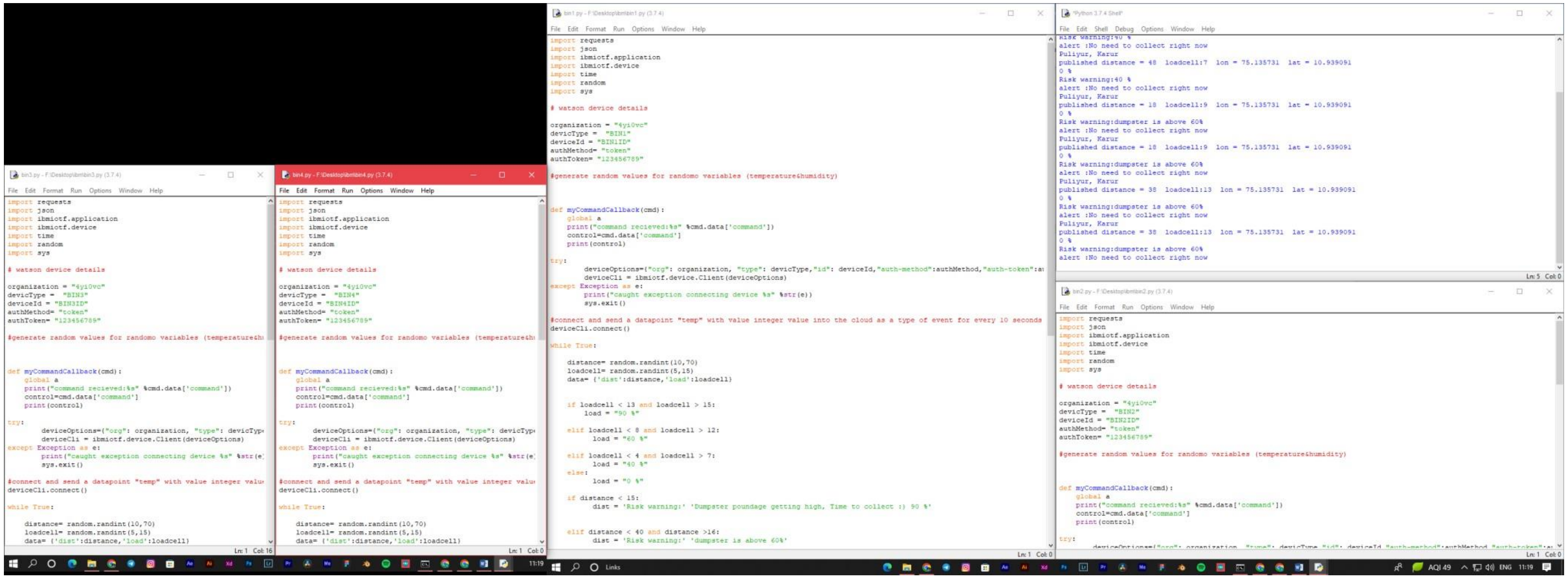
Python script

```
 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,"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 Output:



bin3.py - F:\Desktop\ibm\bin3.py (3.7.4)

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

# watson device details

organization = "4yi0vc"
devicType =  "BIN3"
deviceId = "BIN3ID"
authMethod= "token"
authToken= "123456789"

#generate random values for randomo variables (temperature&h



def myCommandCallback(cmd):
    global a
    print("command recieved:%s" %cmd.data['command'])
    control=cmd.data['command']
    print(control)

try:
        deviceOptions={"org": organization, "type": devicTyp
        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 valu
deviceCli.connect()

while True:

    distance= random.randint(10,70)
    loadcell= random.randint(5,15)
    data= {'dist':distance,'load':loadcell}
```

bin4.py - F:\Desktop\ibm\bin4.py (3.7.4)

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

# watson device details

organization = "4yi0vc"
devicType =  "BIN4"
deviceId = "BIN4ID"
authMethod= "token"
authToken= "123456789"

#generate random values for randomo variables (temperature&h



def myCommandCallback(cmd):
    global a
    print("command recieved:%s" %cmd.data['command'])
    control=cmd.data['command']
    print(control)

try:
        deviceOptions={"org": organization, "type": devicTyp
        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 valu
deviceCli.connect()

while True:

    distance= random.randint(10,70)
    loadcell= random.randint(5,15)
    data= {'dist':distance,'load':loadcell}
```

bin1.py - F:\Desktop\ibm\bin1.py (3.7.4)

```
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":a
        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%'
```

Python 3.7.4 Shell

```
Risk warning:40 %
alert :No need to collect right now
Puliyur, Karur
published distance = 48  loadcell:7  lon = 75.135731  lat = 10.939091
0 %
Risk warning:40 %
alert :No need to collect right now
Puliyur, Karur
published distance = 18  loadcell:9  lon = 75.135731  lat = 10.939091
0 %
Risk warning:dumpster is above 60%
alert :No need to collect right now
Puliyur, Karur
published distance = 18  loadcell:9  lon = 75.135731  lat = 10.939091
0 %
Risk warning:dumpster is above 60%
alert :No need to collect right now
Puliyur, Karur
published distance = 38  loadcell:13  lon = 75.135731  lat = 10.939091
0 %
Risk warning:dumpster is above 60%
alert :No need to collect right now
Puliyur, Karur
published distance = 38  loadcell:13  lon = 75.135731  lat = 10.939091
0 %
Risk warning:dumpster is above 60%
alert :No need to collect right now
```

bin2.py - F:\Desktop\ibm\bin2.py (3.7.4)

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

# watson device details

organization = "4yi0vc"
devicType =  "BIN2"
deviceId = "BIN2ID"
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:
```