

Develop a python script

Team ID	PNT2022TMID29903
PROJECT NAME	Smart waste management system for metropolitan cities

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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)

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

        if loadcell< 13 and loadcell> 15:
            load = "90 %"
        elifloadcell< 8 and loadcell> 12:
            load = "60 %"
        elifloadcell< 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 '
defmyOnPublishCallback(lat=11.6395,long=78.1490):
    print("ANNATHANAPATTI, Salem")
    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

```

