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


# watson device details

organization = "a7g2jo"
devicType =  "Garbage-Bin"
deviceId = "Garbage_Bin-I"
authMethod= "token"
authToken= "Cs_e4IG2RBps4cAMxe"

#generate random values for random variables (Distance and load)



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 "Distance" with value integer value into the cloud as a type of event for every 10 seconds
deviceCli.connect()

while True:
    lat= 32.939021
    lon= 75.135731
    location= "Thiruparankundram, Madurai, Tamil Nadu, India"
    Distance= random.randint(1,75)
    Loadcell= random.randint(0,20)
    data= {'dist':Distance,'load':Loadcell,'Latitude':lat,'Longitude':lon,'Location':location}
    if Loadcell<5 and Loadcell>0:
        load="20%"
    elif Loadcell<10 and Loadcell>5:
        load="40%"
    elif Loadcell<15 and Loadcell>10:
        load="60%"
    elif Loadcell<18 and Loadcell>15:
        load="80%"
    elif Loadcell<20 and Loadcell>18:
        load="90%"
    else:
        load="100%"
```

```
    if Distance(7 and Distance)1:
        level="90%"
    elif Distance(15 and Distance)7:
        level="80%"
    elif Distance(30 and Distance)15:
        level="60%"
    elif Distance(45 and Distance)30:
        level="40%"
    elif Distance(60 and Distance)45:
        level="20%"
    elif Distance(75 and Distance)60:
        level="10%"
    else:
        level="0%"

    if level=="90%" or load=="90%":
        warn = 'alert:''Dustbin is almost filled in latitude:32.939021 and longitude:75.135731
Thiruparankundram, Madurai, Tamil Nadu, India'

    def myOnPublishCallback(latitude=32.939021,longitude=75.135731 ):
        print("Thiruparankundram, Madurai, Tamil Nadu, India")
        print("published Level of bin = %s " %level,"Load = %s " %load, "Latitude = %s "
 %latitude,"Longitude = %s " %longitude)
        print(load)
        print(level)
        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(20)



    deviceCli.commandCallback=myCommandCallback
#disconnect the device
deviceCli.disconnect()
```