DEVELOP PYTHON SCRIPT

Team ID	PNT2022TMID01889
Project Name	Smart Waste Management System for metropolitan cities

CODE:

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import time
import random
import sys
import requests
import json
import ibmiotf.application
import ibmiotf.device
# watson device details
organization = "3w5ire"
devicType = "Dustbin"
deviceId = "DustbinID"
authMethod= "token"
authToken= "987654321"
#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
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of event for every 10 seconds
deviceCli.connect()
while True:
    Distance= random.randint(1,75)
    Loadcell= random.randint(0,20)
    data= {'dist':Distance,'load':Loadcell}
    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'
    def myOnPublishCallback(latitude=10.9368,longitude=78.1366):
        print("Puliyur,Karur,Tamilnadu")
        print("published Level of bin = %s " %level,"Load = %s " %load, "Latitude = %s "
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%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()
```