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

# watson device details
organization = "73ffv"
devicType = "BIN2"
deviceId = "BIN2ID"
authMethod= "token"
authToken= "123456789"

#generate random values for random variables (temperature&humidity)
def myCommandCallback(cmd):
    global a
    print("command recieved is:%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("Exception while 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:' 'Garbage level is high, collection time :)
90 %'
    elif distance < 40 and distance >16:
        dist = 'Risk warning:' 'garbage is above 60%'
    elif distance < 60 and distance > 41:
        dist = 'Risk warning:' '40 %'

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else:
    dist = 'Risk warning:' '17 %'

if load == "90 %" or distance == "90 %":
    warn = 'alert :' ' Garbage level is high, collection time :)'
elif load == "60 %" or distance == "60 %":
    warn = 'alert :' 'garbage is above 60%'
else :
    warn = 'alert :' 'Levels are low, collection not needed '

def myOnPublishCallback(lat=11.068774,long=77.092978):
    print("PSG iTech, Coimbatore")
    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()

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