**PYTHON SCPRIT**

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| Date | 3 November 2022 |
| Team ID | PNT2022TMID42565 |
| Project Name | Smart Waste Management System For  Metropolitan Cities |
| Maximum Marks | 4 Marks |

**PYTHON CODE**

import requests

import json

import ibmiotf.application

import ibmiotf.device

import time

import random

import sys

organization = "70icwf"

deviceType="1234"

deviceId="12345678"

authMethod="token"

authToken="S\_OVsw4ICr5-Vk9A9x"

def myCommandCallback(cmd):

global a

print("Command received: %s" %cmd.data['command'])

control=cmd.data['command']

print(control)

try:

deviceOptions ={"org":organization, "type": deviceType, "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()

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 = 'Warning:' 'Trash is getting high, Time to collect 90 %'

elif distance < 40 and distance >16:

dist = 'Warning:' 'Trash is above 70 %'

elif distance < 60 and distance > 41:

dist = 'Warning:' '40 %'

else:

dist = 'Warning:' '17 %'

if load == "90 %" or distance == "90 %":

warn = 'alert:' ' Warning: Trash poundage getting high, Time to collect'

elif load == "60%" or distance == "60 %":

warn = 'alert:' 'Trash is above 60%'

else :

warn = 'alert:''No need to collect right now'

def myOnPublishCallback(lat=11.0168,long=76.9558):

print("Coimbatore")

print("published distance = %s" %distance, "loadcell:%s" %loadcell, "lon= %s"%long,"lat=%s" %lat)

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 connnected to ibmiot")

time.sleep(20)

deviceCli.commandCallback=myCommandCallback

deviceCli.disconnect()