**CREATE A GPRS.PY**

import time

import sys

import ibmiotf.application

import ibmiotf.device

import random

import requests

import json

#Provide your IBM Watson Device Credentials

organization = "0z828r"

deviceType = "iotdevice" #Credentials of Watson IoT sensor simulator

deviceId = "1001"

authMethod = "token"

authToken = "prathyusha"

# Initialize the device client.

L=0

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()

# Connect and send a datapoint "hello" with value "world" into the cloud as an event of type "greeting" 10 times

deviceCli.connect()

while True:

overpass\_url = "http://overpass-api.de/api/interpreter"

overpass\_query = """

[out:json];area[name="India"];(node[place="village"](area););out;

"""

response = requests.get(

overpass\_url,

params={'data': overpass\_query}

)

coords = []

if response.status\_code == 200:

data = response.json()

places = data.get('elements', [])

for place in places:

coords.append((place['lat'], place['lon']))

print ("Got %s village coordinates!" % len(coords))

print (coords[0])

else:

print("Error")

i = random.randint(1,100)

L = coords[i]

#Send random gprs data to node-red to IBM Watson

data = {"d":{ 'Latitude' : L[0], 'Longitude' : L[1]}}

#print data

def myOnPublishCallback():

print("Published gprs location = ", L, "to IBM Watson")

success = deviceCli.publishEvent("Data", "json", data, qos=0, on\_publish=myOnPublishCallback)

time.sleep(12)

if not success:

print("Not connected to IoTF")

time.sleep(1)

deviceCli.disconnect()