

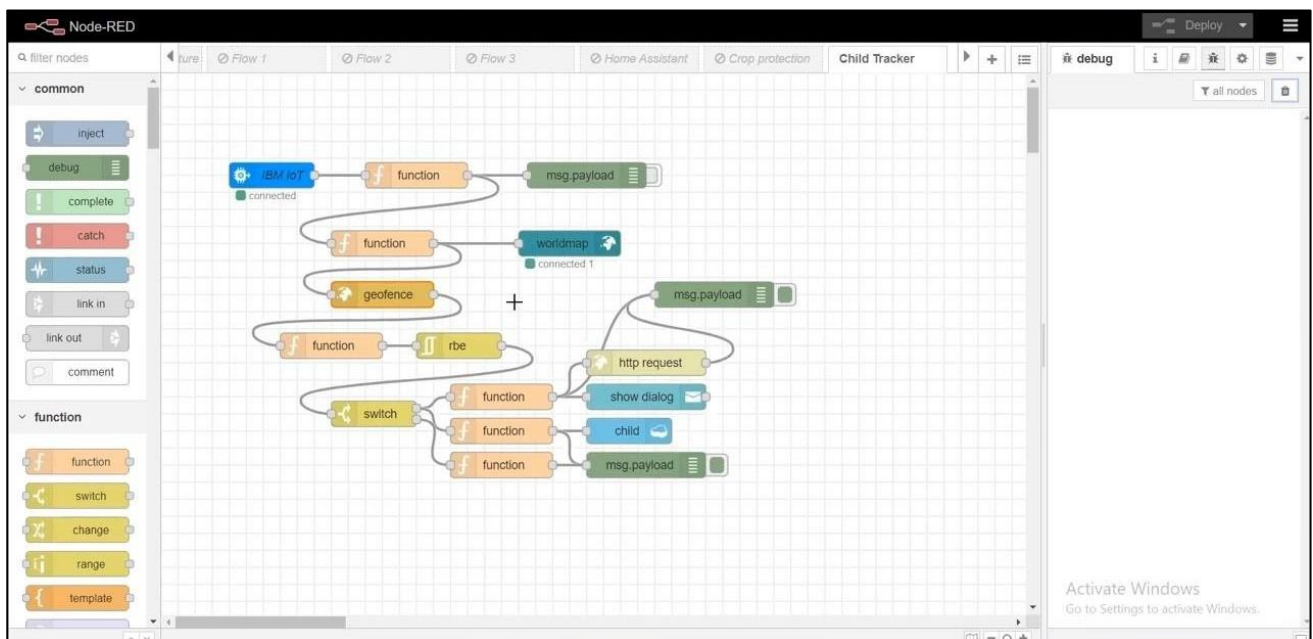
## WEB – APPLICATION USING NODE-RED

**AIM:**

## Develop the web application using Node-RED

### STEPS TO BE DONE:

- Opened a Node-RED project



- Develop a code to get child Location using Python

```

C:\Users\NOME\Documents\7th SEM\geforce Coding.py (3.7.0)
File Edit Format Run Options Window Help

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

organization = "cp51iq"
deviceType = "p1rya02jodevictype"
deviceId = "p1rya02jodeviceid"
authMethod = "use-token-auth"
authToken = "xMqB18ih_EEOTlxmjW"

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="lighton":
        print ("led is on")
    else :
        print ("led is off")

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:

    temp=random.randint(0,100)
    Humid=random.randint(0,100)

    data = { 'temp' : temp, 'Humid': Humid }

    def myOnPublishCallback():
        print ("Published Temperature = %s C" % temp, "Humidity = %s" % Humid, "to IBM Watson")

    success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0, on_publish=myOnPublishCallback)
    if not success:
        print("Not connected to IoT")
        time.sleep(1)

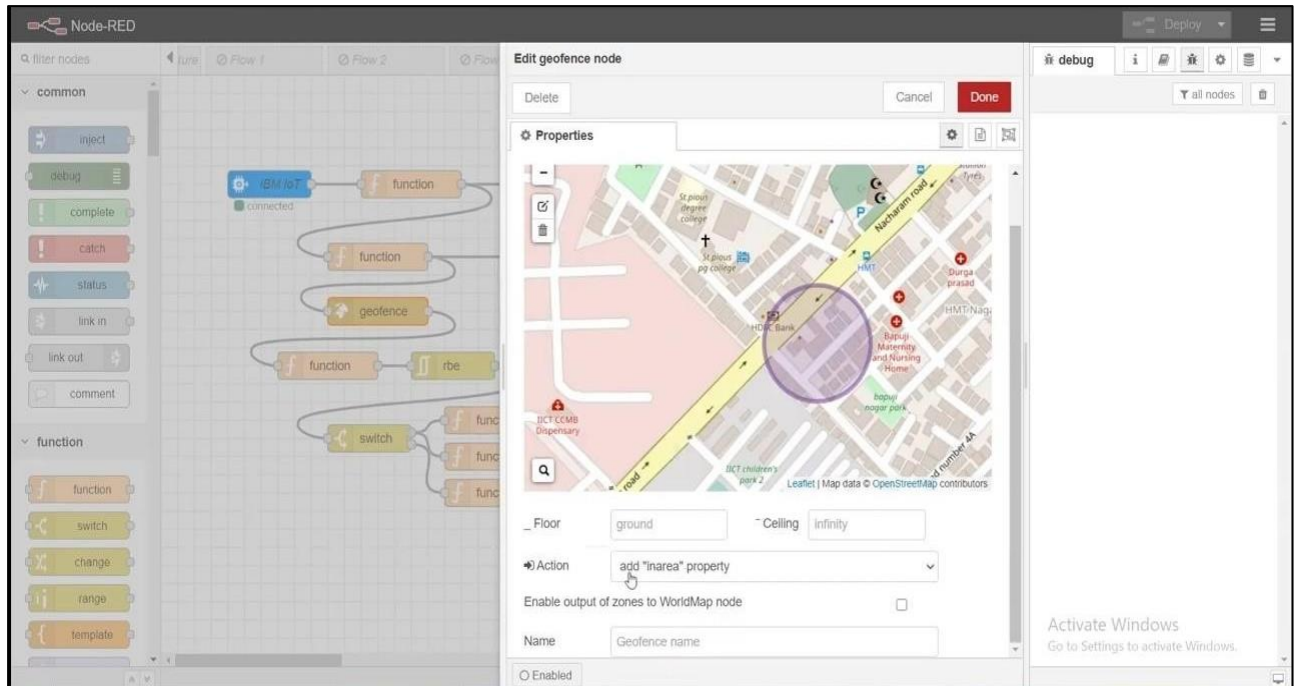
    deviceCli.commandCallback = myCommandCallback

deviceCli.disconnect()

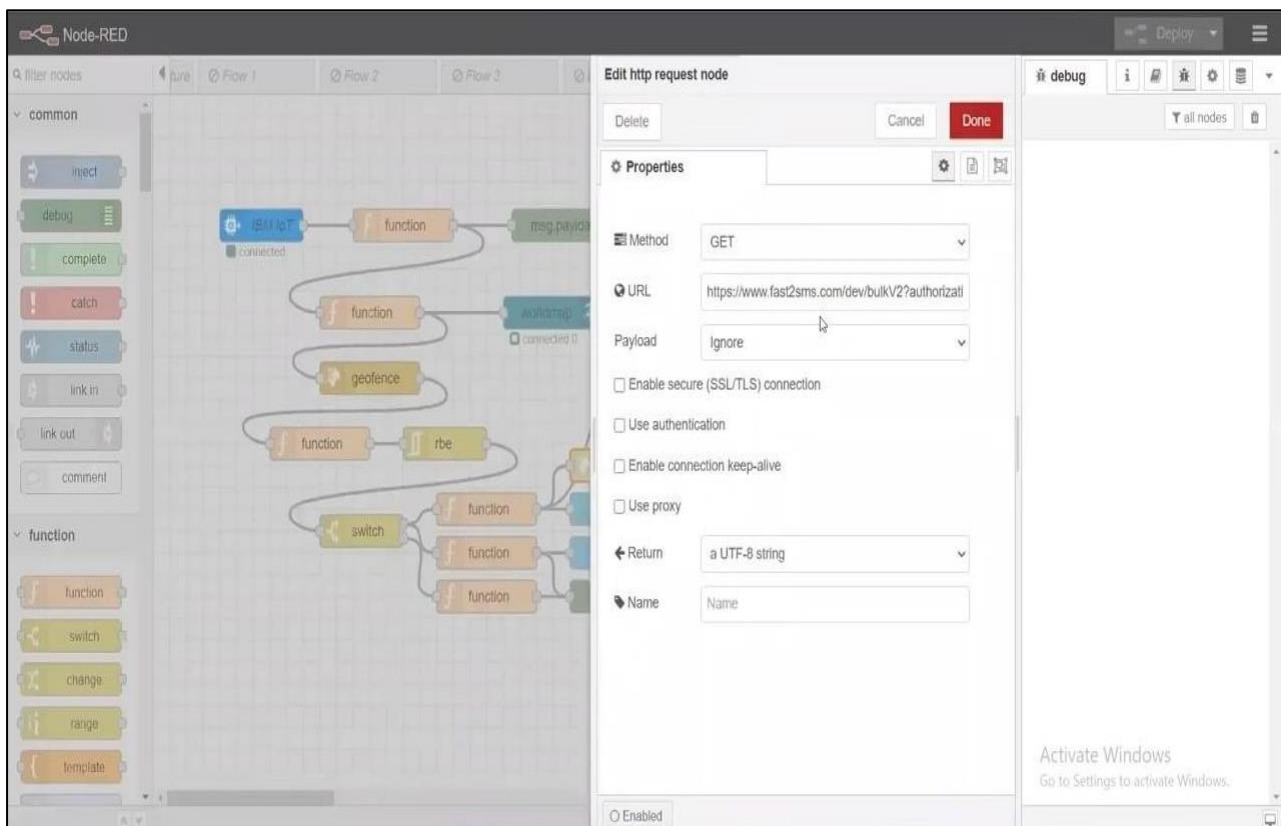
```

Activate Windows  
Go to Settings to activate Windows.

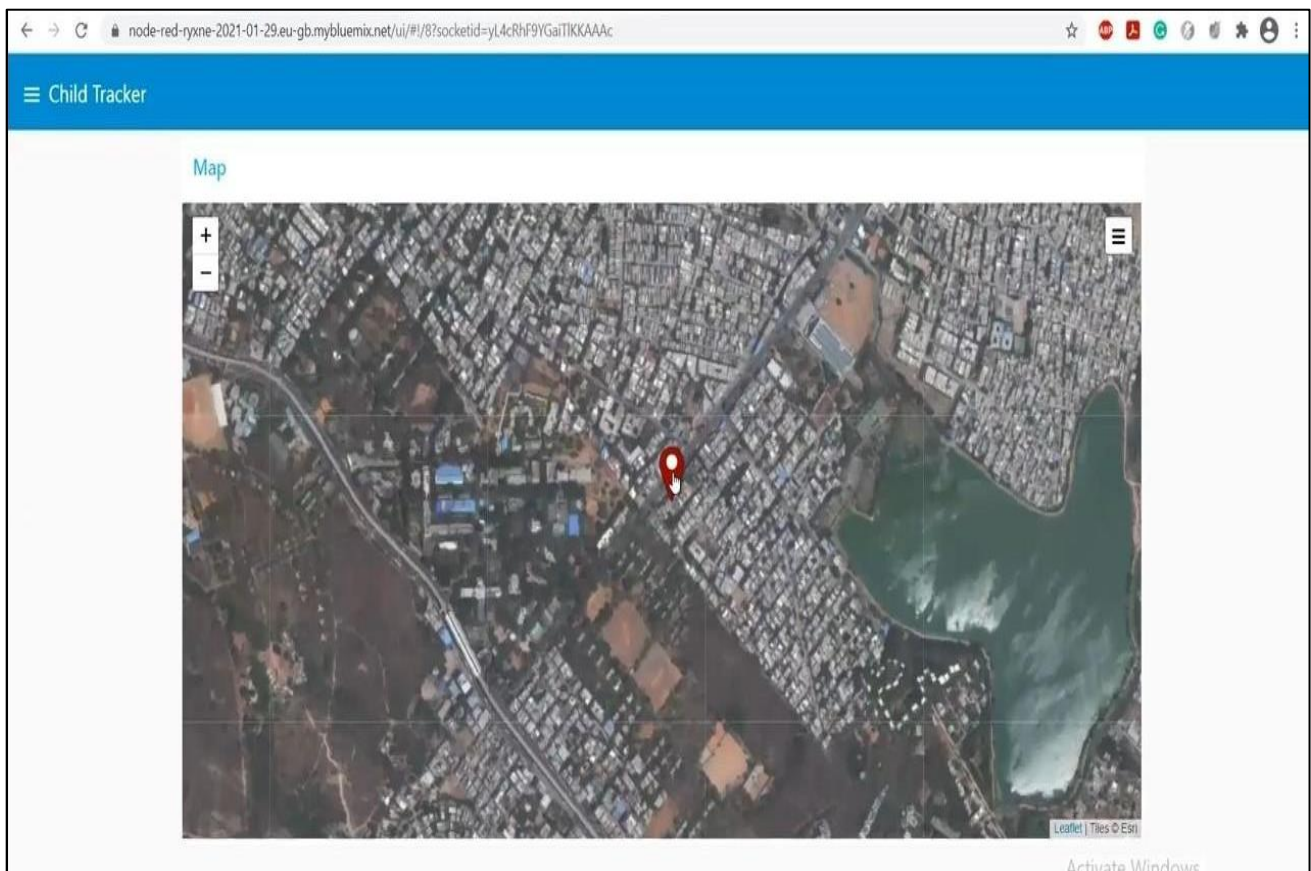
- Create **GEOFENCE** mode



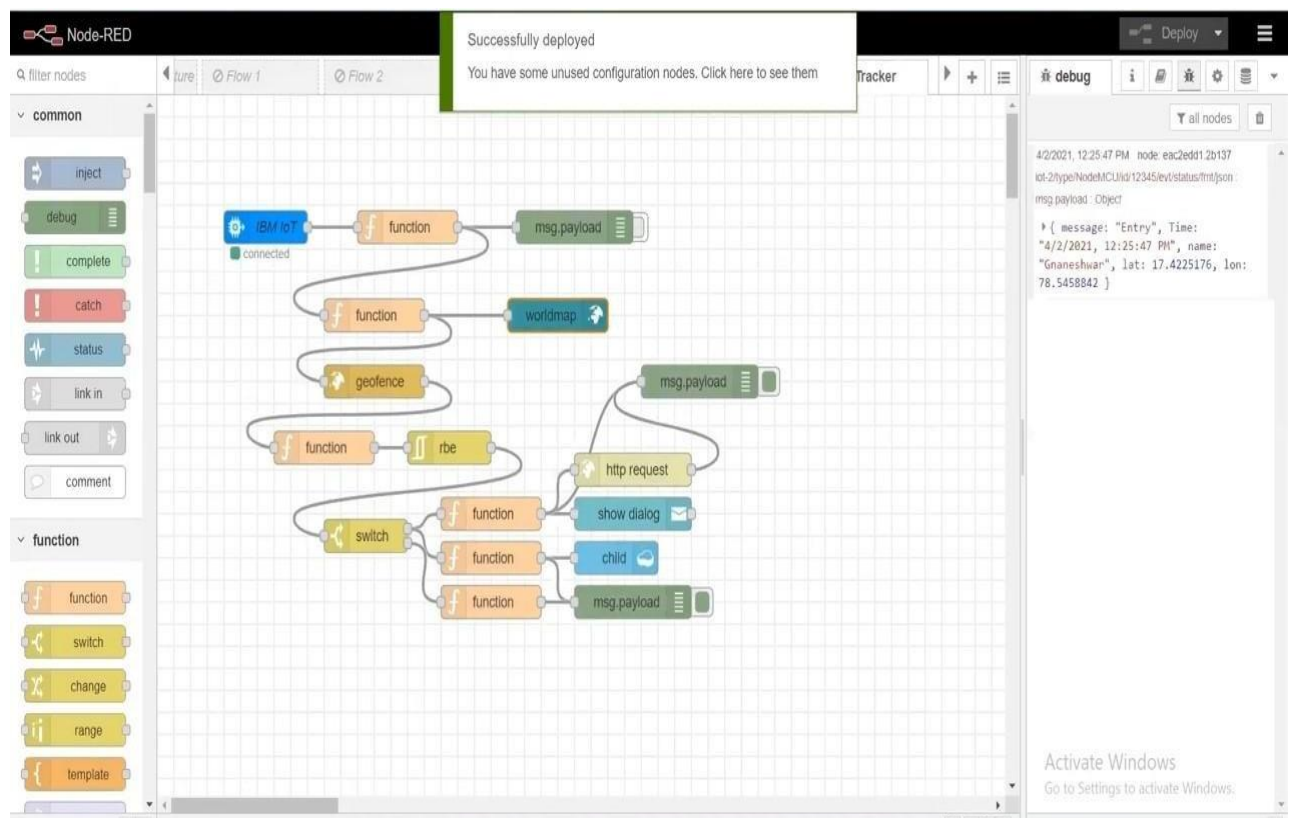
- Edit the **HTTP Request** URL



- Located the Child's location

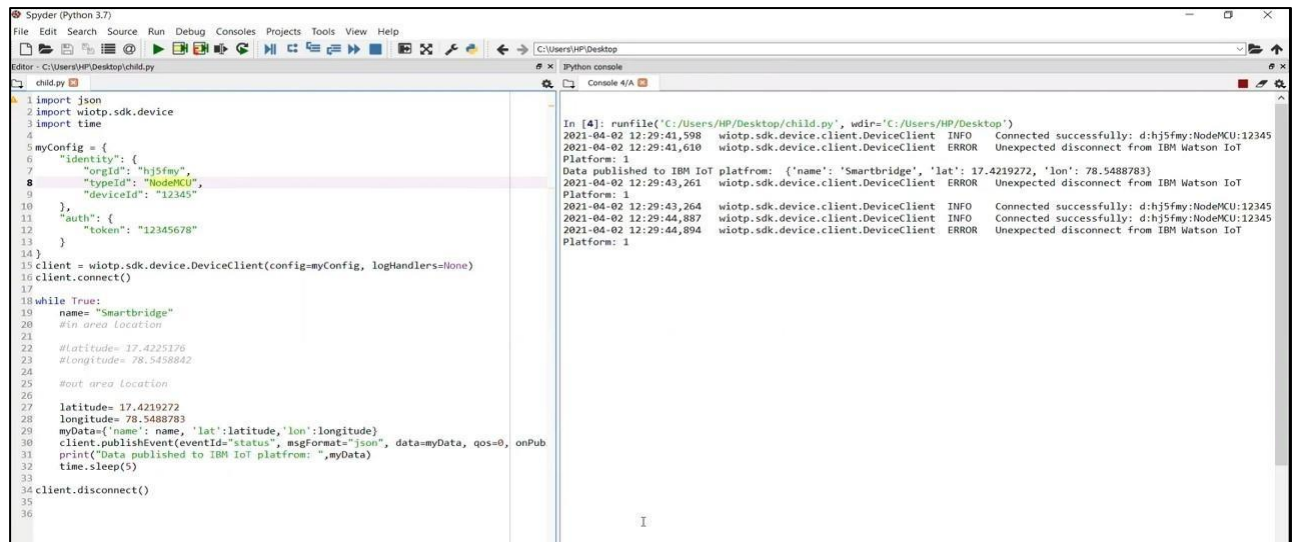


- GEOFENCE node created









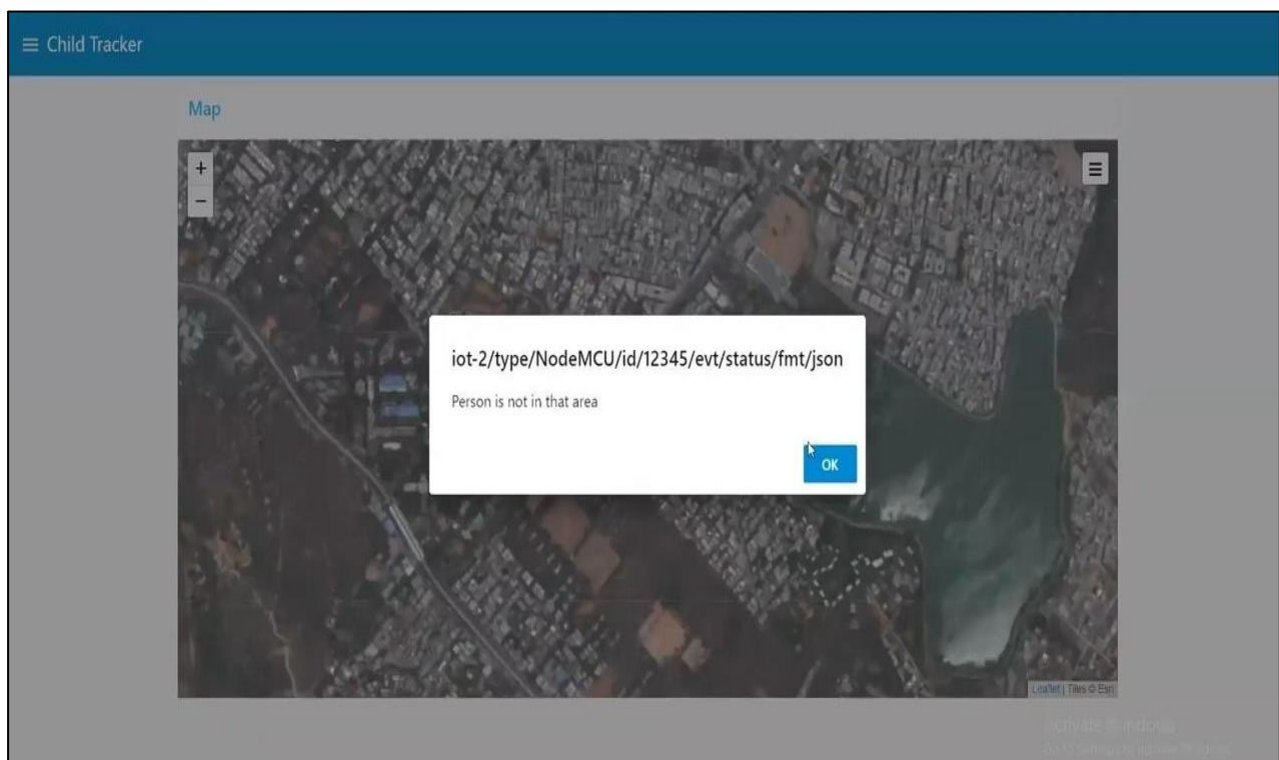
The screenshot shows the Spyder Python IDE with a file named `child.py` open. The script imports `json`, `wiotp.sdk.device`, and `time`. It defines a configuration object `myConfig` with fields for `identity` (including `orgId`, `typeId`, and `deviceId`), `auth` (including `token`), and `clientId`. The script then creates a `DeviceClient` instance and enters a loop where it publishes status events to the IBM IoT platform. The console output shows the script running successfully, with messages indicating connection status and data published to the platform.

```
1 import json
2 import wiotp.sdk.device
3 import time
4
5 myConfig = {
6     "identity": {
7         "orgId": "hj5fmy",
8         "typeId": "NodeMCU",
9         "deviceId": "12345"
10    },
11    "auth": {
12        "token": "12345678"
13    }
14 }
15 client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
16 client.connect()
17
18 while True:
19     name= "Smartbridge"
20     #in area location
21
22     #latitude= 17.4225176
23     #longitude= 78.5458842
24
25     #out area location
26
27     latitude= 17.4219272
28     longitude= 78.5488783
29     myData={ 'name': name, 'lat':latitude, 'lon':longitude}
30     client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPub
31     print("Data published to IBM IoT platform: ",myData)
32     time.sleep(5)
33
34 client.disconnect()
35
36
```

Console output:

```
In [4]: runfile('C:/Users/HP/Desktop/child.py', wdir='C:/Users/HP/Desktop')
2021-04-02 12:29:41,598 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: dhj5fmy:NodeMCU:12345
2021-04-02 12:29:41,610 wiotp.sdk.device.client.DeviceClient ERROR Unexpected disconnect from IBM Watson IoT
Platform: 1
Data published to IBM IoT platform: { 'name': 'Smartbridge', 'lat': 17.4219272, 'lon': 78.5488783}
2021-04-02 12:29:43,261 wiotp.sdk.device.client.DeviceClient ERROR Unexpected disconnect from IBM Watson IoT
Platform: 1
2021-04-02 12:29:43,264 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: dhj5fmy:NodeMCU:12345
2021-04-02 12:29:44,887 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: dhj5fmy:NodeMCU:12345
2021-04-02 12:29:44,894 wiotp.sdk.device.client.DeviceClient ERROR Unexpected disconnect from IBM Watson IoT
Platform: 1
```

- After running the script, the web UI shows “Person is not in the particular area”



## RESULT:

Thus the web-application using node-red was developed successfully.