

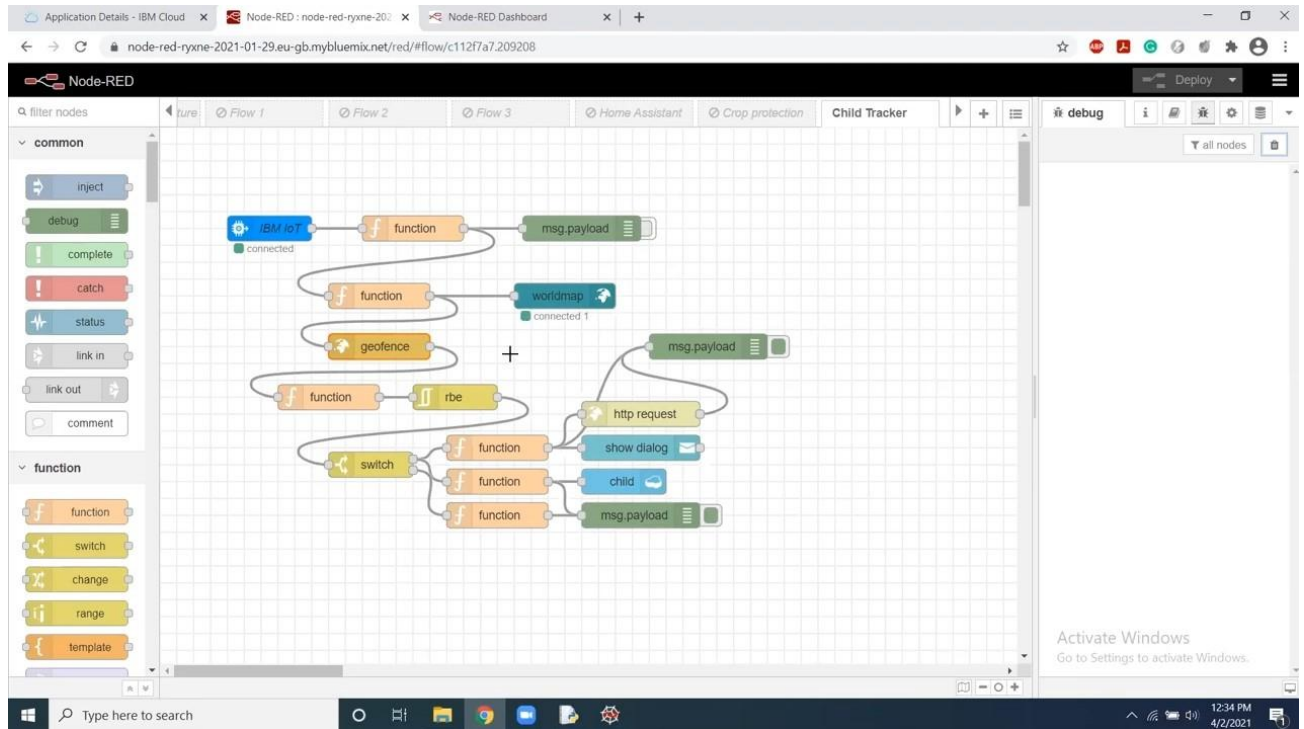
# Develop The Web Application Using Node-RED

## Aim:

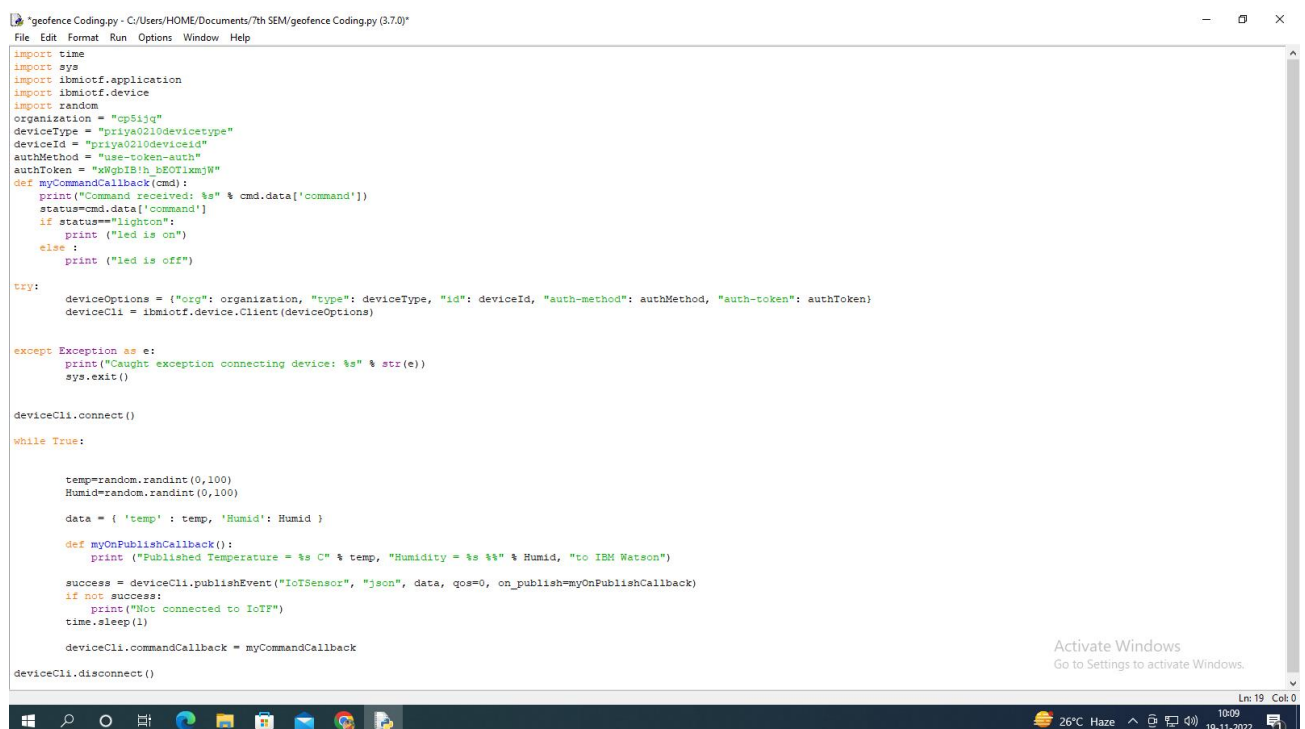
Develop the web application using Node-RED.

## Steps Followed:

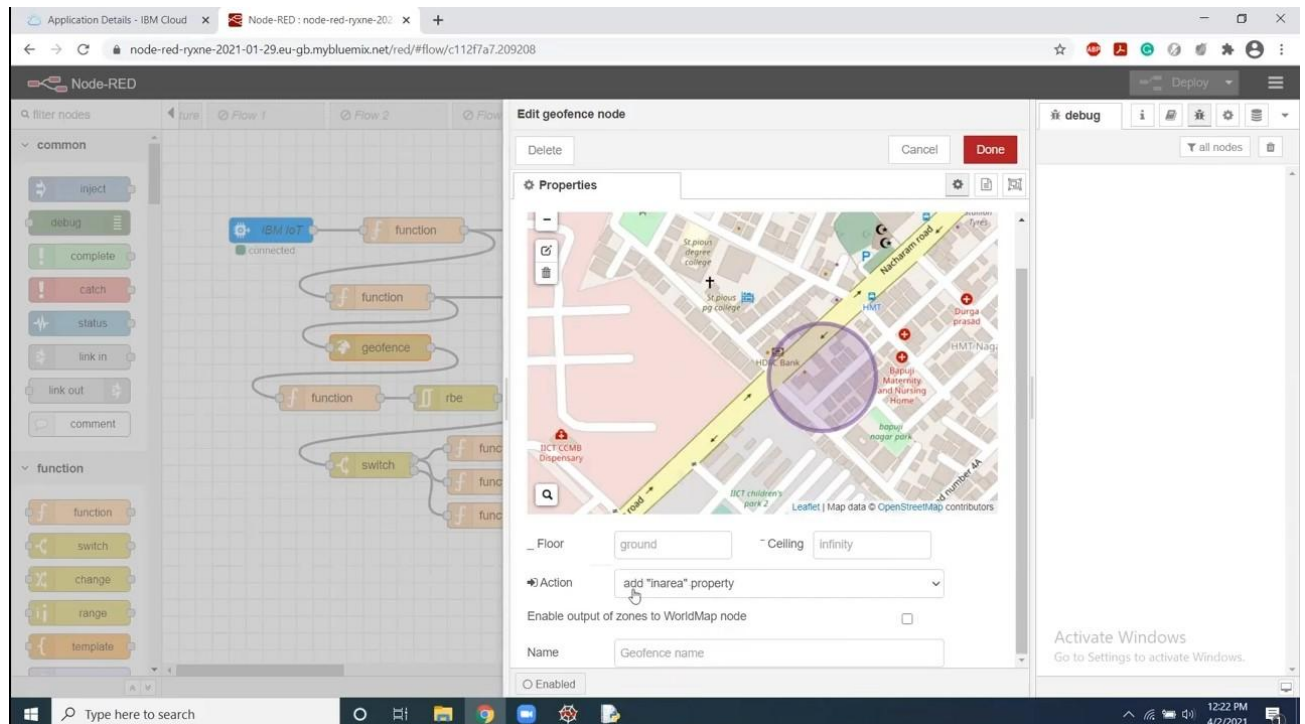
- Opened a Node-RED project



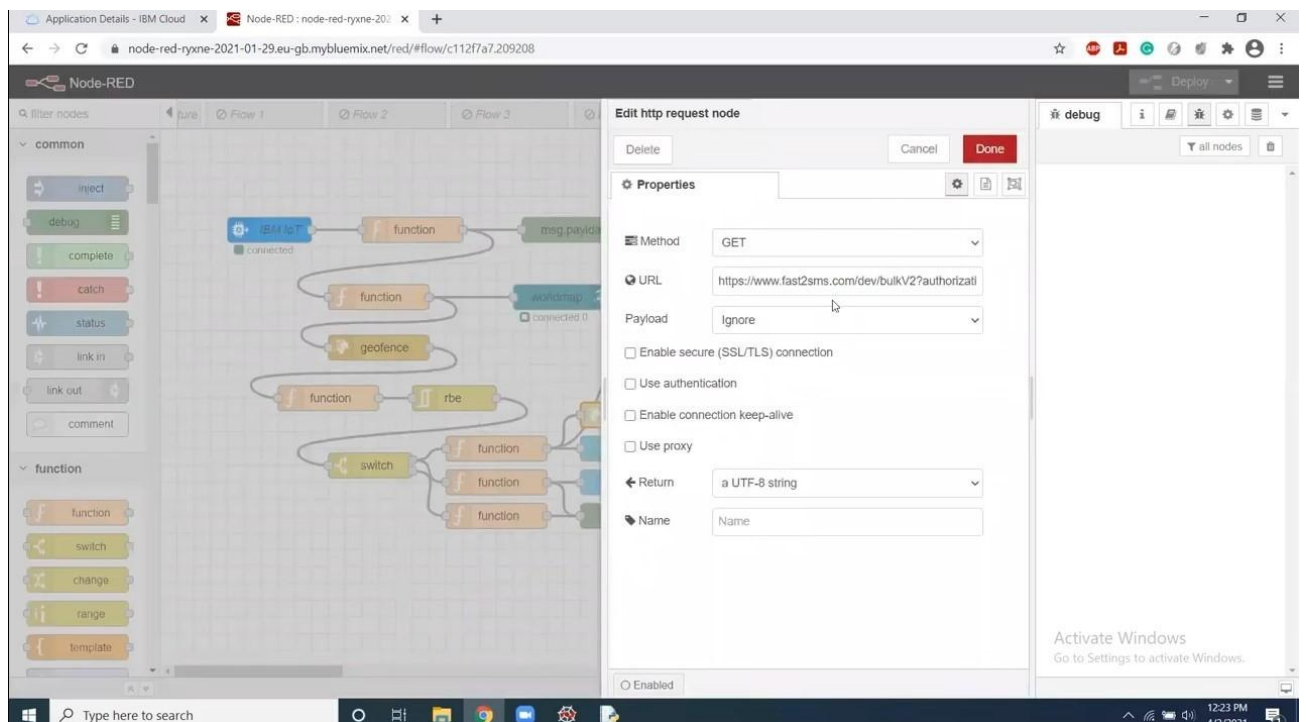
- Added code to get child location in python



- Created the GeoFence



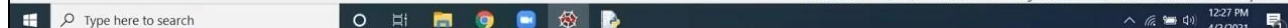
- Editing the HTTP RequestURL



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- The screenshot displays the Node-RED web interface in a browser. The address bar shows the URL: `https://node-red-rynx-2021-01-29.eu-gb.mybluemix.net/red/#flow/c112f7a7.209208`. The interface features a left sidebar with node categories: 'common' (including inject, debug, complete, catch, status, link in, link out, comment) and 'function' (including function, switch, change, range, template). The main workspace contains a flowchart with the following nodes and connections:
- inject** node connected to a **function** node.
  - The first **function** node is connected to a **msg.payload** node.
  - The **msg.payload** node is connected to a second **function** node.
  - The second **function** node is connected to a **worldmap** node.
  - The **worldmap** node is connected to a **geofence** node.
  - The **geofence** node is connected to a third **function** node.
  - The third **function** node is connected to an **rbe** node.
  - The **rbe** node is connected to an **http request** node.
  - The **http request** node is connected to a **show dialog** node.
  - The **show dialog** node is connected to a **child** node.
  - The **child** node is connected to a final **msg.payload** node.
- A notification at the top center states: "Successfully deployed. You have some unused configuration nodes. Click here to see them". The right sidebar shows a 'debug' console with a log entry for a message object:
- ```
{ message: "Entry", Time: "4/2/2021, 12:25:47 PM", name: "Gnateshwar", lat: 17.4225176, lon: 78.5458842 }
```





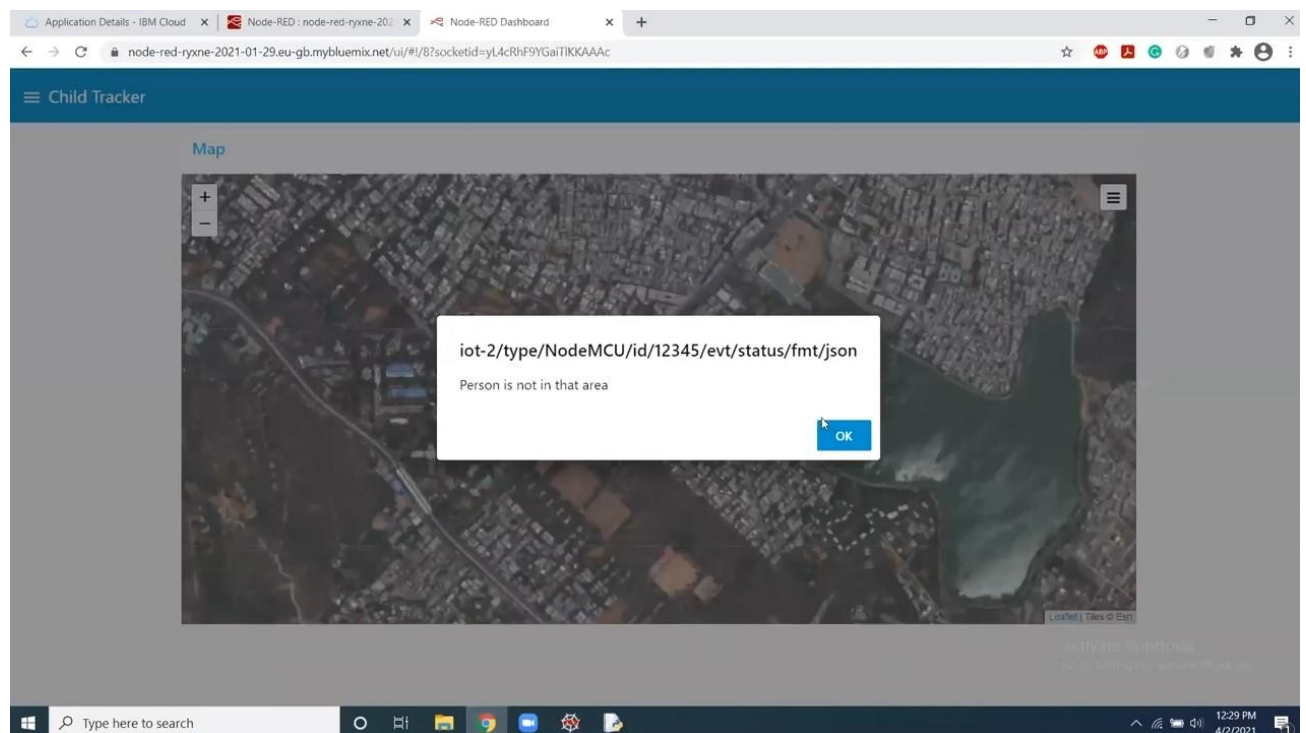
The image shows a Spyder Python IDE window. The editor on the left contains a Python script named `child.py`. The script imports `json`, `wiotp.sdk.device`, and `time`. It defines a `myConfig` dictionary with fields for `identity`, `orgId`, `typeId`, `deviceId`, and `auth`. A `client` object is created using `wiotp.sdk.device.DeviceClient`. A `while True` loop publishes data to the IBM IoT platform at regular intervals, including location data (latitude and longitude) and a status message. The console on the right shows the execution output, including connection logs and data published to the platform.

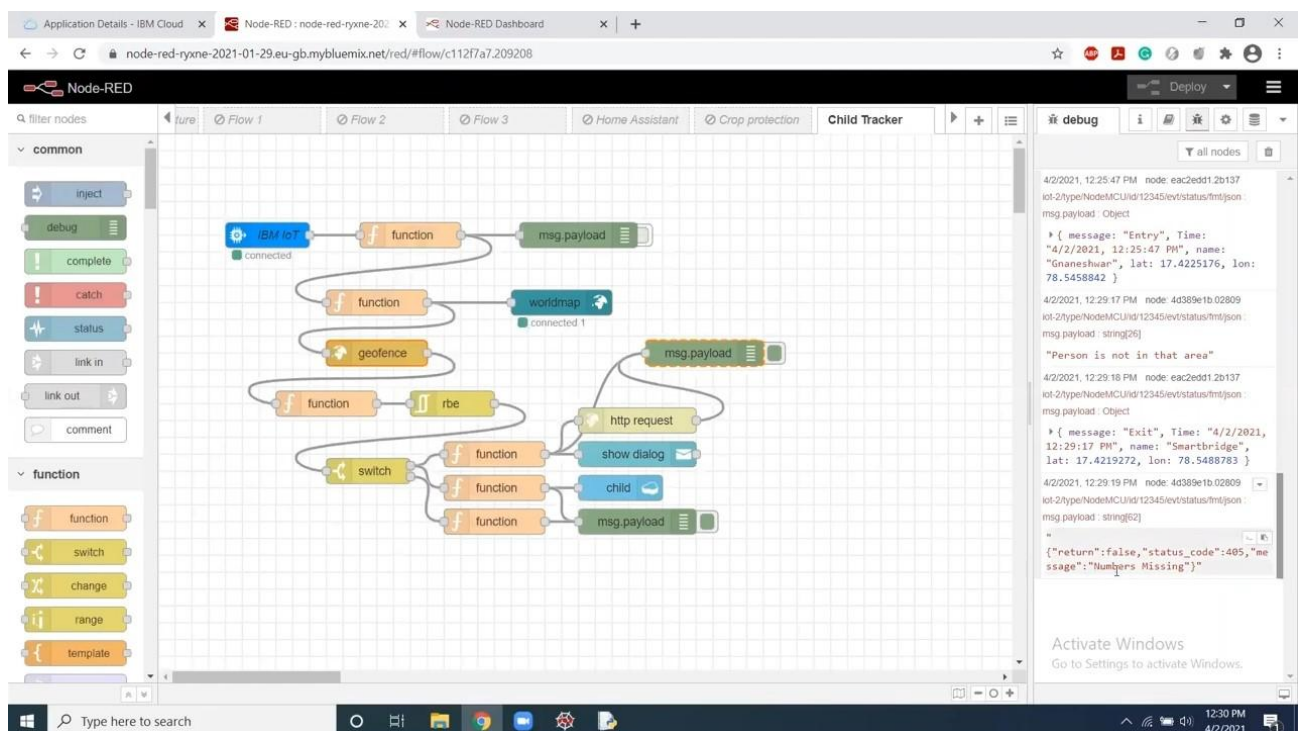
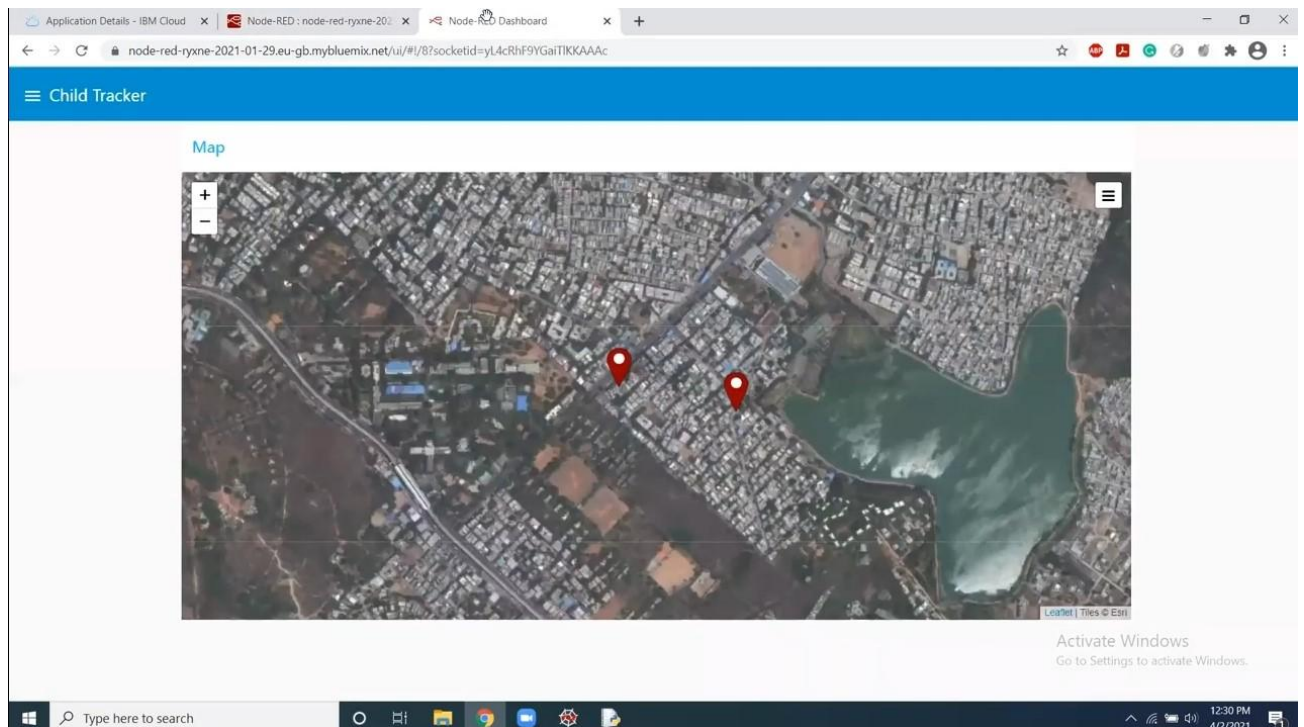
```
1 import json
2 import wiotp.sdk.device
3 import time
4
5 myConfig = {
6     "identity": {
7         "orgId": "hj5fmy",
8         "typeId": "NodeMCU",
9         "deviceId": "12345"
10     },
11     "auth": {
12         "token": "12345678"
13     }
14 }
15 client = wiotp.sdk.device.DeviceClient(config=myConfig, 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: d:hj5fmy: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: d:hj5fmy:NodeMCU:12345
2021-04-02 12:29:44,887 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:hj5fmy: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:

Successfully developed the web application using Node-RED