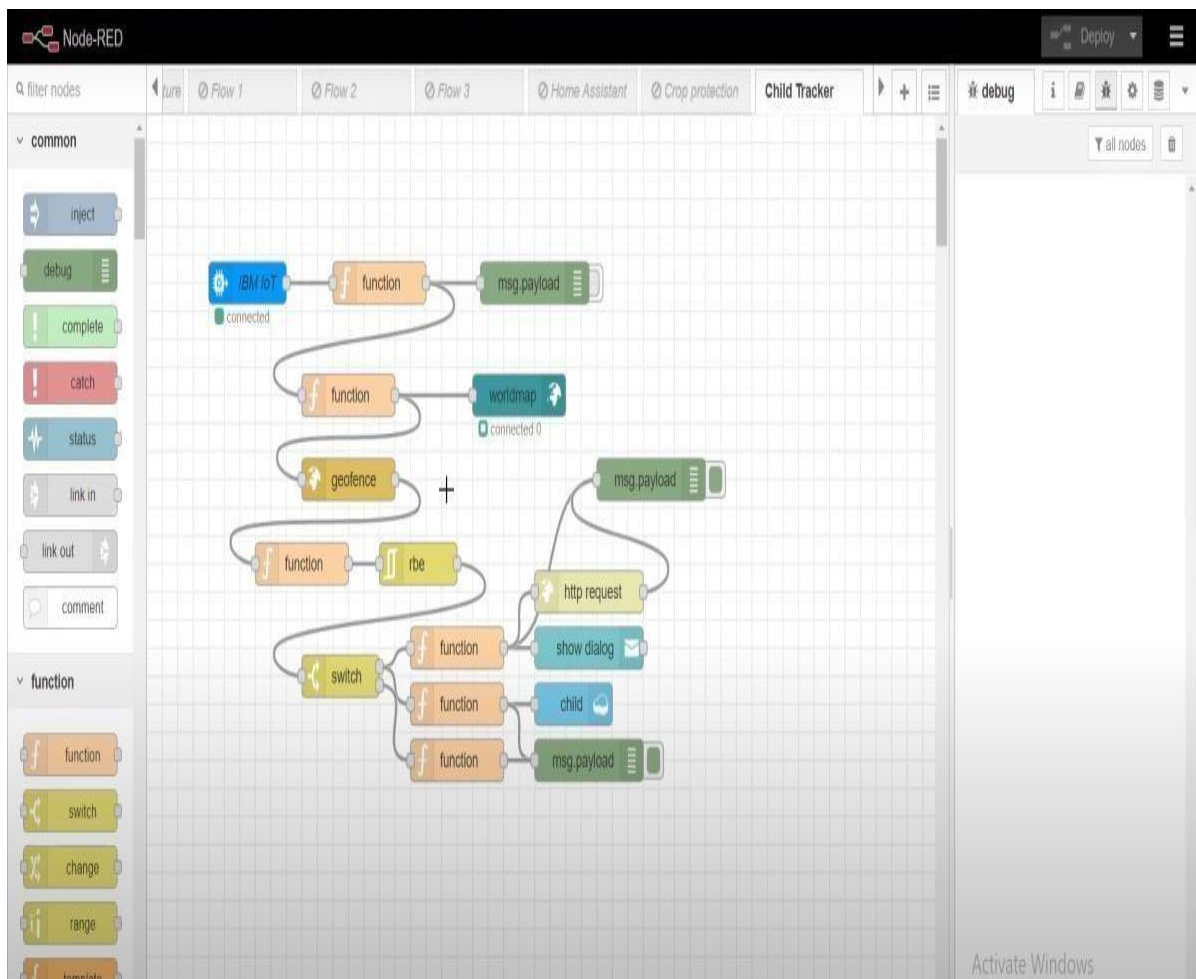


## Develop A Web Application Using Node-RED

DATE	7-11-2022
TEAM ID	PNT2022TMID17224
PROJECT NAME	Industry-specific intelligent fire management system

### Steps Followed:

- Opened a Node-RED project



- Added code to get child location in python

```

import json
import wiotp.sdk.device
import time

myConfig = {
    "identity": {
        "orgId": "hj5fmy",
        "typeId": "NodeMCU",
        "deviceId": "12345"
    },
    "auth": {
        "token": "12345678"
    }
}

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()

while True:
    name= "Smartbridge"
    #in area location

    latitude= 17.4225176
    longitude= 78.5458842

    #out area location

    #latitude= 17.4219272
    #longitude= 78.5488783
    myData={'name': name, 'lat':latitude,'lon':longitude}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Data published to IBM IoT platfrom: ",myData)
    time.sleep(5)

client.disconnect()

```

- **Created the GeoFence**

•

### Edit geofence node

Delete

Cancel

Done

⚙ Properties

⚙

📄

🗺

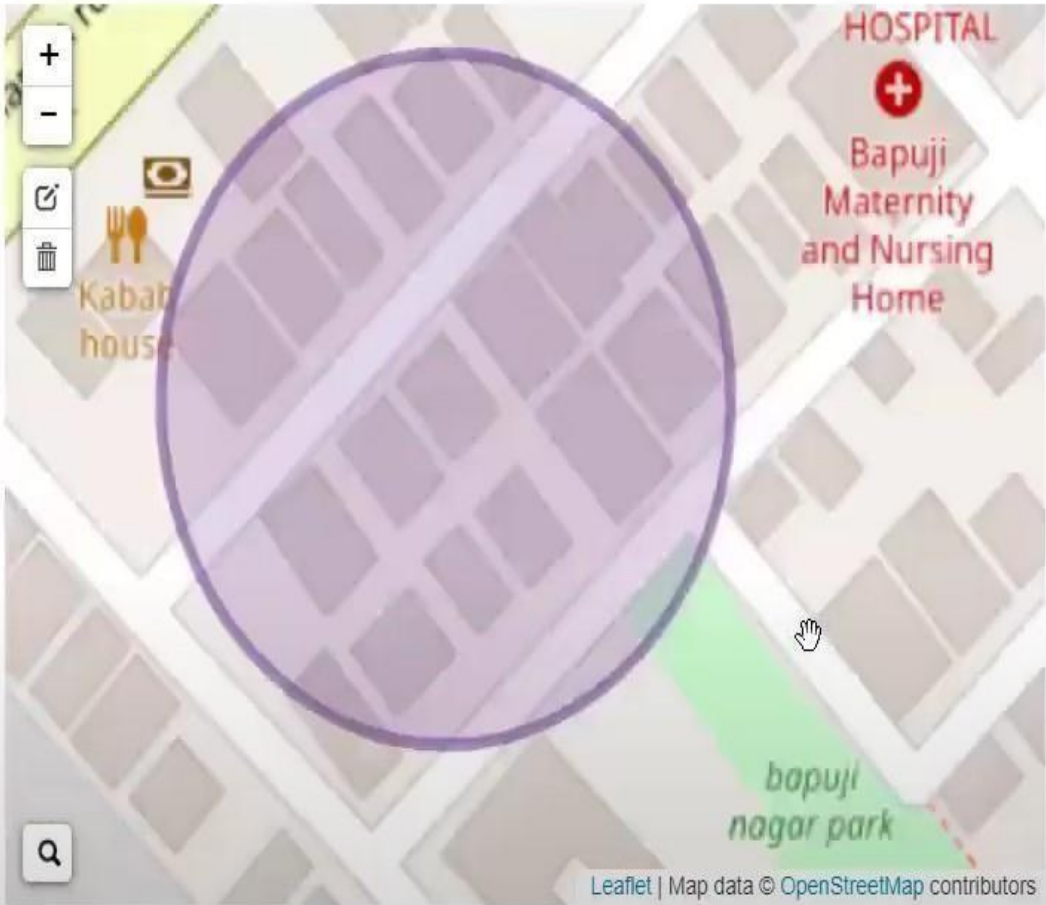
+

-

📍

🗑

🔍



Leaflet | Map data © OpenStreetMap contributors

\_ Floor

ground

~ Ceiling

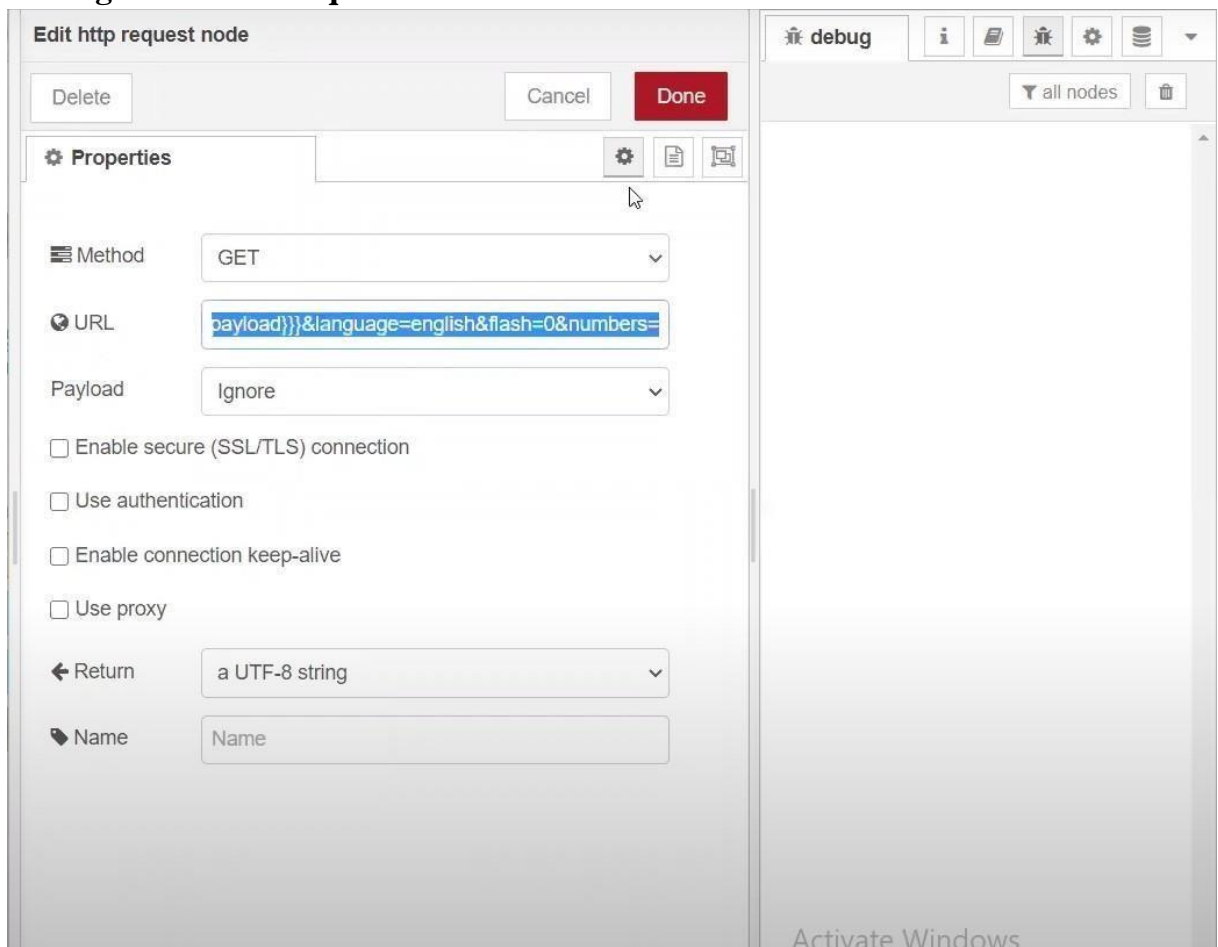
infinity

➡ Action

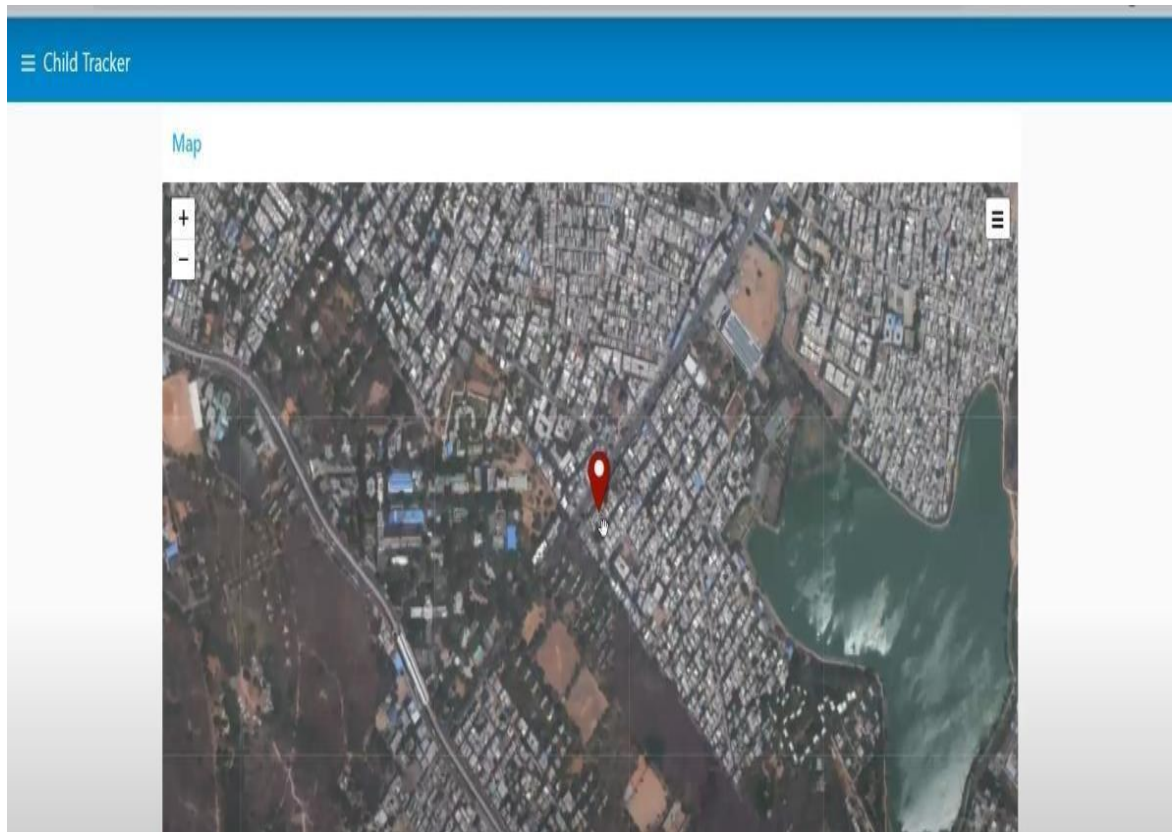
add "inarea" property

▼

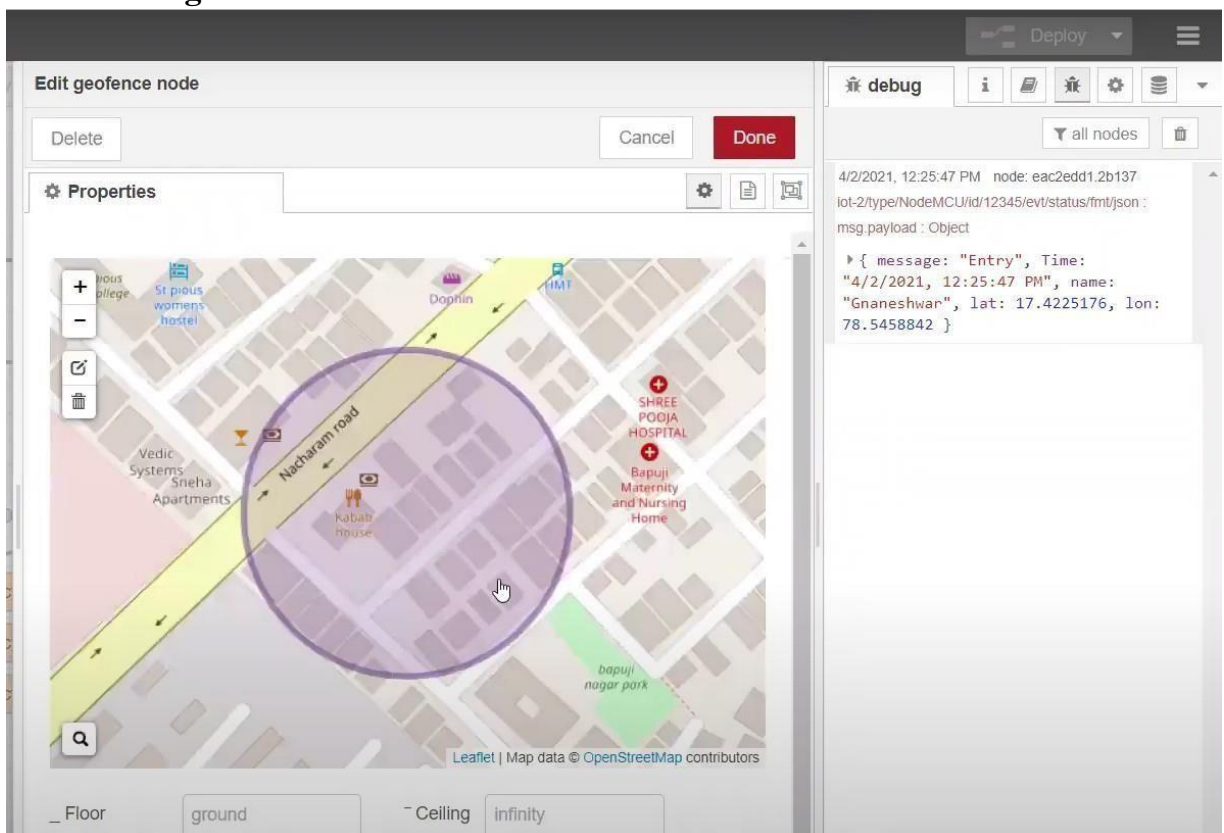
- **Editing the HTTP Request URL**



- **Located the child**

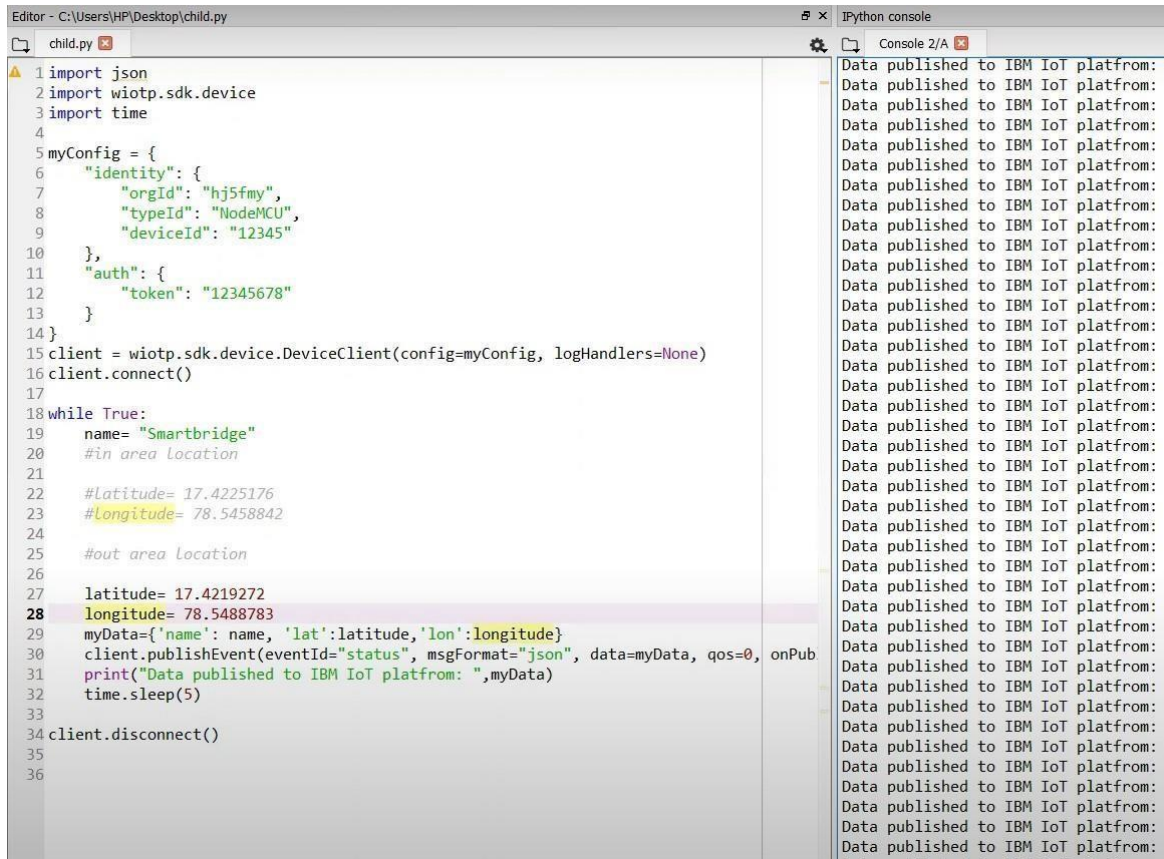


**Created the geofence node**



- **Python script sending requests to IBM Cloud**





The image shows a screenshot of a Python script running in an IDE. The script is named `child.py` and is located at `C:\Users\HP\Desktop\child.py`. The script imports `json`, `wiotp.sdk.device`, and `time`. It defines a `myConfig` dictionary with `identity` and `auth` sections. The `identity` section contains `orgId`, `typeId`, and `deviceId`. The `auth` section contains a `token`. The script then creates a `DeviceClient` object and connects it. It enters a `while True` loop where it publishes events to the IBM IoT platform. The events are published with the event ID `status`, message format `json`, and data `myData`. The data `myData` is a dictionary with `name`, `lat`, and `lon` keys. The `lat` key is assigned the value `17.4225176` and the `lon` key is assigned the value `78.5458842`. The script also includes comments for `in area location` and `out area location`. The script ends with `client.disconnect()`.

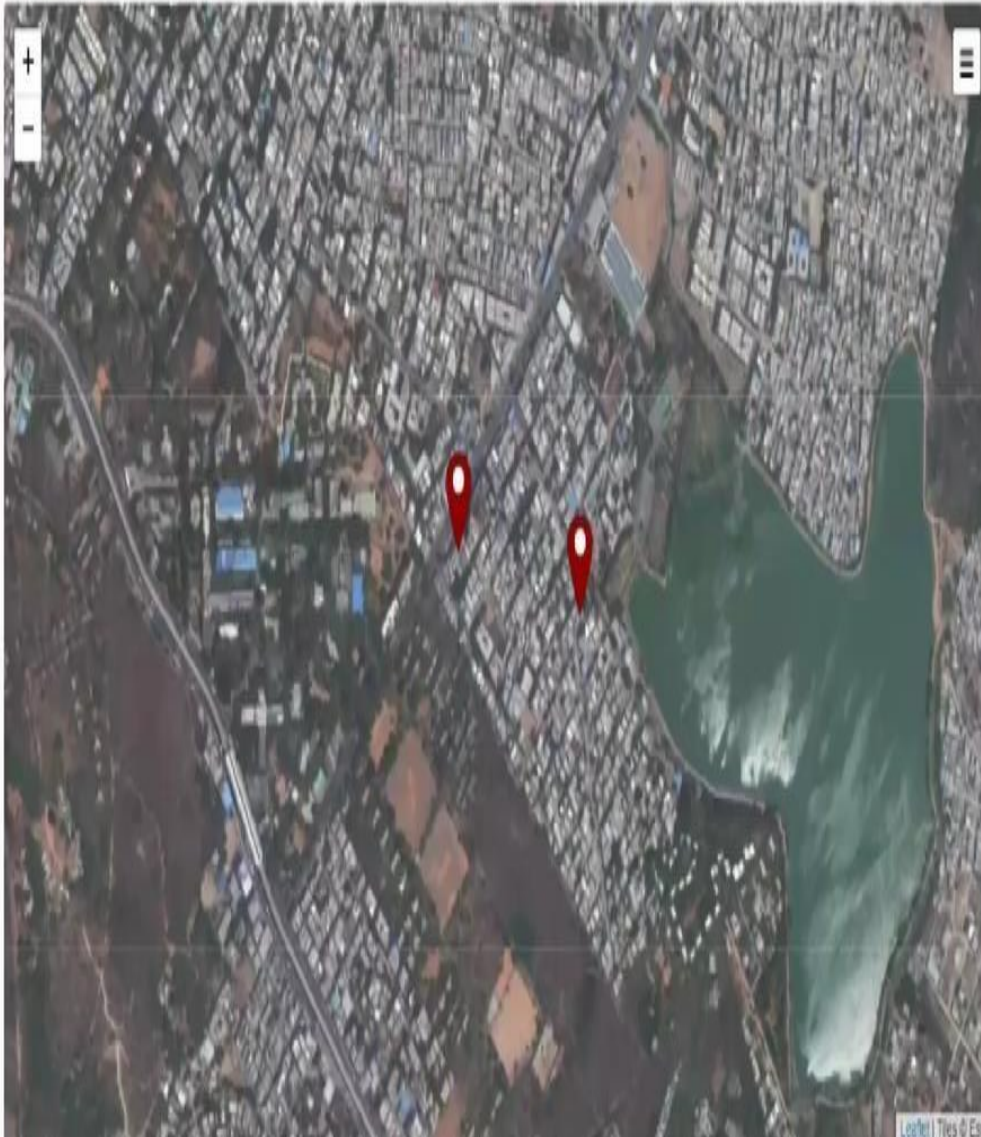
```
1 import json
2 import wiotp.sdk.device
3 import time
4
5 myConfig = {
6     "identity": {
7         "orgId": "hj5fmy",
8         "typeId": "NodeMCU",
9         "deviceId": "12345"
10    },
11    "auth": {
12        "token": "12345678"
13    }
14 }
15 client = wiotp.sdk.device.DeviceClient(config=myConfig,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

The console output on the right shows the following message repeated 20 times:

```
Data published to IBM IoT platform:
```

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

Map



**Result:** Successfully developed a web application using Node-RED