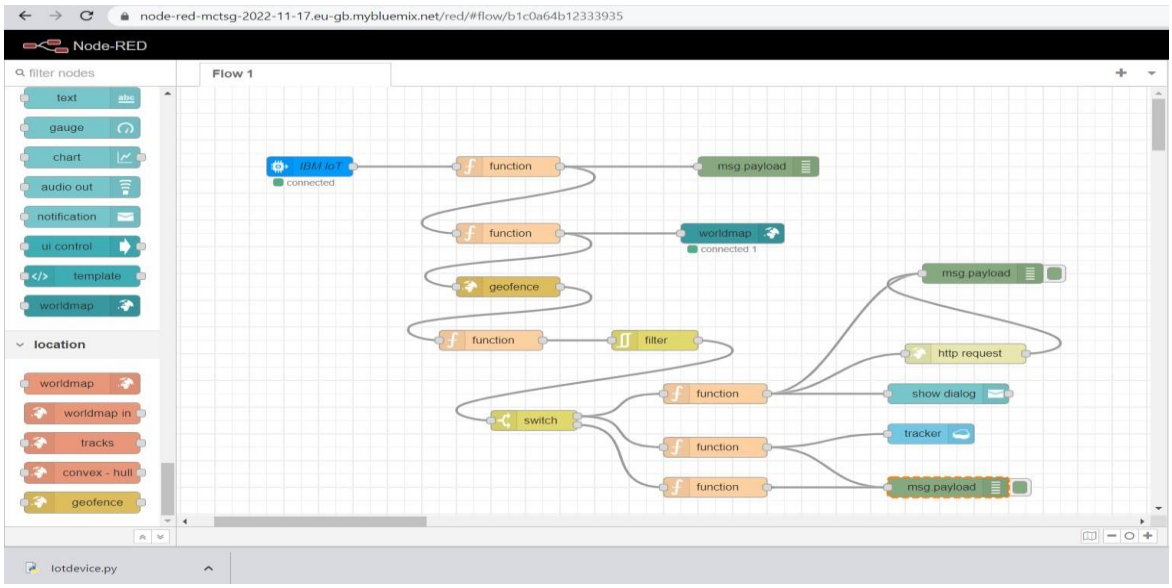
Develop the app using Node Red

Date	18 November 2022
Team ID	PNT2022TMID04717
Project Name	IoT Based Safety Gadget for Child Safety Monitoring and Notification

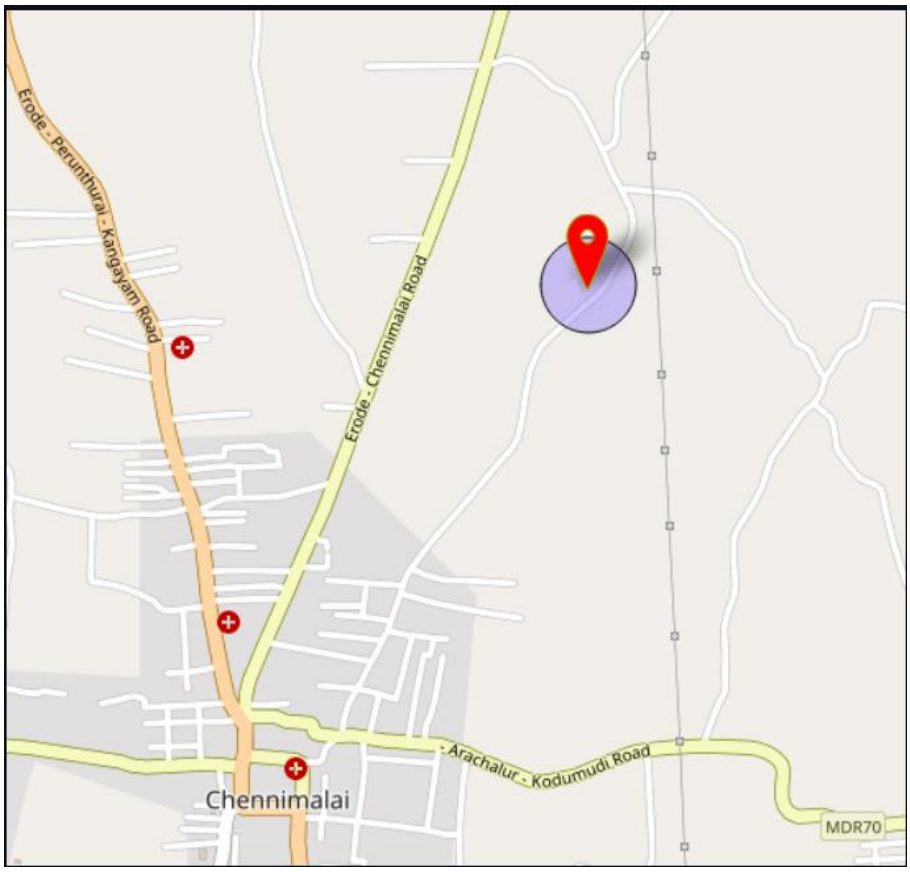
1. Node Red flow



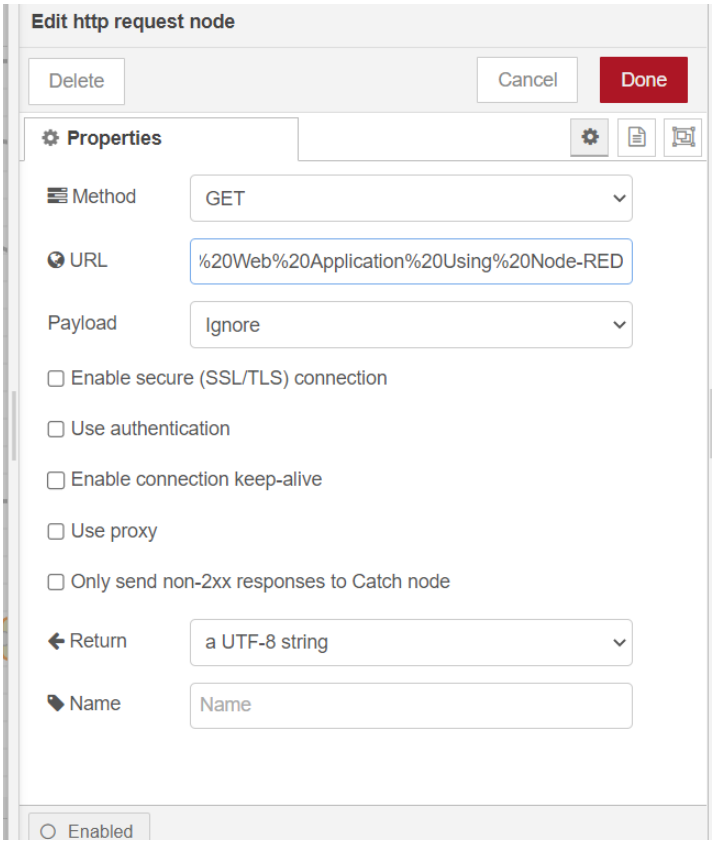
2. Python Code

```
Python 3.10.6 (tags/v3.10.6:9c7b4bd, Aug  1 2022, 21:53:49) [MSC v.1932
Type "help", "copyright", "credits" or "license()" for more information.
>>> import time
... import random
... #import ibmiotf.application
... import ibmiotf.device
... import sys
... config= {"org":" 6l9i71",
...  "type":" IoT ",
...  "id":"12344321",
...  "auth-method":"use-token-auth",
...  "auth-token":"12345678"}
... client= ibmiotf.device.Client (config)
... client.connect()
... def myCommandCallback (cmd):
... a=cmd.data
... if len(a["command"])==0:
... pass
... else:
... print(a["command"])
... def pub (data):
... client.publishEvent (event="status", msgFormat="json",data=data, qos=0)
... print("Published data Successfully: %s",data)
... while True:
... name= "Childtracker"
... #in area
... #latitude= 9.8796
... #longitude= 78.0810
... #out area latitude= 9.95143 longitude= 78.1158
... data={'name': name, 'lat':latitude,'lon':longitude}
... pub(data)
... client.commandCallback = myCommandCallback
... time.sleep(2)
... client.disconnect()
```

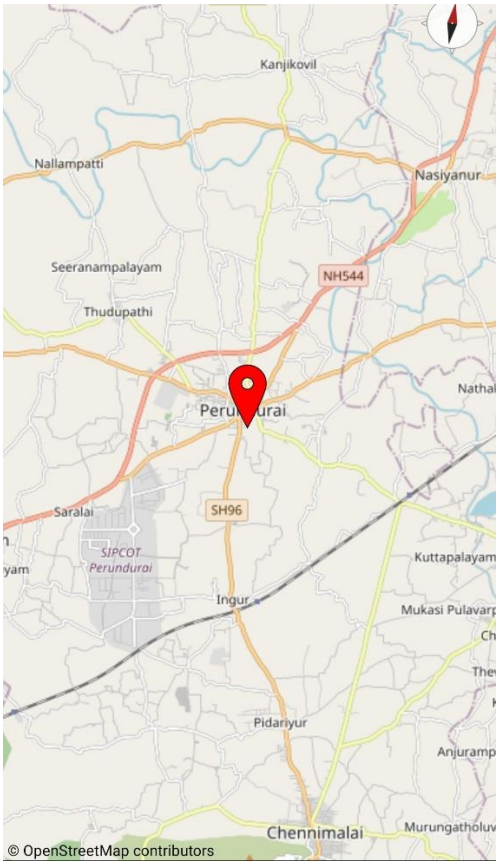
3. Created Geo fence



4. Edit HTTP request node URL



5. Locate the child



6. Python Script sending request to cloud

```
Python 3.10.6 (tags/v3.10.6:9c7b4bd, Aug  1 2022, 21:53:49) [MSC v.1932
Type "help", "copyright", "credits" or "license()" for more information.
>>> import time
... import random
... #import ibmiotf.application
... import ibmiotf.device
... import sys
... config= {"org":" 619i71",
...  "type":" IoT ",
...  "id":"12344321",
...  "auth-method":"use-token-auth",
...  "auth-token":"12345678"}
... client= ibmiotf.device.Client (config)
... client.connect()
... def myCommandCallback (cmd):
... a=cmd.data
... if len(a["command"])==0:
... pass
... else:
... print(a["command"])
... def pub (data):
... client.publishEvent (event="status", msgFormat="json",data=data, qos=0)
... print("Published data Successfully: %s",data)
... while True:
... name= "Childtracker"
... #in area
... #latitude= 9.8796
... #longitude= 78.0810
... #out area latitude= 9.95143 longitude= 78.1158
... data={'name': name, 'lat':latitude,'lon':longitude}
... pub(data)
... client.commandCallback = myCommandCallback
... time.sleep(2)
... client.disconnect()
```

Python 3.7.2 Shell

File Edit Shell Debug Options Window Help

```
Python 3.7.2 (tags/v3.7.2:9a3ffc0492, Dec 23 2018, 22:20:52) [MSC v.1916 32 bit
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
============== RESTART: C:\Users\Lenovo\Downloads\Iotdevice.py ==============
Published data Successfully: %s2022-11-17 23:42:19,489   ibmiotf.device.Client
    INFO    Connected successfully: d:phsvnq:CS1:1234
 {'name': 'Childtracker', 'lat': 9.8796, 'lon': 78.081}
Published data Successfully: %s {'name': 'Childtracker', 'lat': 9.8796, 'lon': 7
8.081}
Published data Successfully: %s {'name': 'Childtracker', 'lat': 9.8796, 'lon': 7
8.081}
Published data Successfully: %s {'name': 'Childtracker', 'lat': 9.8796, 'lon': 7
8.081}
Published data Successfully: %s {'name': 'Childtracker', 'lat': 9.8796, 'lon': 7
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8.081}
Published data Successfully: %s {'name': 'Childtracker', 'lat': 9.8796, 'lon': 7
8.081}
Published data Successfully: %s {'name': 'Childtracker', 'lat': 9.8796, 'lon': 7
8.081}
```

Ln: 16 Col: 0

7. After verifying, popup will indicate whether child is in geofence or not.