Sprint 2

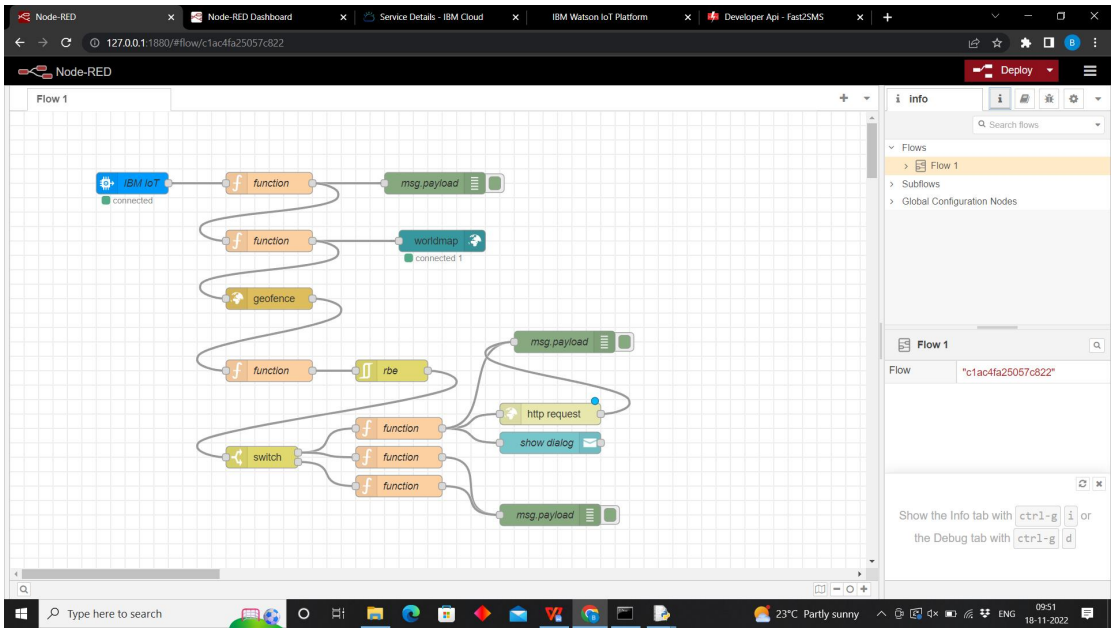
Project	IoT Based Safety Gadget for Child Safety Monitoring and Notification
Team Id	PNT2022TMID19486
Member1	Dharani Dharan A
Member2	Balaji L
Member3	Benildus R
Member4	Gowtham S

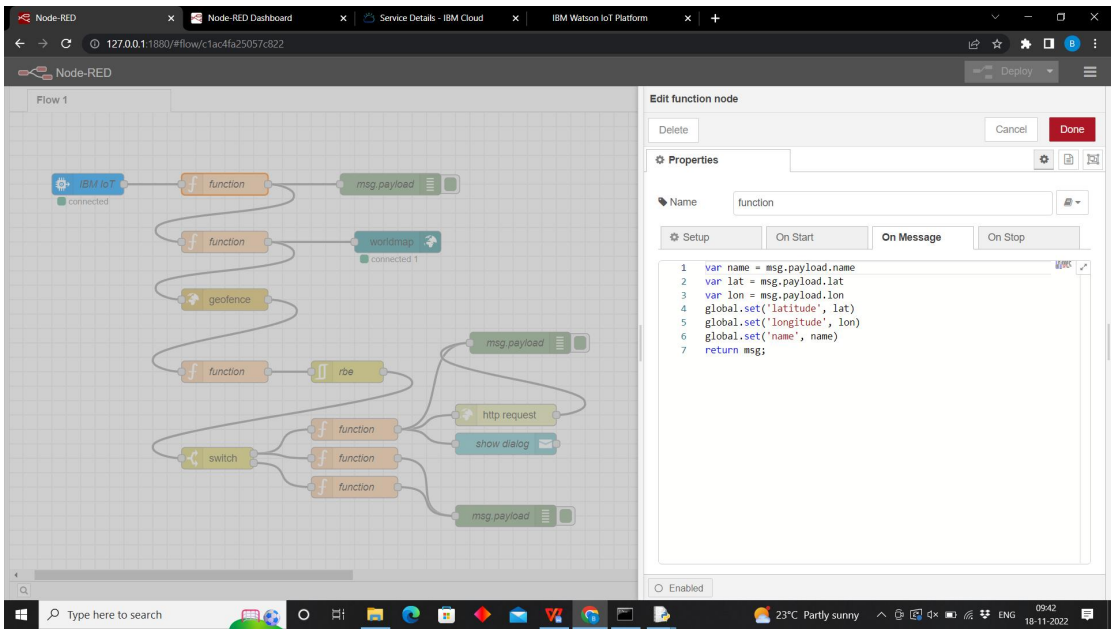
Python program:

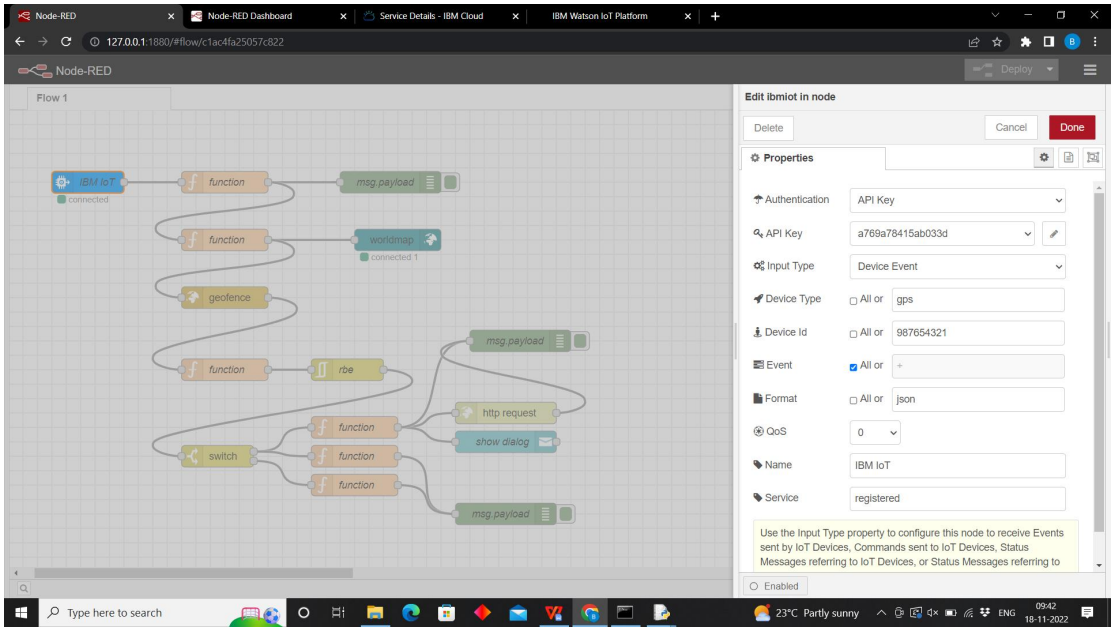
```
import json
import wiotp.sdk.device
import time

myConfig={
   "identity":{
      "orgId":"hi70w8",
      "typeId":"gps",
      "deviceId":"987654321"
   },
   "auth":{
      "token":"24688462"
   }
}
client=wiotp.sdk.device.DeviceClient(config=myConfig,logHandlers=Non
e)
client.connect()

while True:
   name="GPS"

   #outside
   #latitude=10.820155
   #longitude=77.016172

   #inside
   latitude=10.826579
   longitude=77.059943
```

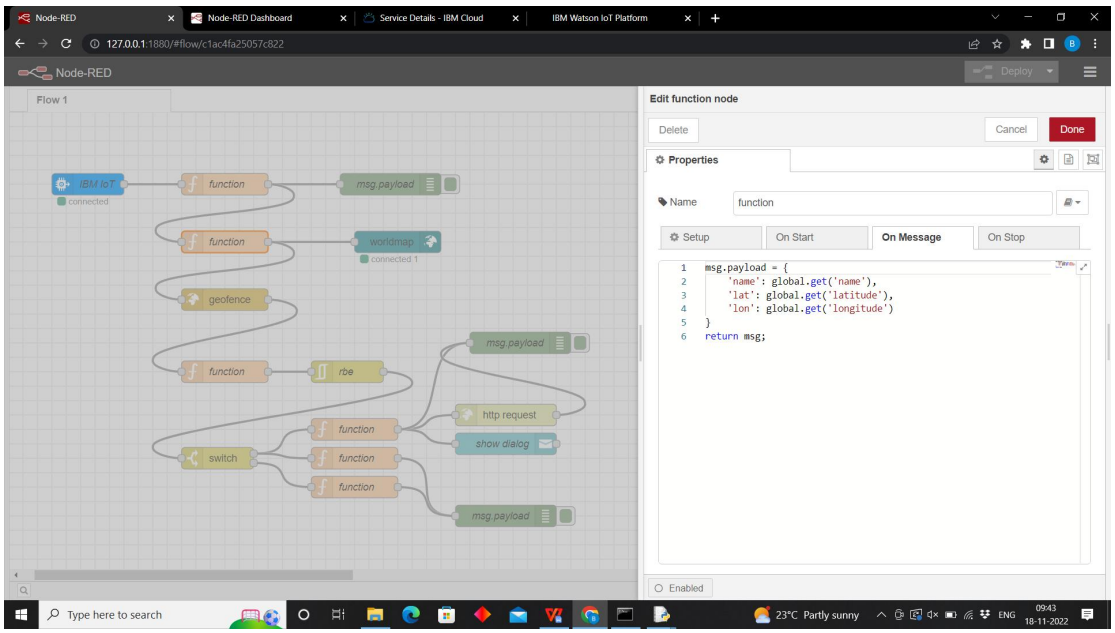
```
    myData={'name':name,'lat':latitude,'lon':longitude}

client.publishEvent(eventId="status",msgFormat="json",data=myData,qos=0,onPublish=None)
    print("Data published to IBM platform:",myData)
    time.sleep(5)
client.disconnect()
```

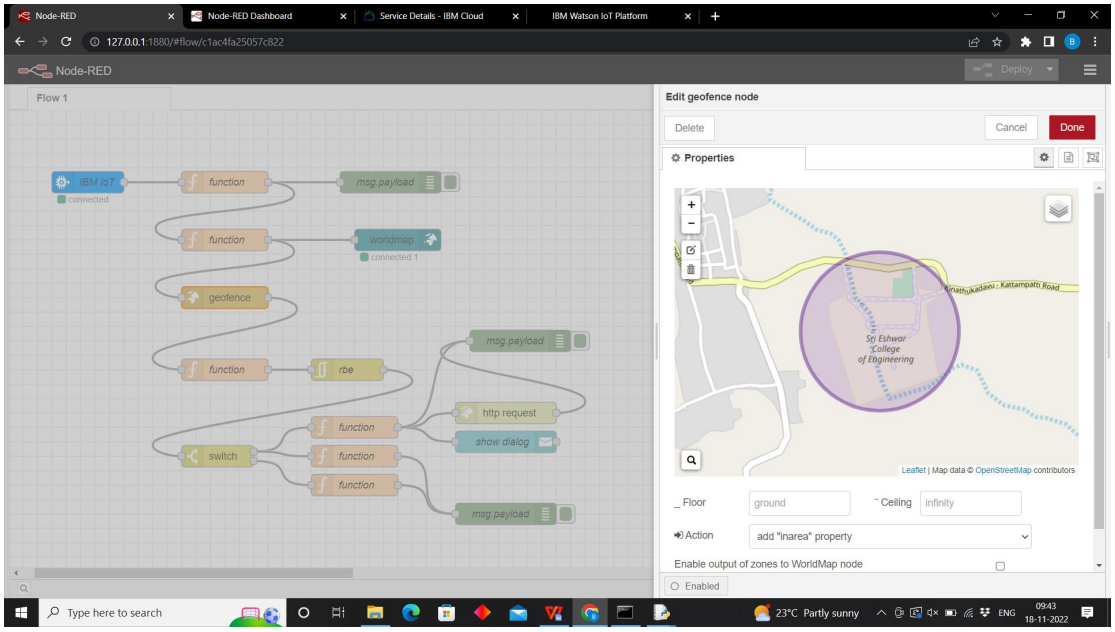
Node Red:

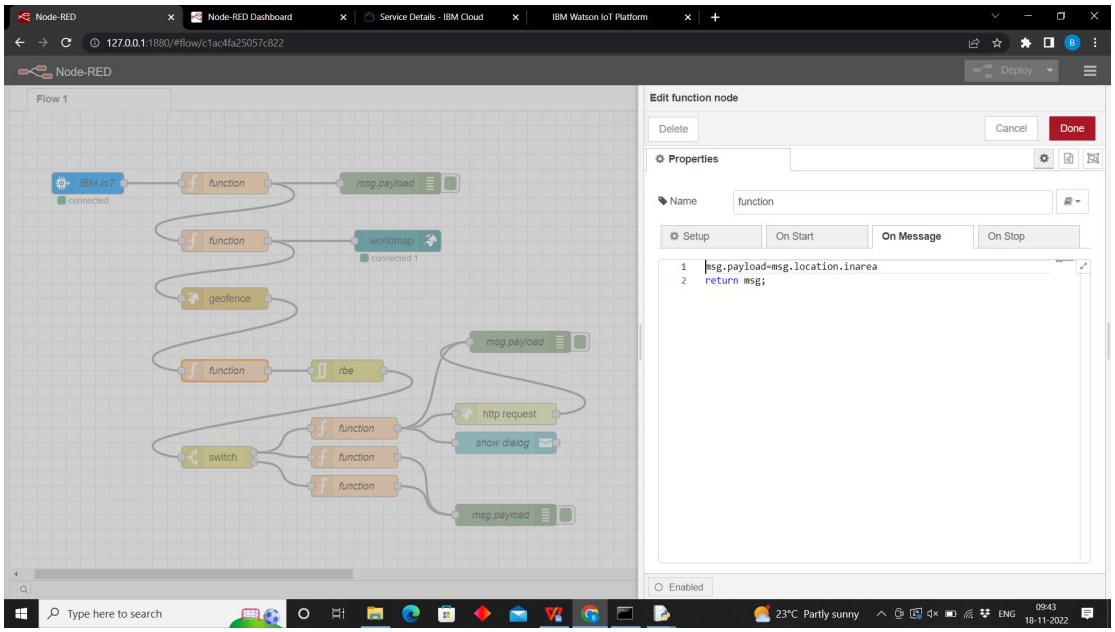


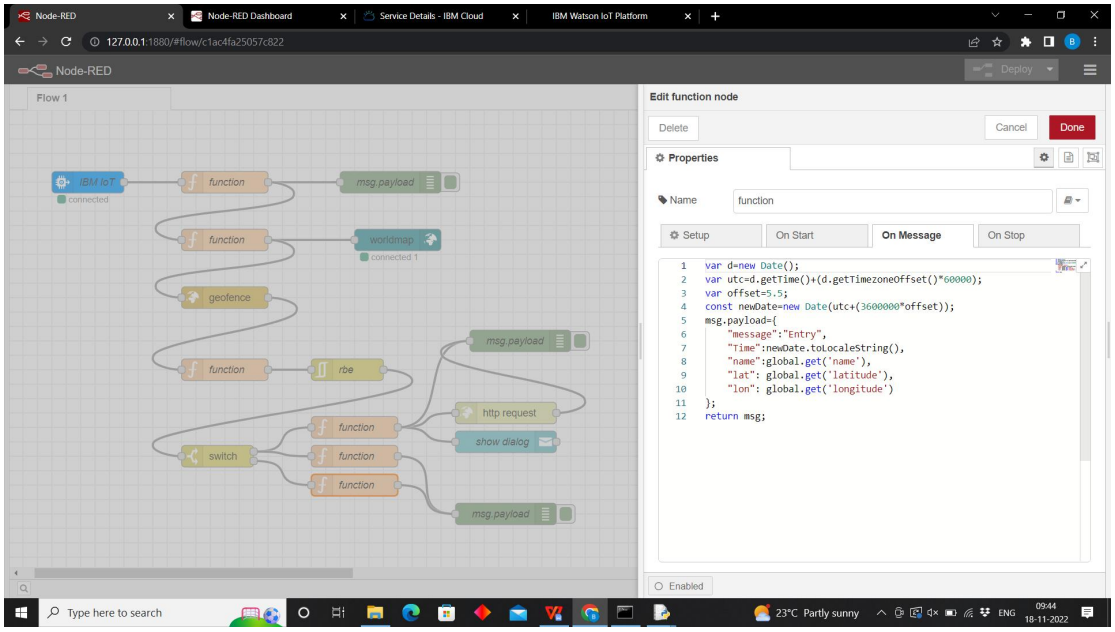


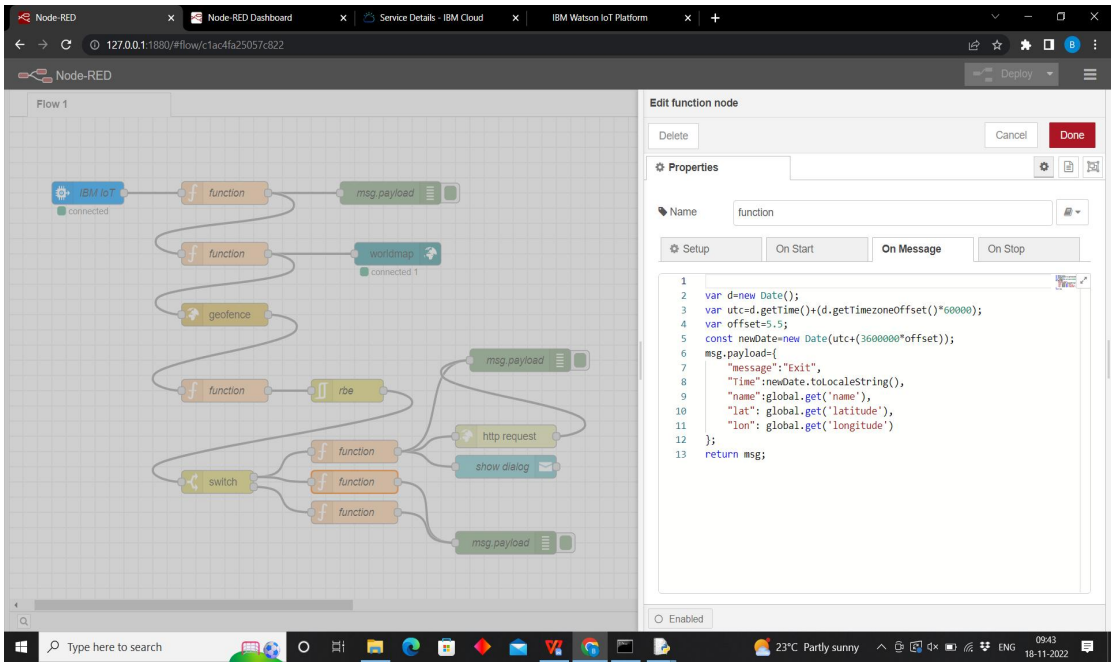

Node-RED
Node-RED Dashboard
Service Details - IBM Cloud
IBM Watson IoT Platform
127.0.0.1:1880/#flow/c1ac4fa25057c822
Deploy
Flow 1
IBM IoT
connected
function
msg.payload
worldmap
connected:1
geofence
rbe
http request
show dialog
switch
Edit ibmiot in node
Delete
Cancel
Done
Properties
Authentication
API Key
API Key
a769a78415ab033d
Input Type
Device Event
Device Type
All or
gps
Device Id
987654321
Event
Format
json
QoS
Name
IBM IoT
Service
registered
Use the Input Type property to configure this node to receive Events sent by IoT Devices, Commands sent to IoT Devices, Status Messages referring to IoT Devices, or Status Messages referring to
Enabled
Type here to search
23°C Partly sunny
ENG
09:42
18-11-2022

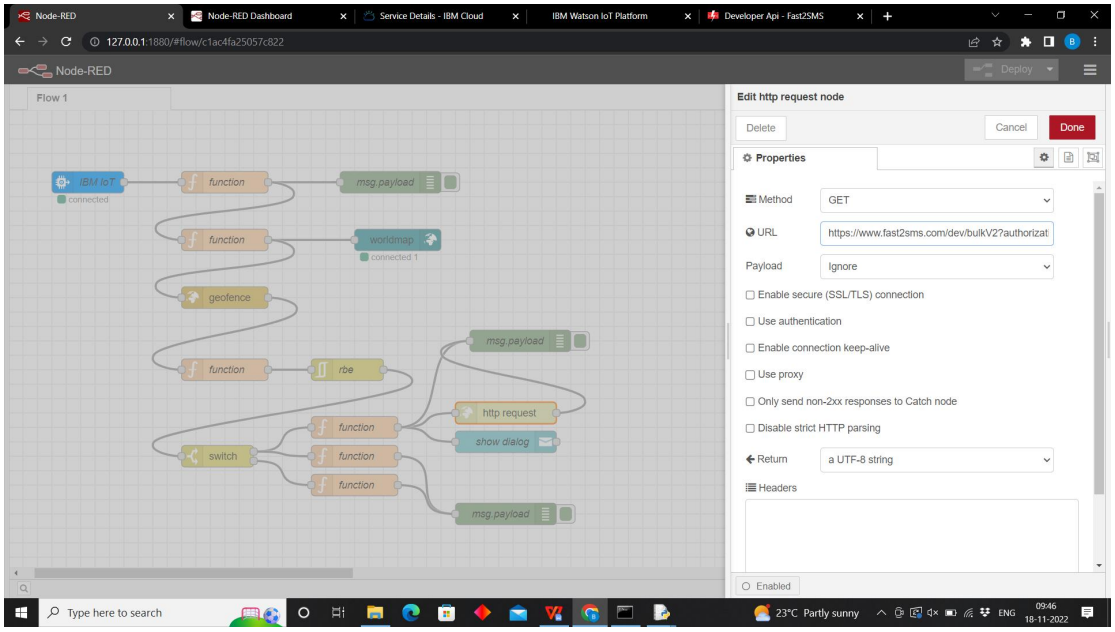

Node-RED
Node-RED Dashboard
Service Details - IBM Cloud
IBM Watson IoT Platform
127.0.0.1:1880/#flow/c1ac4fa25057c822
Deploy
Flow 1
IBM IoT
connected
function
msg.payload
worldmap
connected:1
geofence
rbe
http request
show dialog
switch
Edit function node
Delete
Cancel
Done
Properties
Name
function
Setup
On Start
On Message
On Stop
msg.payload = {
'name': global.get('name'),
'lat': global.get('latitude'),
'lon': global.get('longitude')
}
return msg;
Enabled
Type here to search
23°C Partly sunny
ENG
09:43
18-11-2022

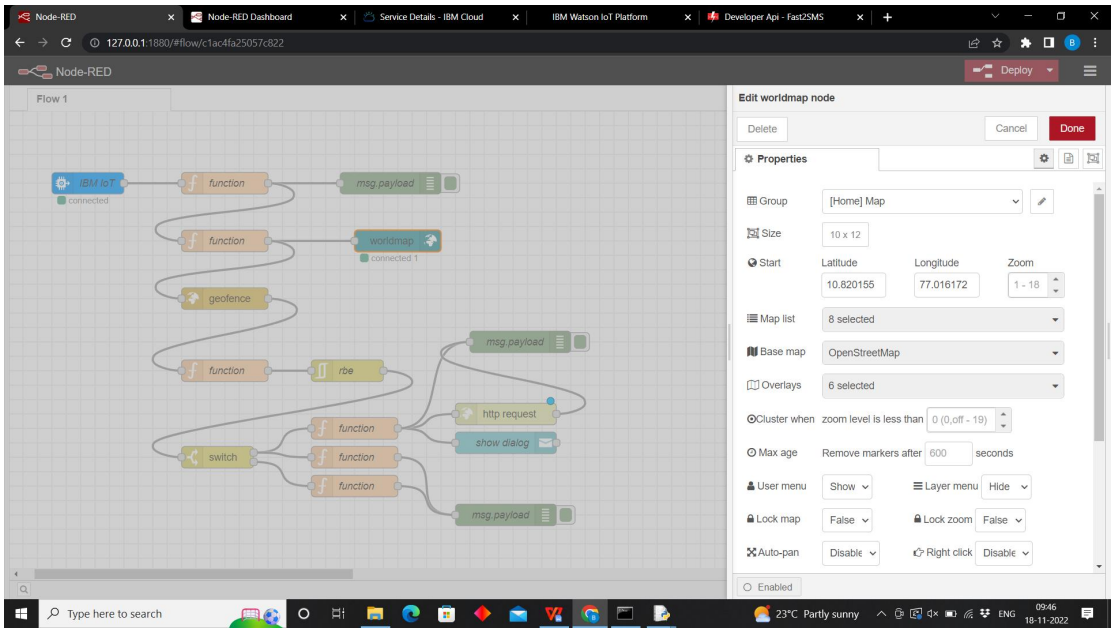

Node-RED
Node-RED Dashboard
Service Details - IBM Cloud
IBM Watson IoT Platform
127.0.0.1:1880/#flow/c1ac4fa25057c822
Deploy
Flow 1
IBM IoT
connected
function
msg.payload
worldmap
connected 1
geofence
rbe
http request
show dialog
switch
Edit geofence node
Delete
Cancel
Done
Properties
Sri Eshwar College of Engineering
Leaflet | Map data © OpenStreetMap contributors
Floor
ground
Ceiling
infinity
Action
add "inarea" property
Enable output of zones to WorldMap node
Enabled
Type here to search
23°C Partly sunny
ENG
09:43
18-11-2022


Node-RED
Node-RED Dashboard
Service Details - IBM Cloud
IBM Watson IoT Platform
127.0.0.1:1880/#flow/c1ac4fa25057c822
Deploy
Flow 1
IBM IoT
connected
function
msg.payload
worldmap
connected 1
geofence
rbe
http request
show dialog
switch
Edit function node
Delete
Cancel
Done
Properties
Name
function
Setup
On Start
On Message
On Stop
1 msg.payload=msg.location.inarea
2 return msg;
Enabled
Type here to search
23°C Partly sunny
ENG
09:43
18-11-2022

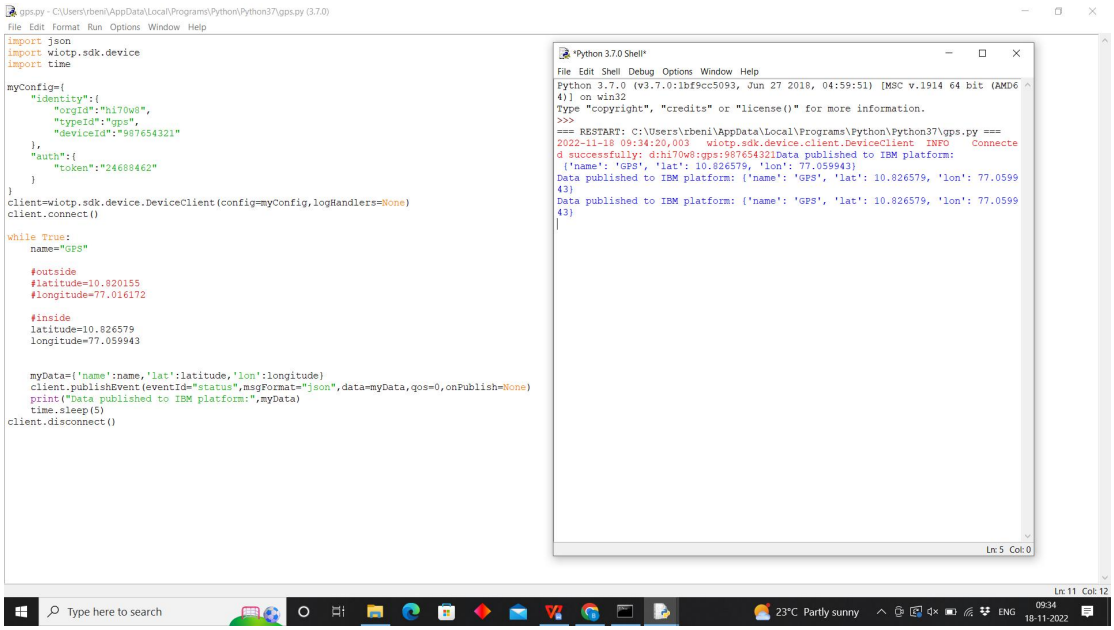

Node-RED
Node-RED Dashboard
Service Details - IBM Cloud
IBM Watson IoT Platform
127.0.0.1:1880/#flow/c1ac4fa25057c822
Deploy
Flow 1
IBM IoT
connected
function
msg.payload
worldmap
connected 1
geofence
rbe
http request
show dialog
switch
Edit function node
Delete
Cancel
Done
Properties
Name
Setup
On Start
On Message
On Stop
var d=new Date();
var utc=d.getTime()+(d.getTimezoneOffset()*60000);
var offset=5.5;
const newDate=new Date(utc+(3600000*offset));
msg.payload={
"message":"Entry",
"Time":newDate.toLocaleString(),
"name":global.get('name'),
"lat": global.get('latitude'),
"lon": global.get('longitude')
};
return msg;
Enabled
Type here to search
23°C Partly sunny
ENG
09:44
18-11-2022

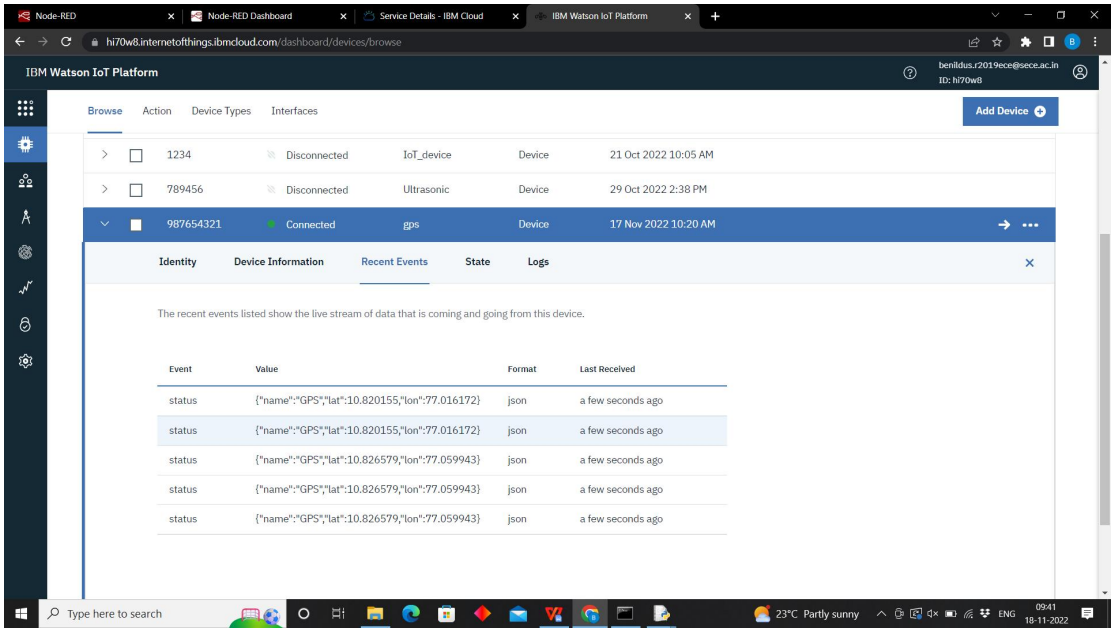

Node-RED
Node-RED Dashboard
Service Details - IBM Cloud
IBM Watson IoT Platform
127.0.0.1:1880/#flow/c1ac4fa25057c822
Deploy
Flow 1
IBM IoT
connected
function
msg.payload
worldmap
connected 1
geofence
rbe
http request
show dialog
switch
Edit function node
Delete
Cancel
Done
Properties
Name
Setup
On Start
On Message
On Stop
var d=new Date();
var utc=d.getTime()+(d.getTimezoneOffset()*60000);
var offset=5.5;
const newDate=new Date(utc+(3600000*offset));
msg.payload={
"message":"Exit",
"Time":newDate.toLocaleString(),
"name":global.get('name'),
"lat": global.get('latitude'),
"lon": global.get('longitude')
};
return msg;
Enabled
Type here to search
23°C Partly sunny
ENG
09:43
18-11-2022

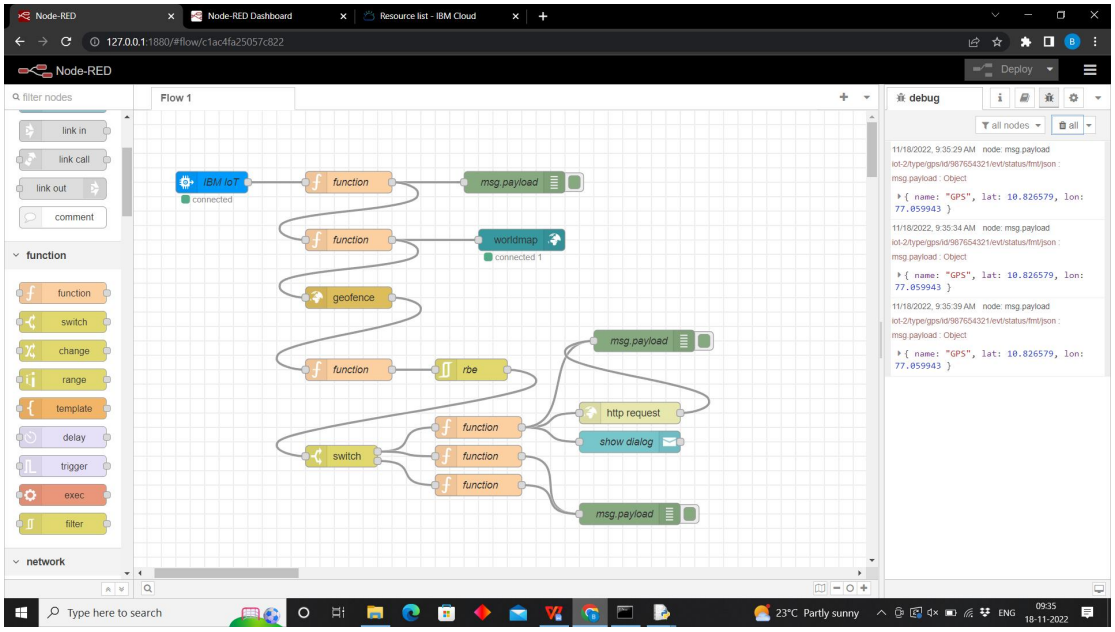

Node-RED
Node-RED Dashboard
Service Details - IBM Cloud
IBM Watson IoT Platform
Developer Api - Fast2SMS
127.0.0.1:1880/#flow/c1ac4fa25057c822
Deploy
Flow 1
IBM IoT
connected
function
msg.payload
worldmap
connected 1
geofence
rbe
http request
show dialog
switch
Edit http request node
Delete
Cancel
Done
Properties
Method
GET
URL
https://www.fast2sms.com/dev/bulkV2?authorizat
Payload
Ignore
Enable secure (SSL/TLS) connection
Use authentication
Enable connection keep-alive
Use proxy
Only send non-2xx responses to Catch node
Disable strict HTTP parsing
Return
a UTF-8 string
Headers
Enabled
Type here to search
23°C Partly sunny
ENG
09:46
18-11-2022

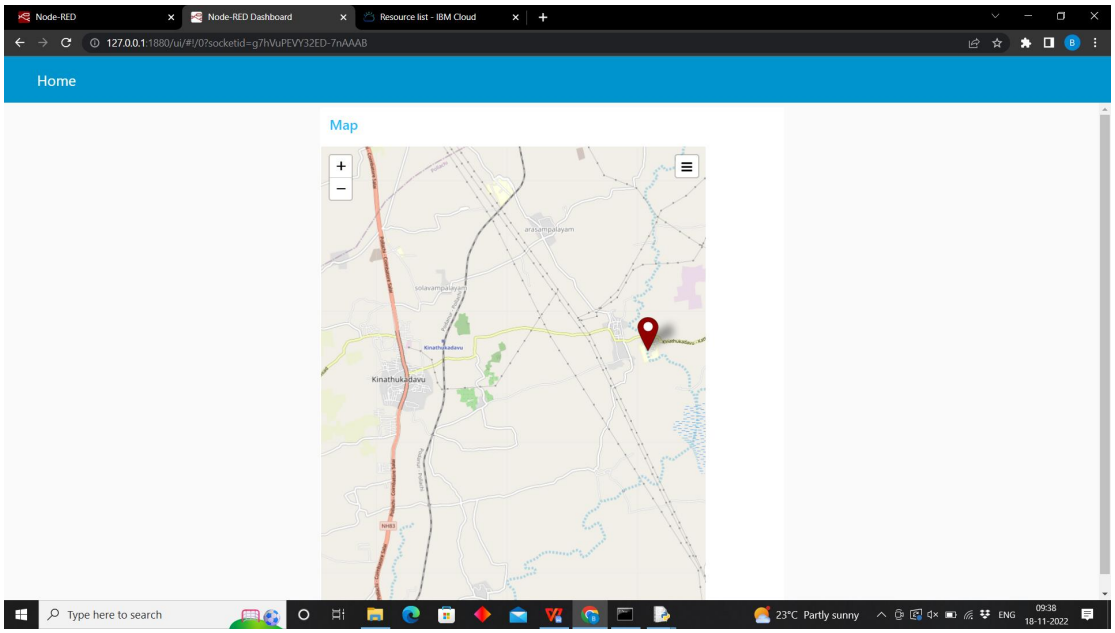

Node-RED
Node-RED Dashboard
Service Details - IBM Cloud
IBM Watson IoT Platform
Developer Api - Fast2SMS
127.0.0.1:1880/#flow/c1ac4fa25057c822
Deploy
Flow 1
IBM IoT
connected
function
msg.payload
worldmap
connected 1
geofence
rbe
http request
show dialog
switch
Edit worldmap node
Delete
Cancel
Done
Properties
Group
[Home] Map
Size
10 x 12
Start
Latitude
Longitude
Zoom
10.820155
77.016172
1 - 18
Map list
8 selected
Base map
OpenStreetMap
Overlays
6 selected
Cluster when
zoom level is less than
0 (0,off - 19)
Max age
Remove markers after
600
seconds
User menu
Show
Layer menu
Hide
Lock map
False
Lock zoom
False
Auto-pan
Disable
Right click
Disable
Enabled
Type here to search
23°C Partly sunny
ENG
09:46
18-11-2022

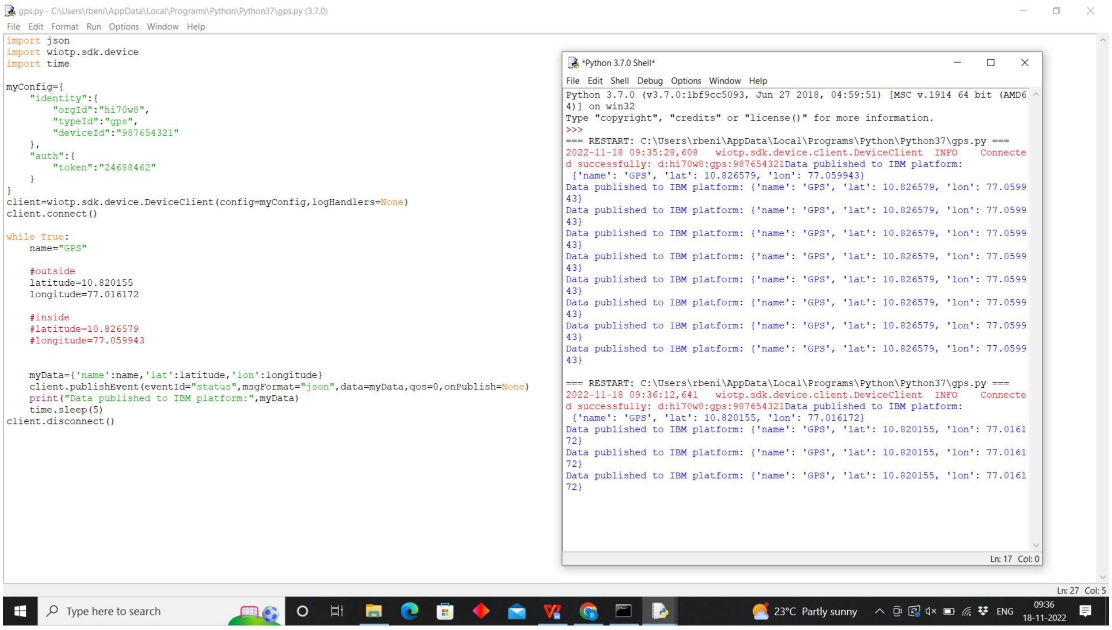
Output:

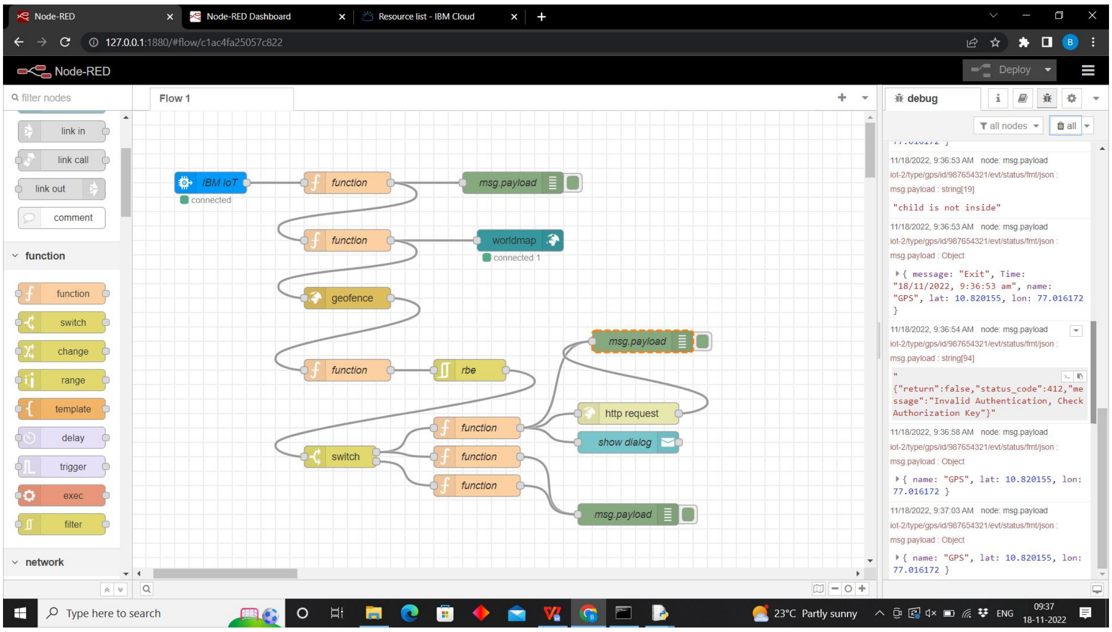

gps.py - C:\Users\rbeni\AppData\Local\Programs\Python\Python37\gps.py (3.7.0)
File Edit Format Run Options Window Help
import json
import wiotp.sdk.device
import time
myConfig={
"identity":{
"orgId":"hi70w8",
"typeId":"gps",
"deviceId":"987654321"
},
"auth":{
"token":"24688462"
}
}
client=wiotp.sdk.device.DeviceClient(config=myConfig,logHandlers=None)
client.connect()
while True:
name="GPS"
#outside
#latitude=10.820155
#longitude=77.016172
#inside
latitude=10.826579
longitude=77.059943
myData={'name':name,'lat':latitude,'lon':longitude}
client.publishEvent(eventId="status",msgFormat="json",data=myData,qos=0,onPublish=None)
print("Data published to IBM platform:",myData)
time.sleep(5)
client.disconnect()
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=== RESTART: C:\Users\rbeni\AppData\Local\Programs\Python\Python37\gps.py ===
2022-11-18 09:34:20,003 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:hi70w8:gps:987654321Data published to IBM platform:
{'name': 'GPS', 'lat': 10.826579, 'lon': 77.059943}
Data published to IBM platform: {'name': 'GPS', 'lat': 10.826579, 'lon': 77.059943}
Data published to IBM platform: {'name': 'GPS', 'lat': 10.826579, 'lon': 77.059943}
Ln: 5 Col: 0
Ln: 11 Col: 12
Type here to search
23°C Partly sunny
ENG
09:34
18-11-2022

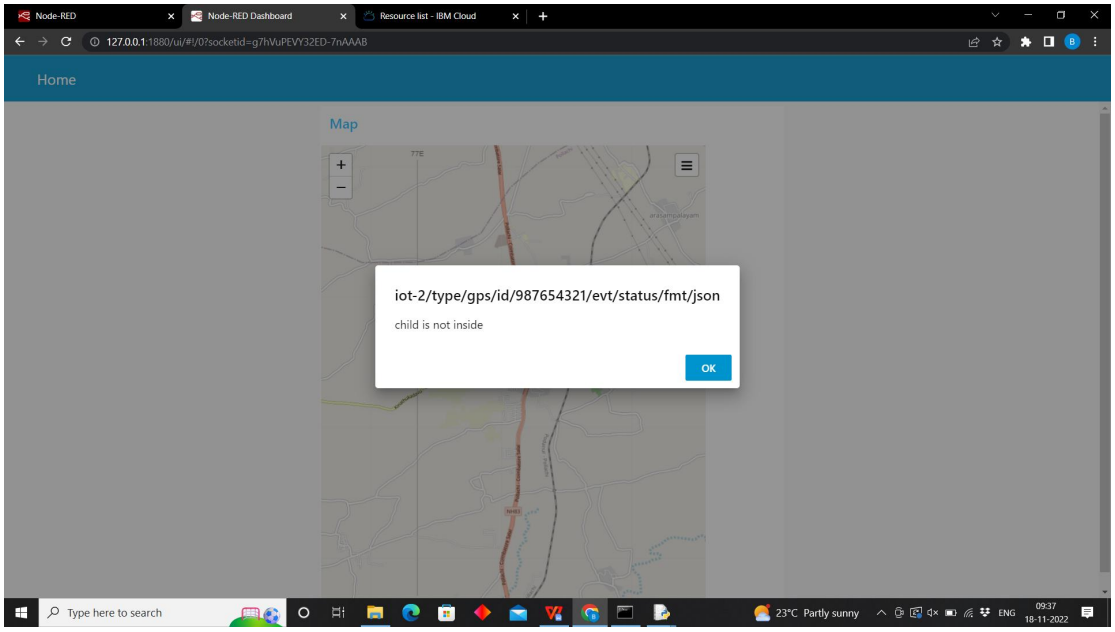

Node-RED
Node-RED Dashboard
Service Details - IBM Cloud
IBM Watson IoT Platform
hi70w8.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
benildus.r2019ecc@sece.ac.in
ID: hi70w8
Browse
Action
Device Types
Interfaces
Add Device
1234 Disconnected IoT_device Device 21 Oct 2022 10:05 AM
789456 Disconnected Ultrasonic Device 29 Oct 2022 2:38 PM
987654321 Connected gps Device 17 Nov 2022 10:20 AM
Identity
Device Information
Recent Events
State
Logs
The recent events listed show the live stream of data that is coming and going from this device.
Event Value Format Last Received
status {"name":"GPS","lat":10.820155,"lon":77.016172} json a few seconds ago
status {"name":"GPS","lat":10.820155,"lon":77.016172} json a few seconds ago
status {"name":"GPS","lat":10.826579,"lon":77.059943} json a few seconds ago
status {"name":"GPS","lat":10.826579,"lon":77.059943} json a few seconds ago
status {"name":"GPS","lat":10.826579,"lon":77.059943} json a few seconds ago
Type here to search
23°C Partly sunny
ENG
09:41
18-11-2022

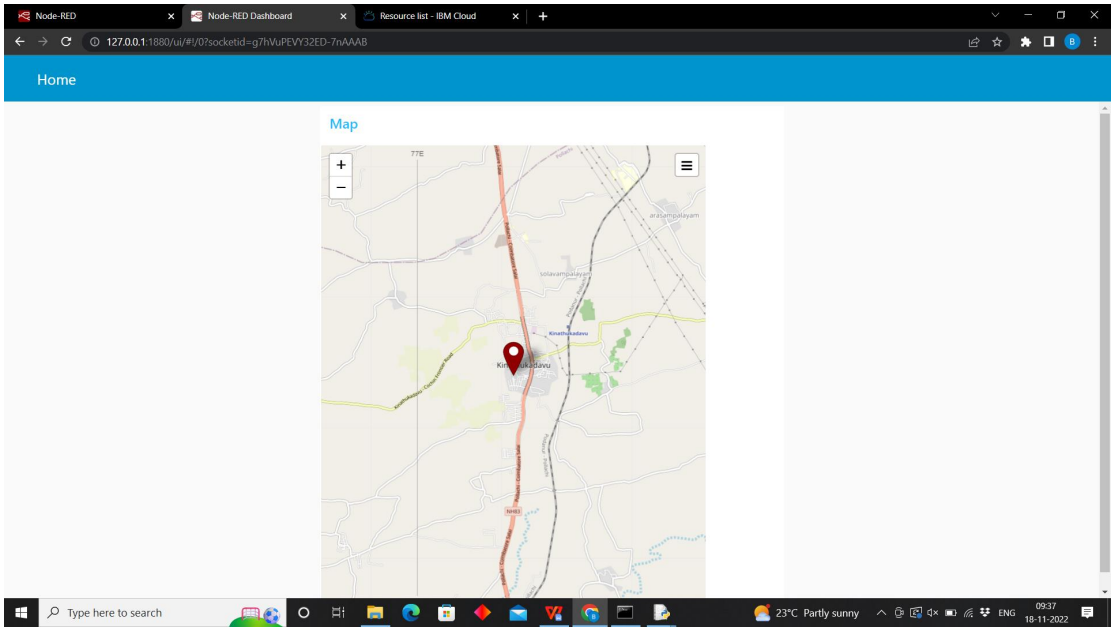

Node-RED
Node-RED Dashboard
Resource list - IBM Cloud
127.0.0.1:1880/#flow/c1ac4fa25057c822
Deploy
Flow 1
debug
IBM IoT
connected
function
msg.payload
worldmap
connected 1
geofence
rbe
http request
show dialog
switch
link in
link call
link out
comment
change
range
template
delay
trigger
exec
filter
network
Type here to search
23°C Partly sunny
ENG
09:35
18-11-2022


Node-RED
Node-RED Dashboard
Resource list - IBM Cloud
127.0.0.1:1880/ui/#!/0?socketid=g7hVuPEVY32ED-7nAAAB
Home
Map
Kinathukadavu
Type here to search
23°C Partly sunny
ENG
09:38
18-11-2022


gps.py - C:\Users\rbeni\AppData\Local\Programs\Python\Python37\gps.py (3.7.0)
File Edit Format Run Options Window Help
import json
import wiotp.sdk.device
import time
myConfig={
"identity":{
"orgId":"hi70w8",
"typeId":"gps",
"deviceId":"987654321"
},
"auth":{
"token":"24688462"
}
}
client=wiotp.sdk.device.DeviceClient(config=myConfig,logHandlers=None)
client.connect()
while True:
name="GPS"
#outside
latitude=10.820155
longitude=77.016172
#inside
#latitude=10.826579
#longitude=77.059943
myData={'name':name,'lat':latitude,'lon':longitude}
client.publishEvent(eventId="status",msgFormat="json",data=myData,qos=0,onPublish=None)
print("Data published to IBM platform:",myData)
time.sleep(5)
client.disconnect()
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=== RESTART: C:\Users\rbeni\AppData\Local\Programs\Python\Python37\gps.py ===
2022-11-18 09:35:28,608 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:hi70w8:gps:987654321Data published to IBM platform:
{'name': 'GPS', 'lat': 10.826579, 'lon': 77.059943}
Data published to IBM platform: {'name': 'GPS', 'lat': 10.826579, 'lon': 77.059943}
=== RESTART: C:\Users\rbeni\AppData\Local\Programs\Python\Python37\gps.py ===
2022-11-18 09:36:12,641 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:hi70w8:gps:987654321Data published to IBM platform:
{'name': 'GPS', 'lat': 10.820155, 'lon': 77.016172}
Data published to IBM platform: {'name': 'GPS', 'lat': 10.820155, 'lon': 77.016172}
Ln: 17 Col: 0
Ln: 27 Col: 5
Type here to search
23°C Partly sunny
ENG
09:36
18-11-2022


Node-RED
Node-RED Dashboard
Resource list - IBM Cloud
127.0.0.1:1880/#flow/c1ac4fa25057c822
Deploy
filter nodes
Flow 1
debug
link in
link call
link out
comment
function
switch
change
range
template
delay
trigger
exec
filter
network
IBM IoT
connected
function
msg.payload
worldmap
geofence
rbe
http request
show dialog
all nodes
all
11/18/2022, 9:36:53 AM node: msg.payload
msg.payload : string[19]
"child is not inside"
msg.payload : Object
{ message: "Exit", Time: "18/11/2022, 9:36:53 am", name: "GPS", lat: 10.820155, lon: 77.016172 }
11/18/2022, 9:36:54 AM node: msg.payload
msg.payload : string[94]
{"return":false,"status_code":412,"message":"Invalid Authentication, Check Authorization Key"}
11/18/2022, 9:36:58 AM node: msg.payload
{ name: "GPS", lat: 10.820155, lon: 77.016172 }
11/18/2022, 9:37:03 AM node: msg.payload
{ name: "GPS", lat: 10.820155, lon: 77.016172 }
Type here to search
23°C Partly sunny
ENG
09:37
18-11-2022


Node-RED
Node-RED Dashboard
Resource list - IBM Cloud
127.0.0.1:1880/ui/#!/0?socketid=g7hVuPEVY32ED-7nAAAB
Home
Map
iot-2/type/gps/id/987654321/evt/status/fmt/json
child is not inside
OK
Type here to search
23°C Partly sunny
ENG
09:37
18-11-2022


Node-RED
Node-RED Dashboard
Resource list - IBM Cloud
127.0.0.1:1880/ui/#!/0?socketid=g7hVuPEVY32ED-7nAAAB
Home
Map
Type here to search
23°C Partly sunny
ENG
09:37
18-11-2022