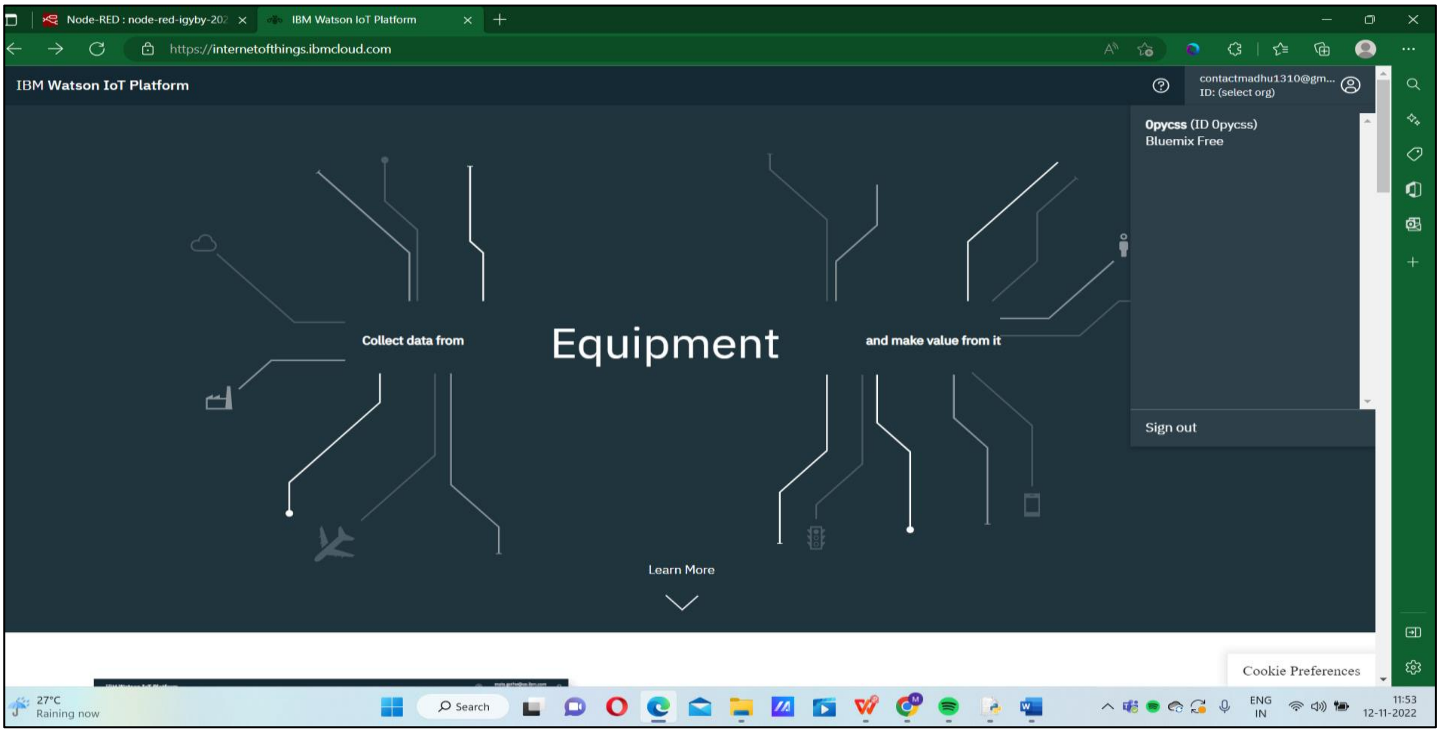
PANIMALAR ENGINEERING COLLEGE

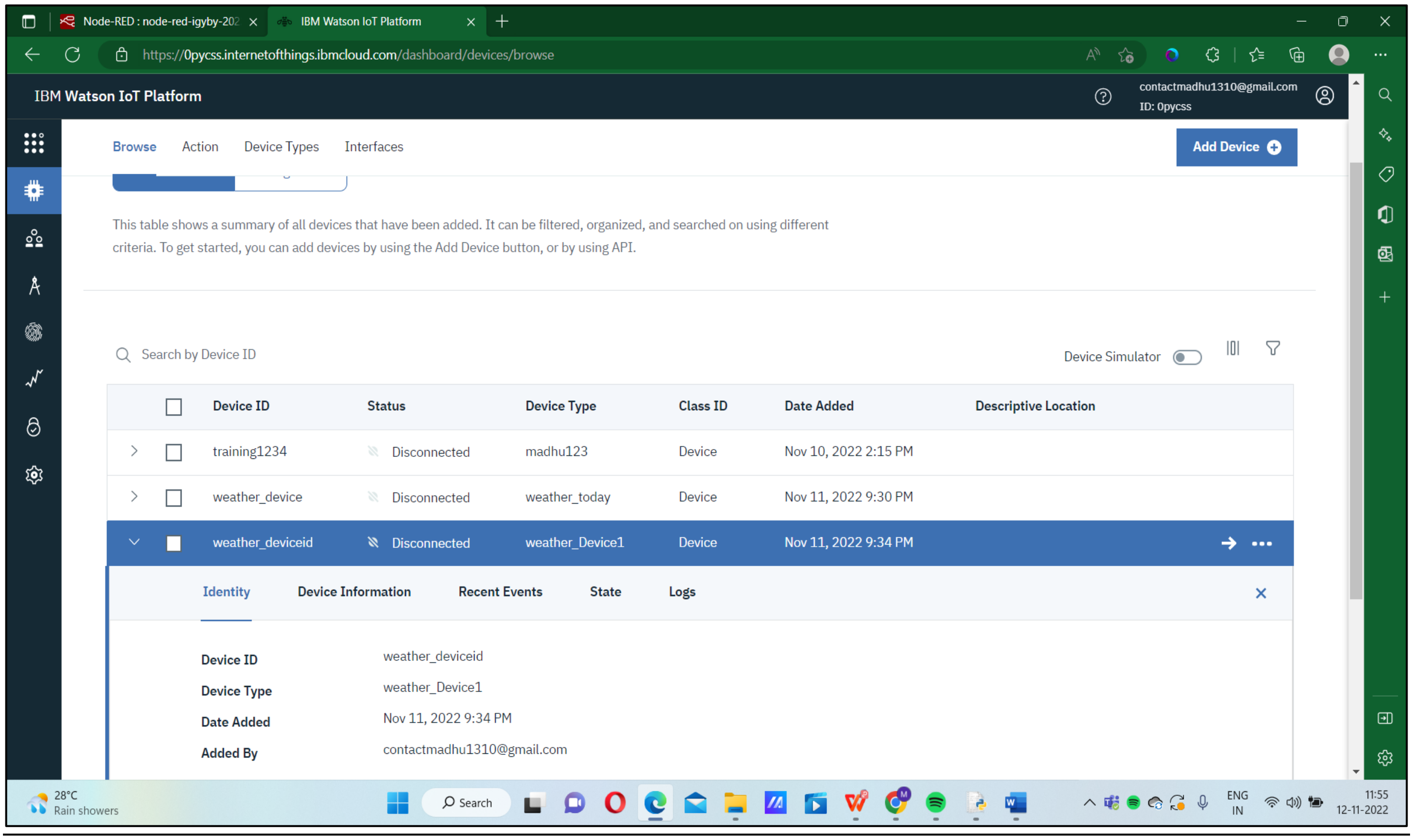
IBM NALAIYATHIRAN

TEAM ID	PNT2022TMID01040
PROJECT NAME	IOT based safety gadget for child safety monitoring and notification
TEAM MEMBERS	K.KEERTHANA T.DURGA DEVI G.MADHUMITHA M.KAVYA

DELIVERY OF SPRINT 2

Creating IBM Cloud Service and IBM WATSON IoT PLATFORM:





This table shows a summary of all devices that have been added. It can be filtered, organized, and searched on using different criteria. To get started, you can add devices by using the Add Device button, or by using API.

	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
□	training1234	Disconnected	madhu123	Device	Nov 10, 2022 2:15 PM	
□	weather_device	Disconnected	weather_today	Device	Nov 11, 2022 9:30 PM	
□	weather_deviceid	Disconnected	weather_Device1	Device	Nov 11, 2022 9:34 PM	

Device ID weather_deviceid

Device Type weather_Device1

Date Added Nov 11, 2022 9:34 PM

Added By contactmadhu1310@gmail.com

Creating and Connecting IBM cloud for Project and Python Code

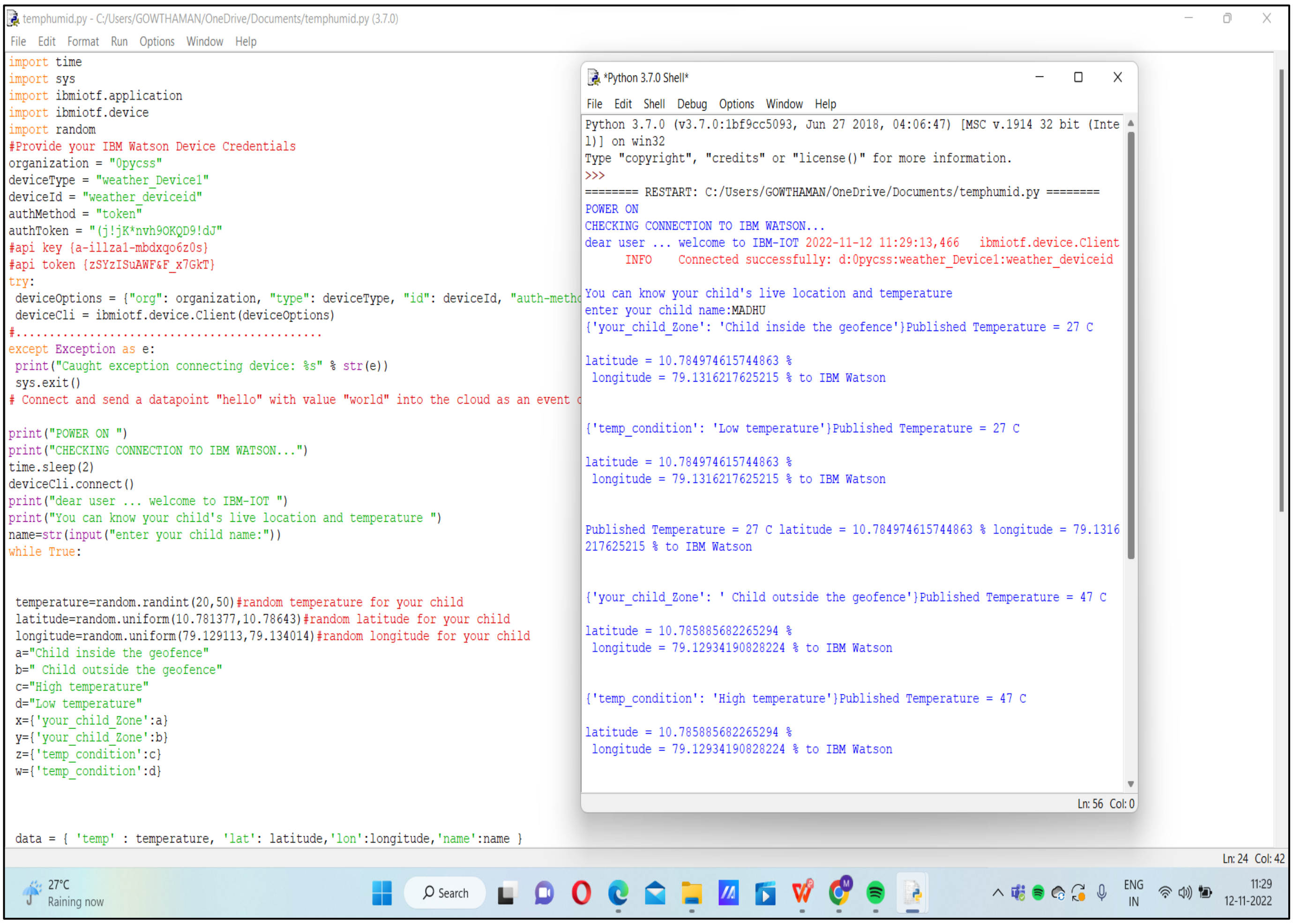
```
import time

import sys

import ibmiotf.application

import ibmiotf.device

import random

#Provide your IBM Watson Device Credentials

organization = "0pycss"

deviceType = "weather_Device1"

deviceId = "weather_deviceid"

authMethod = "token"
```

```
authToken = "(j!jK*nvh9OKQD9!dJ"

#api key {a-illza1-mbdxqo6z0s}

#api token {zSYzISuAWF&F_x7GkT}

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()

# Connect and send a datapoint "hello" with value "world" into the cloud as an event of type



print("POWER ON ")

print("CHECKING CONNECTION TO IBM WATSON...")

time.sleep(2)

deviceCli.connect()

print("dear user ... welcome to IBM-IOT ")

print("You can know your child's live location and temperature ")

name=str(input("enter your child name:"))

while True:




 temperature=random.randint(20,50)#random temperature for your child
```

```
latitude=random.uniform(10.781377,10.78643)#random latitude for your child
longitude=random.uniform(79.129113,79.134014)#random longitude for your child
a="Child inside the geofence"
b=" Child outside the geofence"
c="High temperature"
d="Low temperature"
x={'your_child_Zone':a}
y={'your_child_Zone':b}
z={'temp_condition':c}
w={'temp_condition':d}


data = { 'temp' : temperature, 'lat': latitude,'lon':longitude,'name':name }
#print data
def myOnPublishCallback():
  print ("Published Temperature = %s C" % temperature, "latitude = %s %%" % latitude, "longitude = %s %%" % longitude, "to IBM Watson")
  print("\n")
success = deviceCli.publishEvent("IoTSensorgpsdata", "json", data, qos=0, on_publish=myOnPublishCallback)
if latitude>=10.78200 and latitude<=10.786000 and longitude >=79.130000 and longitude <=79.133000:
```

```
deviceCli.publishEvent("IoTSensorgpsdata","json",data=x,qos=0,on_publish=myOnPublishCallback)

   print(x)

   print("\n")

 else:



deviceCli.publishEvent("IoTSensorgpsdata","json",data=y,qos=0,on_publish=myOnPublishCallback)

  print(y)

  print("\n")


 if (temperature>35):



deviceCli.publishEvent("IoTSensorgpsdata","json",data=z,qos=0,on_publish=myOnPublishCallback)

     print(z)

     print("\n")

 else:



deviceCli.publishEvent("IoTSensorgpsdata","json",data=w,qos=0,on_publish=myOnPublishCallback)

    print(w)

    print("\n")
 if not success:
    print("Not connected to IoTF")
    print("\n")
 time.sleep(3)
# Disconnect the device and application from the cloud
deviceCli.disconnect()
```

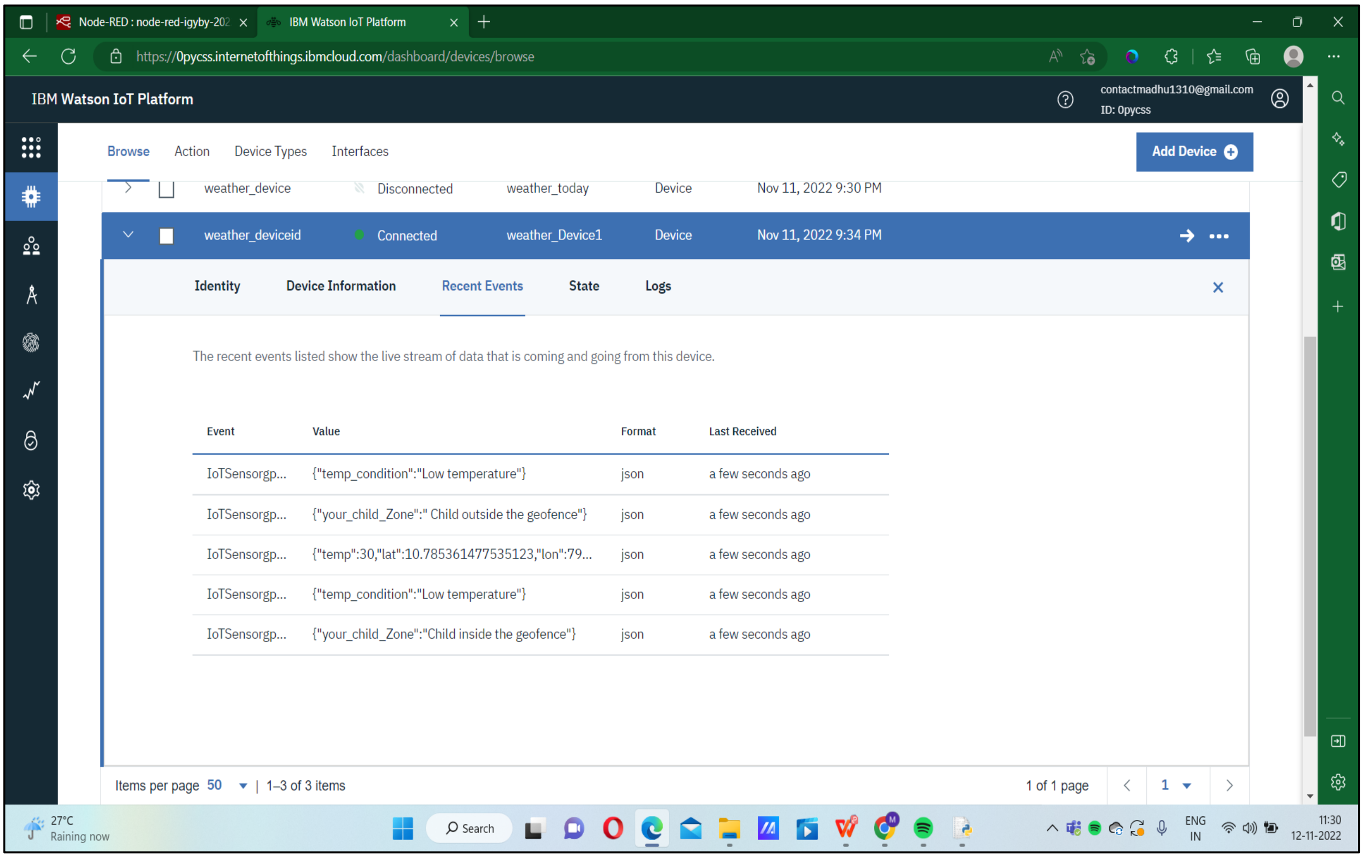
Connecting IBM Watson and python Code:



temphumid.py - C:/Users/GOWTHAMAN/OneDrive/Documents/temphumid.py (3.7.0)
File Edit Format Run Options Window Help
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Ln: 56 Col: 0
Ln: 24 Col: 42
27°C
Raining now
Search
ENG
IN
11:29
12-11-2022

```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random
#Provide your IBM Watson Device Credentials
organization = "0pycss"
deviceType = "weather_Device1"
deviceId = "weather_deviceid"
authMethod = "token"
authToken = "(j!jK*nvh9OKQD9!dJ"
#api key {a-illza1-mbdxqo6z0s}
#api token {zSYzISuAWF&F_x7GkT}
try:
 deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-metho
 deviceCli = ibmiotf.device.Client(deviceOptions)
#............................................
except Exception as e:
 print("Caught exception connecting device: %s" % str(e))
 sys.exit()
# Connect and send a datapoint "hello" with value "world" into the cloud as an event c

print("POWER ON ")
print("CHECKING CONNECTION TO IBM WATSON...")
time.sleep(2)
deviceCli.connect()
print("dear user ... welcome to IBM-IOT ")
print("You can know your child's live location and temperature ")
name=str(input("enter your child name:"))
while True:


 temperature=random.randint(20,50)#random temperature for your child
 latitude=random.uniform(10.781377,10.78643)#random latitude for your child
 longitude=random.uniform(79.129113,79.134014)#random longitude for your child
 a="Child inside the geofence"
 b=" Child outside the geofence"
 c="High temperature"
 d="Low temperature"
 x={'your_child_Zone':a}
 y={'your_child_Zone':b}
 z={'temp_condition':c}
 w={'temp_condition':d}



 data = { 'temp' : temperature, 'lat': latitude,'lon':longitude,'name':name }
```

```
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Inte
l)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:/Users/GOWTHAMAN/OneDrive/Documents/temphumid.py ========
POWER ON
CHECKING CONNECTION TO IBM WATSON...
dear user ... welcome to IBM-IOT 2022-11-12 11:29:13,466   ibmiotf.device.Client
      INFO    Connected successfully: d:0pycss:weather_Device1:weather_deviceid

You can know your child's live location and temperature
enter your child name:MADHU
{'your_child_Zone': 'Child inside the geofence'}Published Temperature = 27 C

latitude = 10.784974615744863 %
 longitude = 79.1316217625215 % to IBM Watson


{'temp_condition': 'Low temperature'}Published Temperature = 27 C

latitude = 10.784974615744863 %
 longitude = 79.1316217625215 % to IBM Watson


Published Temperature = 27 C latitude = 10.784974615744863 % longitude = 79.1316
217625215 % to IBM Watson


{'your_child_Zone': ' Child outside the geofence'}Published Temperature = 47 C

latitude = 10.785885682265294 %
 longitude = 79.12934190828224 % to IBM Watson


{'temp_condition': 'High temperature'}Published Temperature = 47 C

latitude = 10.785885682265294 %
 longitude = 79.12934190828224 % to IBM Watson
```



Node-RED : node-red-igyby-202
IBM Watson IoT Platform
https://0pycss.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
contactmadhu1310@gmail.com
ID: 0pycss
Browse
Action
Device Types
Interfaces
Add Device

weather_device	Disconnected	weather_today	Device	Nov 11, 2022 9:30 PM
weather_deviceid	Connected	weather_Device1	Device	Nov 11, 2022 9:34 PM

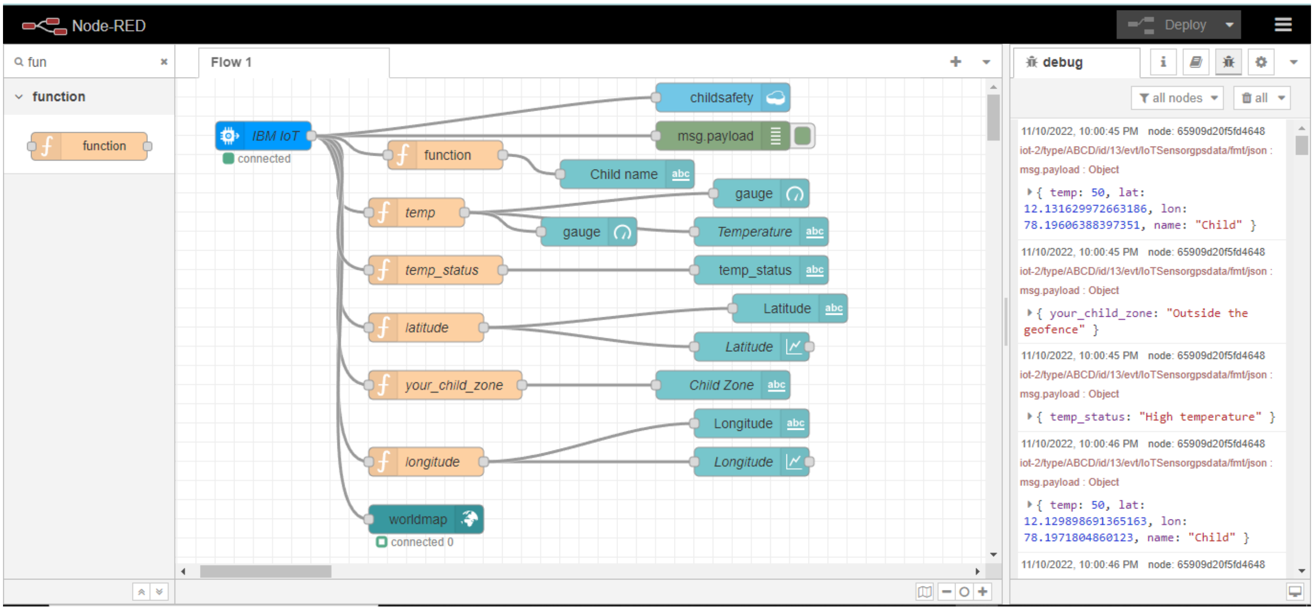
The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
IoTSensorgp...	{"temp_condition":"Low temperature"}	json	a few seconds ago
IoTSensorgp...	{"your_child_Zone":" Child outside the geofence"}	json	a few seconds ago
IoTSensorgp...	{"temp":30,"lat":10.785361477535123,"lon":79...	json	a few seconds ago
IoTSensorgp...	{"temp_condition":"Low temperature"}	json	a few seconds ago
IoTSensorgp...	{"your_child_Zone":"Child inside the geofence"}	json	a few seconds ago

Items per page 50 | 1–3 of 3 items

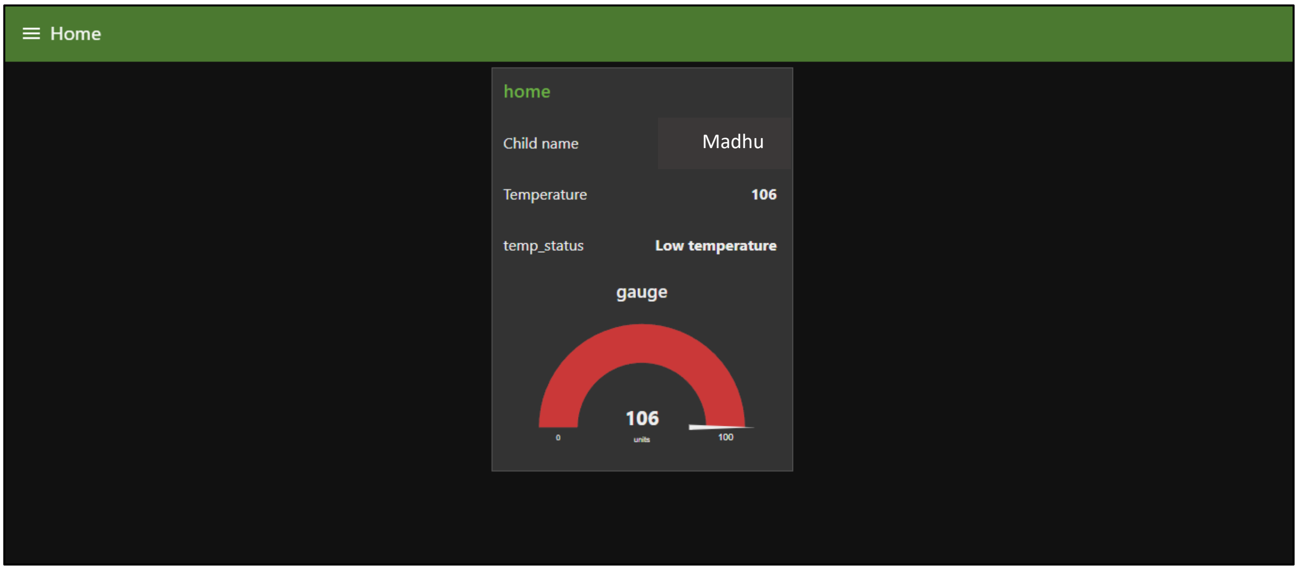
1 of 1 page 1

NODE RED CONNECTIONS:



```
11/10/2022, 10:00:45 PM   node: 65909d20f5fd4648
iot-2/type/ABCD/id/13/evt/IoTSensorgpsdata/fmt/json :
msg.payload : Object
{ temp: 50, lat:
12.131629972663186, lon:
78.19606388397351, name: "Child" }
11/10/2022, 10:00:45 PM   node: 65909d20f5fd4648
iot-2/type/ABCD/id/13/evt/IoTSensorgpsdata/fmt/json :
msg.payload : Object
{ your_child_zone: "Outside the
geofence" }
11/10/2022, 10:00:45 PM   node: 65909d20f5fd4648
iot-2/type/ABCD/id/13/evt/IoTSensorgpsdata/fmt/json :
msg.payload : Object
{ temp_status: "High temperature" }
11/10/2022, 10:00:46 PM   node: 65909d20f5fd4648
iot-2/type/ABCD/id/13/evt/IoTSensorgpsdata/fmt/json :
msg.payload : Object
{ temp: 50, lat:
12.129898691365163, lon:
78.1971804860123, name: "Child" }
11/10/2022, 10:00:46 PM   node: 65909d20f5fd4648
```

NODE-RED OUPUT:



≡ Home

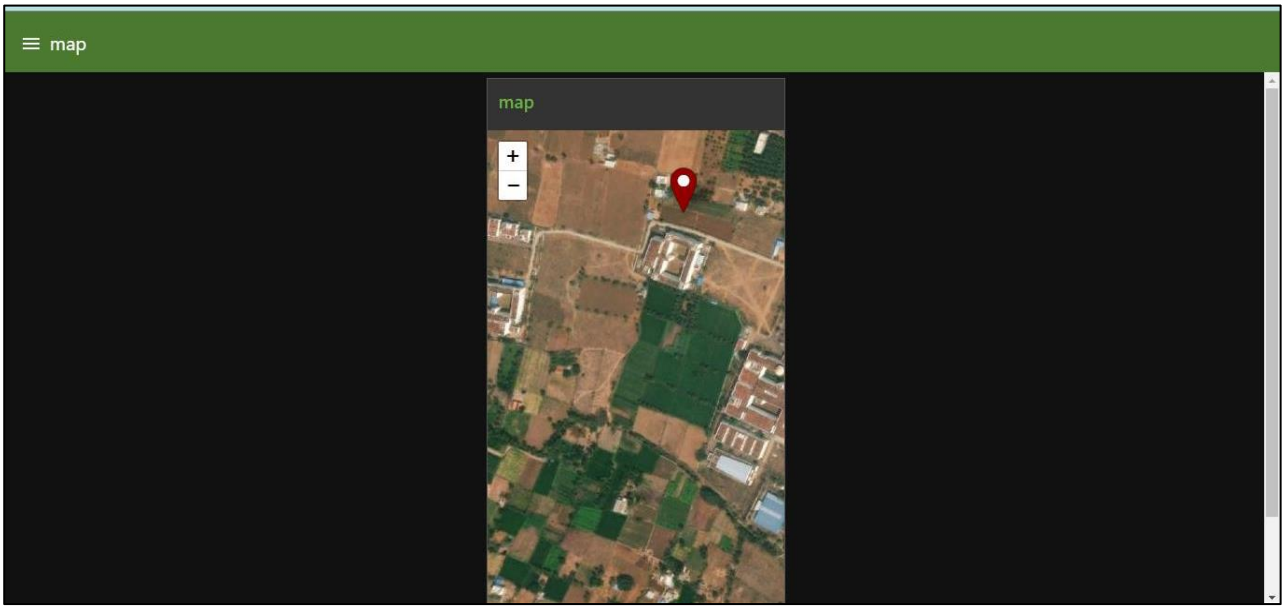
home

Child name Madhu

Temperature 106

temp_status Low temperature

gauge



≡ map

map