GOVERNMENT COLLEGE OF ENGINEERING

CHETTIKARAI, DHARMAPURI

Signs with Smart Connectivity For Better Road Safety

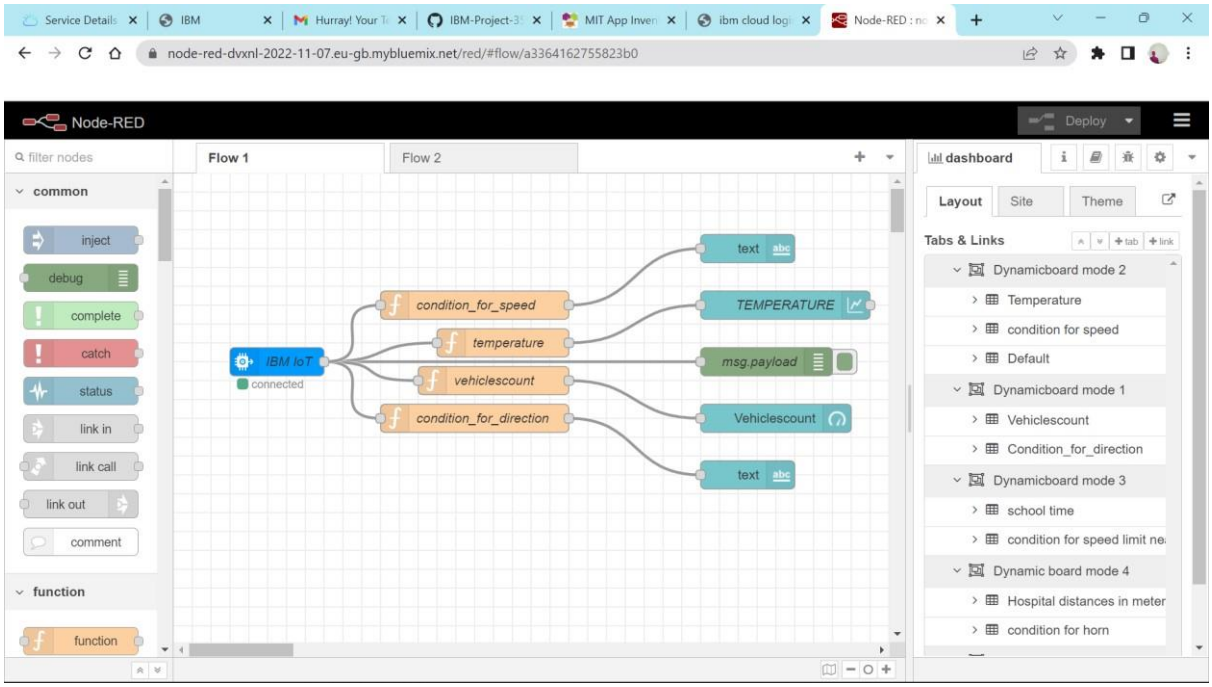
IBM NALAIYATHIRAN

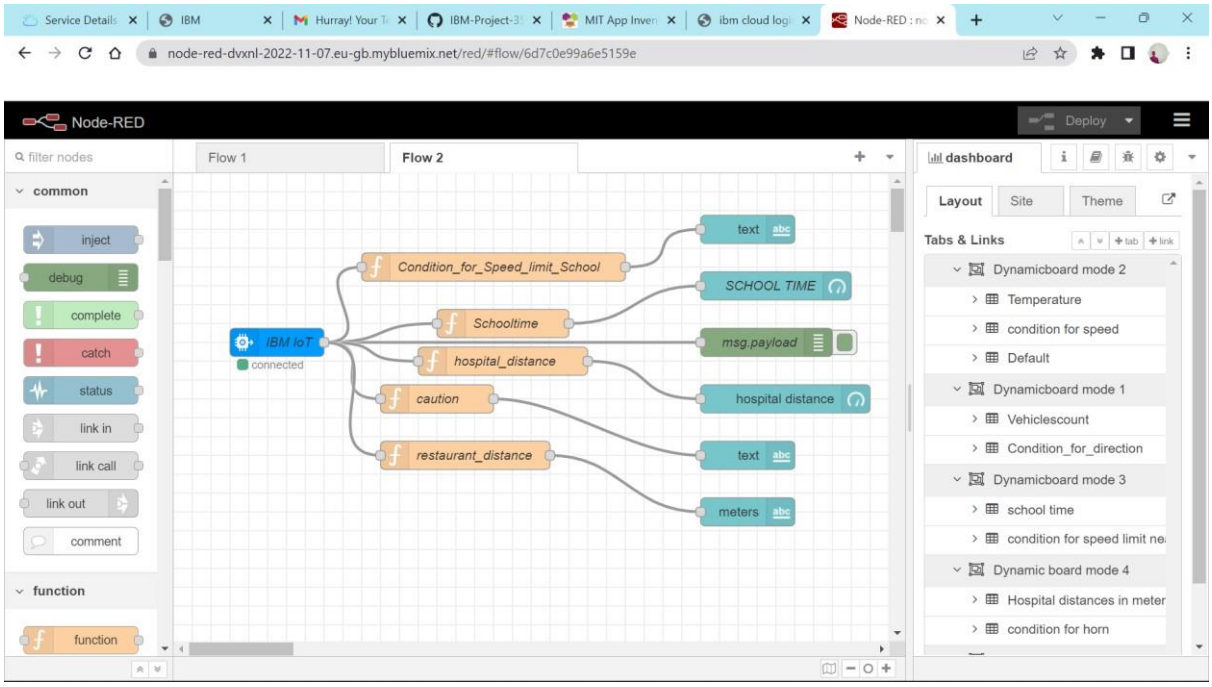
Project Development – Delivery of sprint 2

Creating Node-Red And Connect With Cloud And Web UI

TITLE	Signs with Smart Connectivity for Better Road Safety
DOMAIN NAME	INTERNET OF THINGS
TEAM ID	PNT2022TMID41261
TEAM LEADERNAME	AJAYSEKAR C
TEAM MEMBER NAME	AAKASH A DOURMILKUMAR G DHIVAGAR K
MENTOR NAME	Dr. DINESH G

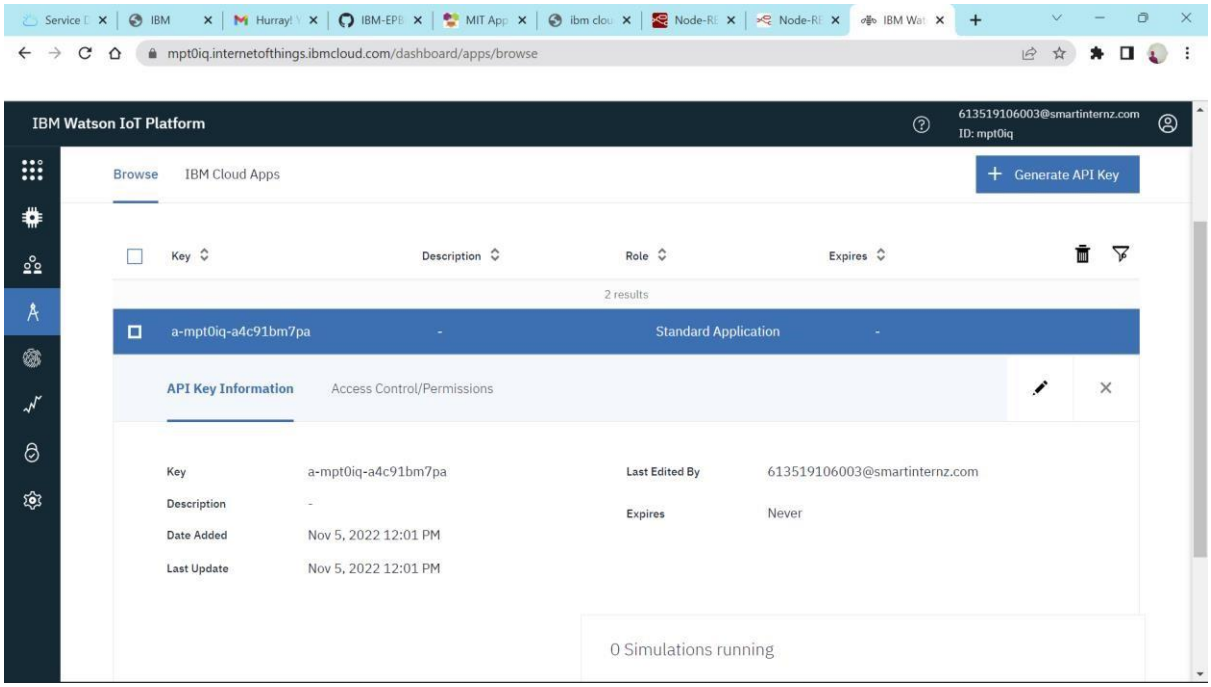
CREATING NODE-RED SERVICE:



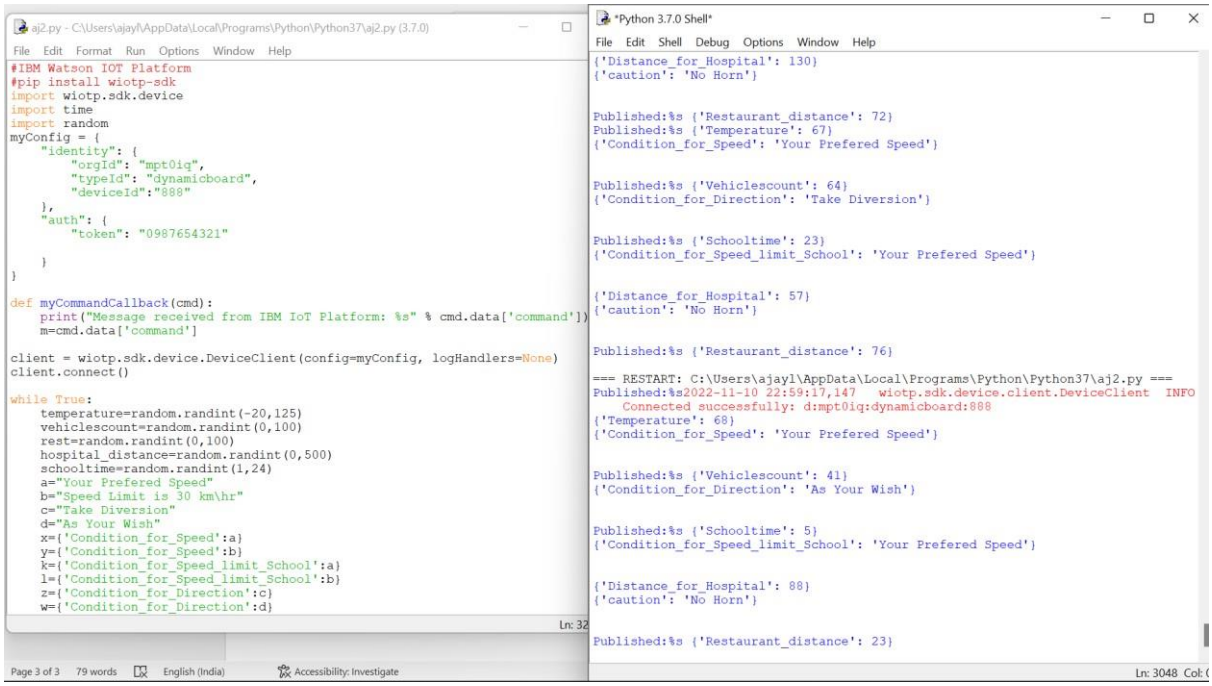


CONNECTING WITH IBM CLOUD:

USING IBM IOT THROUGH API KEY:



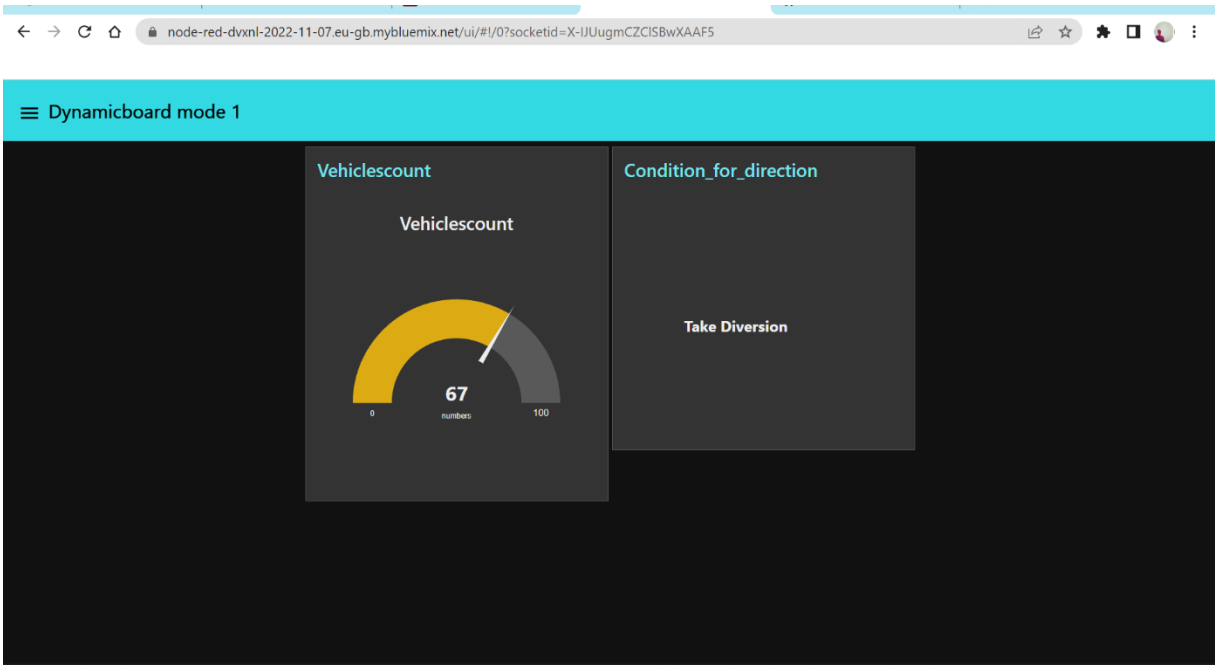
TRANSFERING VALUES FROM PYTHON CODE:

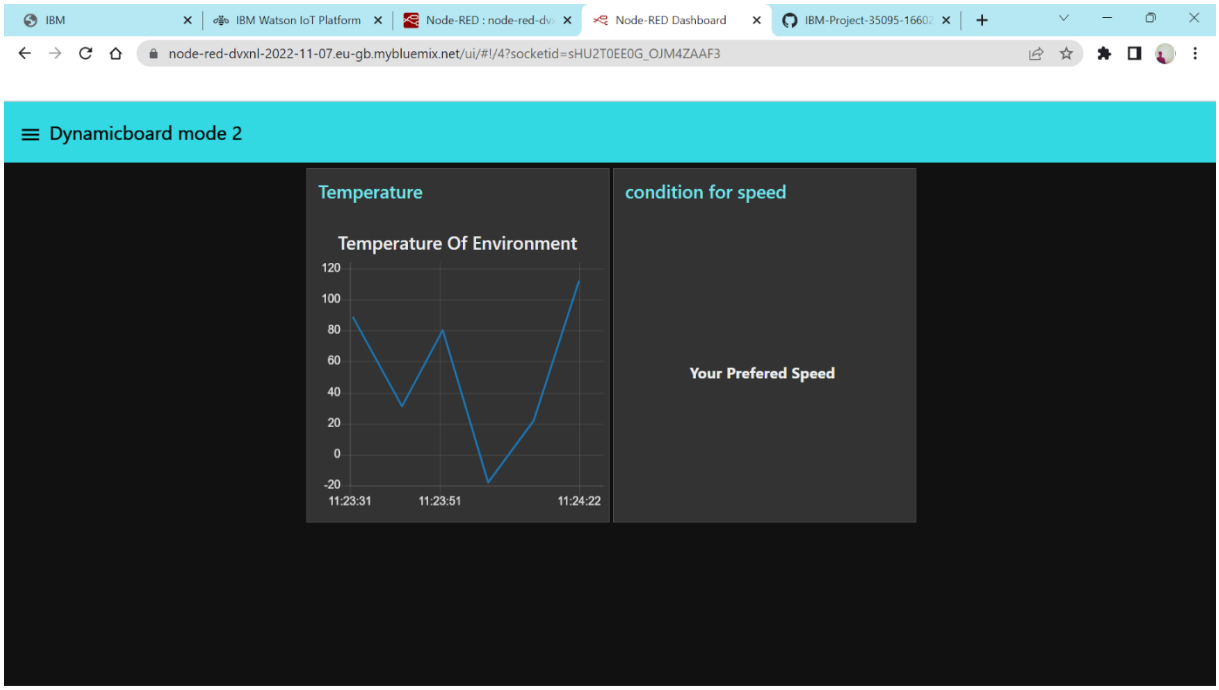


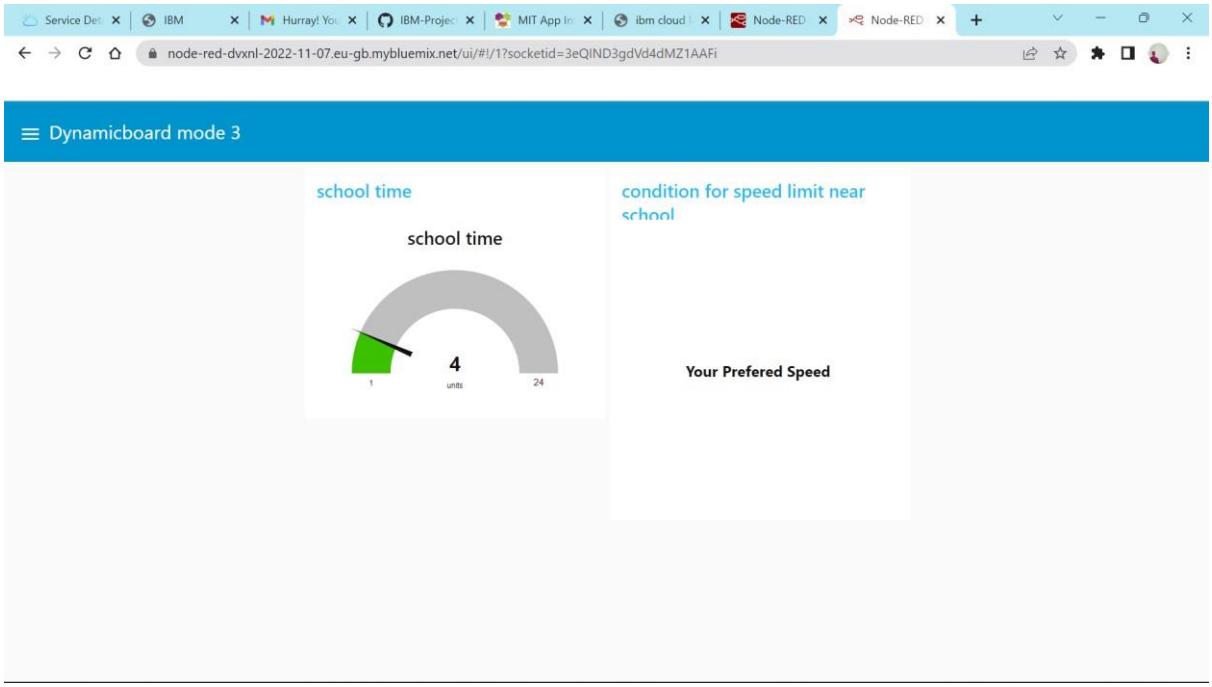
```
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "mpt0iq",
        "typeId": "dynamicboard",
        "deviceId":"888"
    },
    "auth": {
        "token": "0987654321"

    }
}

def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']

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

while True:
    temperature=random.randint(-20,125)
    vehiclescount=random.randint(0,100)
    rest=random.randint(0,100)
    hospital_distance=random.randint(0,500)
    schooltime=random.randint(1,24)
    a="Your Prefered Speed"
    b="Speed Limit is 30 km\hr"
    c="Take Diversion"
    d="As Your Wish"
    x={'Condition_for_Speed':a}
    y={'Condition_for_Speed':b}
    k={'Condition_for_Speed_limit_School':a}
    l={'Condition_for_Speed_limit_School':b}
    z={'Condition_for_Direction':c}
    w={'Condition_for_Direction':d}
```

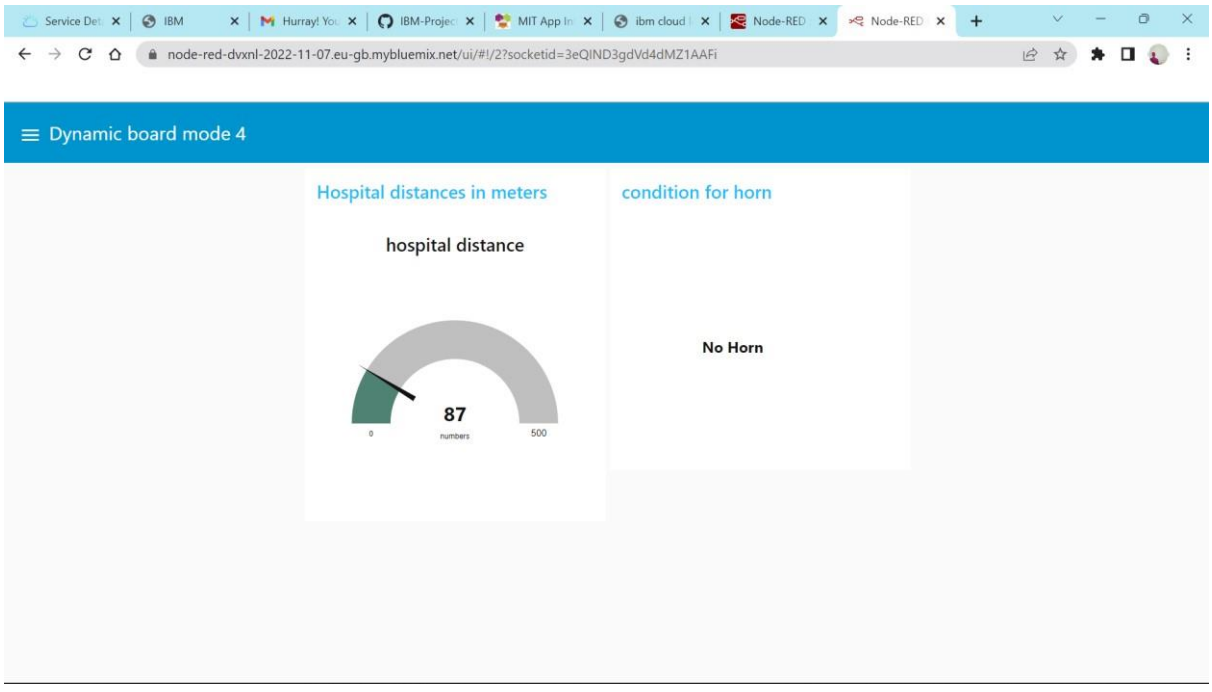
```
{'Distance_for_Hospital': 130}
{'caution': 'No Horn'}


Published:%s {'Restaurant_distance': 72}
Published:%s {'Temperature': 67}
{'Condition_for_Speed': 'Your Prefered Speed'}


Published:%s {'Vehiclescount': 64}
{'Condition_for_Direction': 'Take Diversion'}


Published:%s {'Schooltime': 23}
{'Condition_for_Speed_limit_School': 'Your Prefered Speed'}


{'Distance_for_Hospital': 57}
{'caution': 'No Horn'}


Published:%s {'Restaurant_distance': 76}

=== RESTART: C:\Users\ajayl\AppData\Local\Programs\Python\Python37\aj2.py ===
Published:%s2022-11-10 22:59:17,147   wiotp.sdk.device.client.DeviceClient  INFO
    Connected successfully: d:mpt0iq:dynamicboard:888
{'Temperature': 68}
{'Condition_for_Speed': 'Your Prefered Speed'}


Published:%s {'Vehiclescount': 41}
{'Condition_for_Direction': 'As Your Wish'}


Published:%s {'Schooltime': 5}
{'Condition_for_Speed_limit_School': 'Your Prefered Speed'}


{'Distance_for_Hospital': 88}
{'caution': 'No Horn'}


Published:%s {'Restaurant_distance': 23}
```

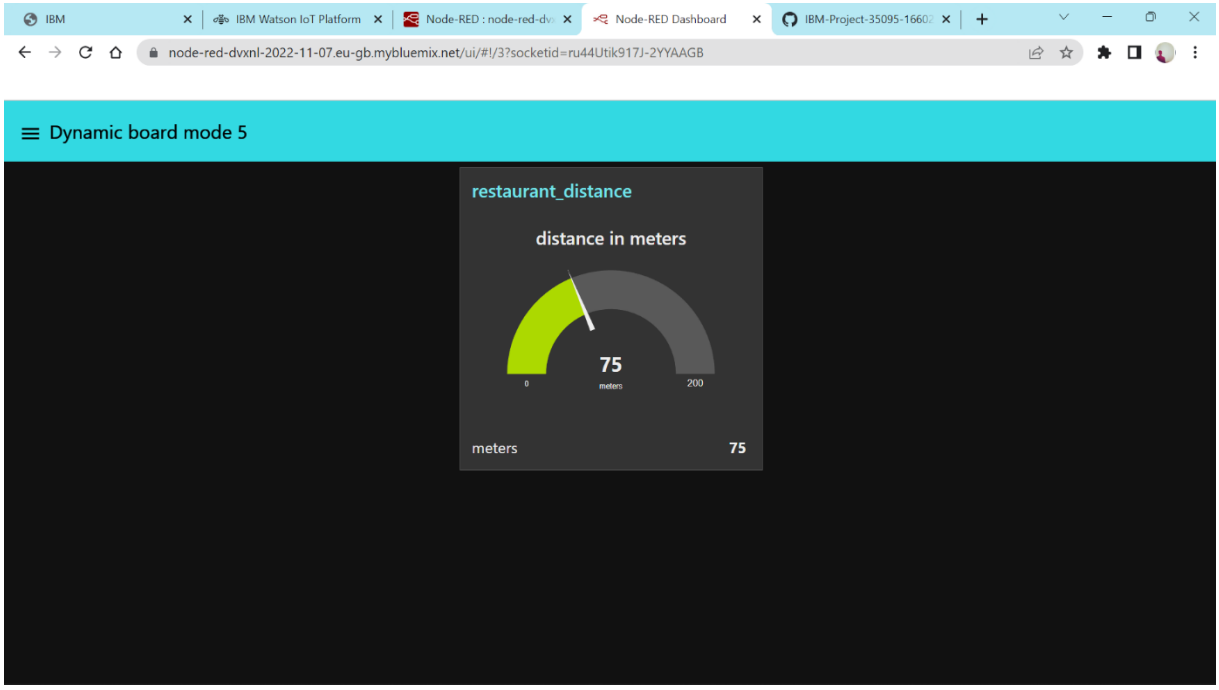
NODE -RED DASHBOARD:






node-red-dvxnl-2022-11-07.eu-gb.mybluemix.net/ui/#!/1?socketid=3eQIND3gdVd4dMZ1AAFi
Dynamicboard mode 3
school time
school time
4
1
units
24
condition for speed limit near school
Your Prefered Speed


node-red-dvxnl-2022-11-07.eu-gb.mybluemix.net/ui/#!/2?socketid=3eQIND3gdVd4dMZ1AAFi
Dynamic board mode 4
Hospital distances in meters
hospital distance
87
0
numbers
500
condition for horn
No Horn


IBM
IBM Watson IoT Platform
Node-RED : node-red-dv
Node-RED Dashboard
IBM-Project-35095-1660
node-red-dvxnl-2022-11-07.eu-gb.mybluemix.net/ui/#!/3?socketid=ru44Utik917J-2YYAAGB
Dynamic board mode 5
restaurant_distance
distance in meters
75
meters
0
200
meters
75