



**GOVERNMENT COLLEGE OF ENGINEERING
CHETTIKARAI, DHARMAPURI**



Signs with Smart Connectivity For Better Road Safety

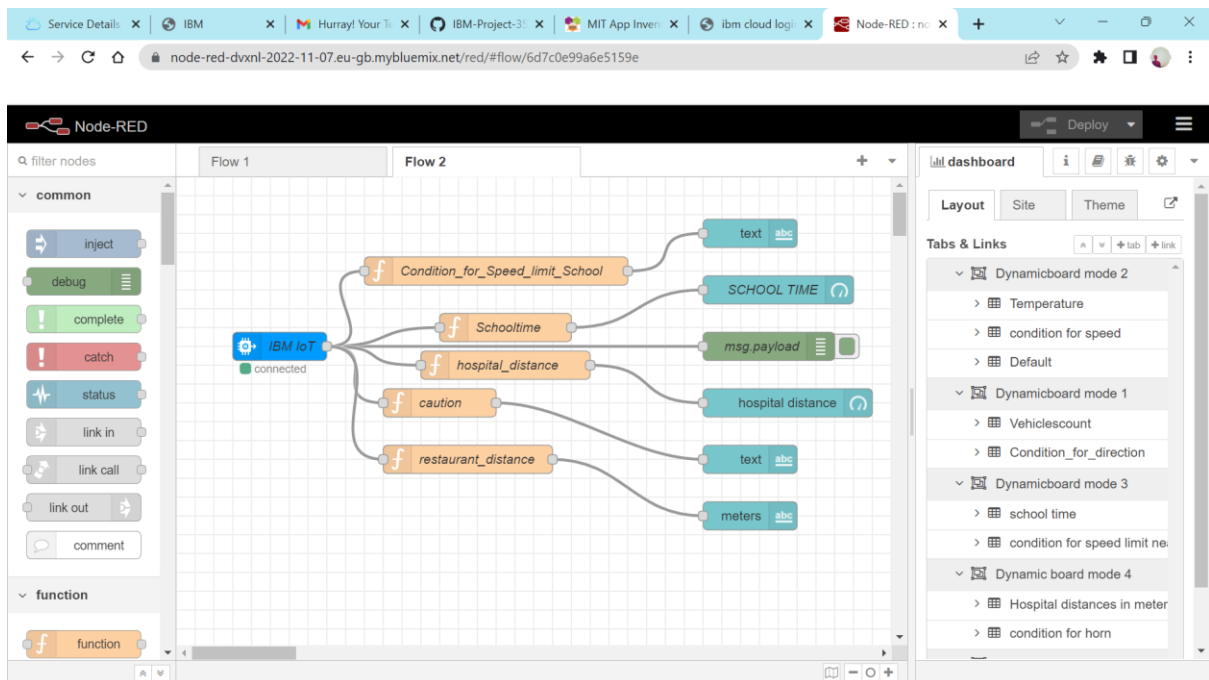
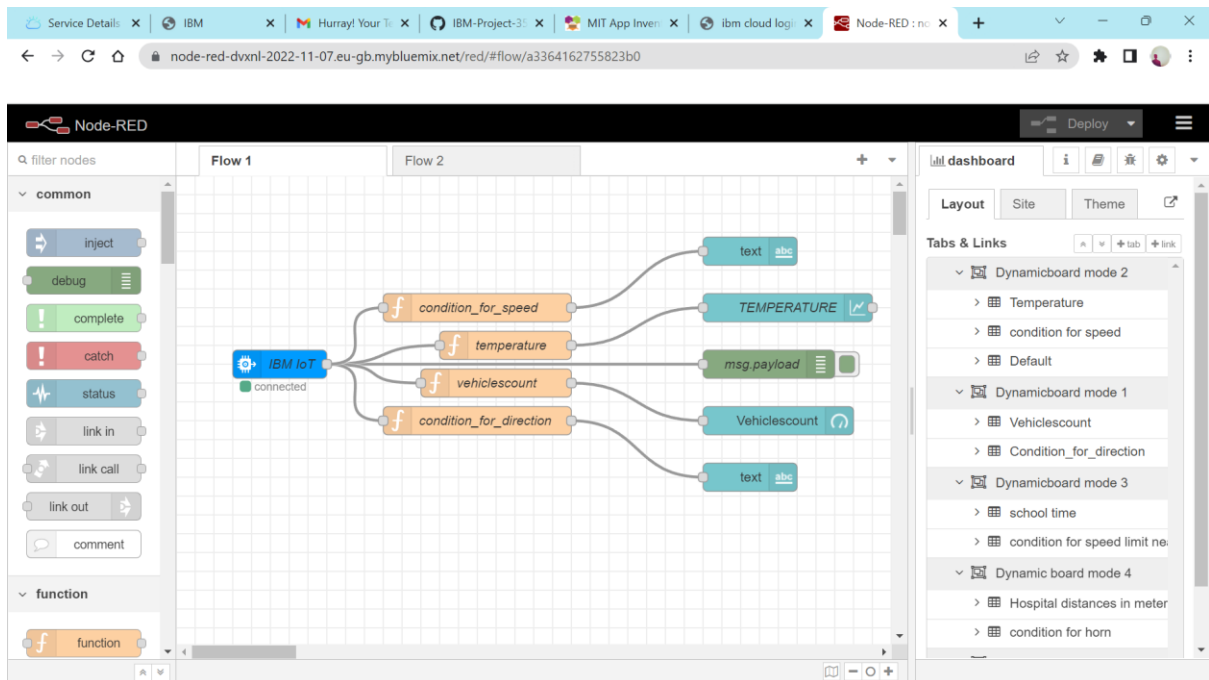
IBM NALAIYATHIRAN

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:

The screenshot shows the IBM Watson IoT Platform dashboard. The user is logged in as 613519106003@smartinternz.com. The dashboard displays a table with 2 results for API keys. The selected key is 'a-mpt0iq-a4c91bm7pa' with the role 'Standard Application'. The API Key Information section shows the following details:

Key	Description	Role	Expires
a-mpt0iq-a4c91bm7pa	-	Standard Application	-

API Key Information

Key	Description	Date Added	Last Update	Last Edited By	Expires
a-mpt0iq-a4c91bm7pa	-	Nov 5, 2022 12:01 PM	Nov 5, 2022 12:01 PM	613519106003@smartinternz.com	Never

0 Simulations running

TRANSFERING VALUES FROM PYTHON CODE:

The screenshot shows a Python 3.7.0 Shell window with the following code and output:

```
#!/usr/bin/env python
# IBM Watson IoT Platform
# pip install wiotsdk
import wiotsdk
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 = wiotsdk.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 Preferred 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}
```

Output:

```
Published:{"Distance_for_Hospital": 130}
Published:{"caution": "No Horn"}

Published:{"Restaurant_distance": 72}
Published:{"Temperature": 67}
Published:{"Condition_for_Speed": "Your Preferred Speed"}

Published:{"Vehiclescount": 64}
Published:{"Condition_for_Direction": "Take Diversion"}

Published:{"Schooltime": 23}
Published:{"Condition_for_Speed_limit_School": "Your Preferred Speed"}

Published:{"Distance_for_Hospital": 57}
Published:{"caution": "No Horn"}

Published:{"Restaurant_distance": 76}

==== RESTART: C:\Users\ajayl\AppData\Local\Programs\Python\Python37\aj2.py ====
Published:2022-11-10 22:59:17,147 wiotsdk.device.client.DeviceClient INFO
Connected successfully: d:mpt0iq:dynamicboard:888
Published:{"Temperature": 68}
Published:{"Condition_for_Speed": "Your Preferred Speed"}

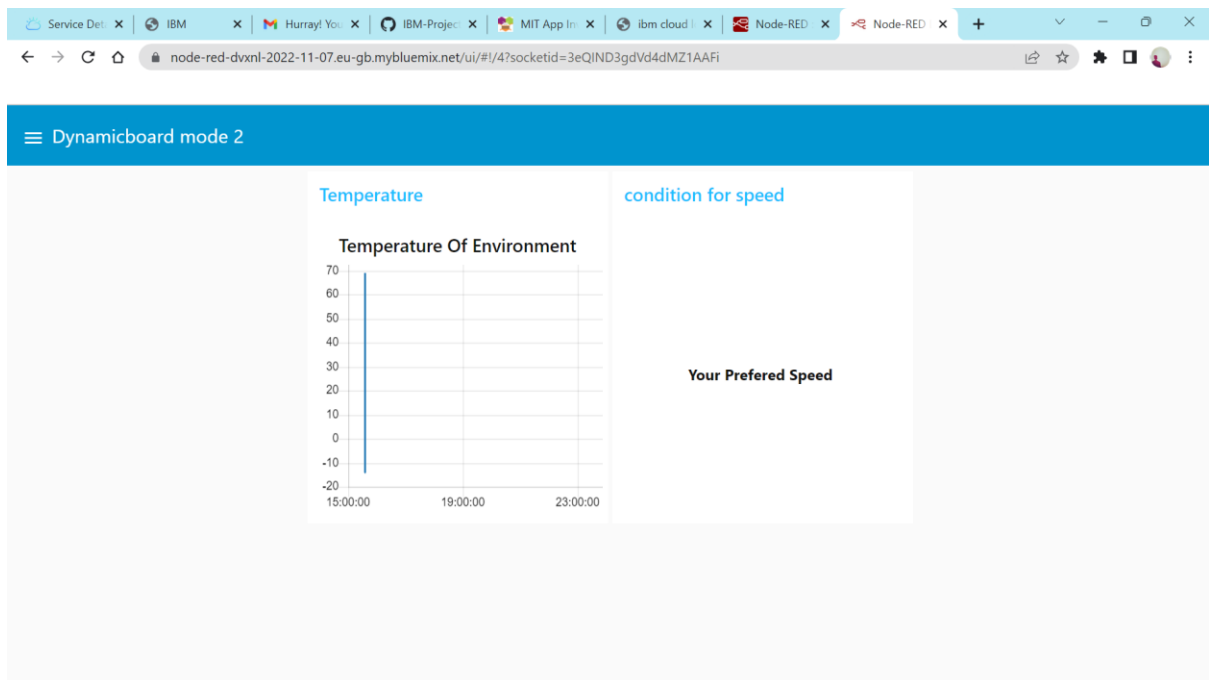
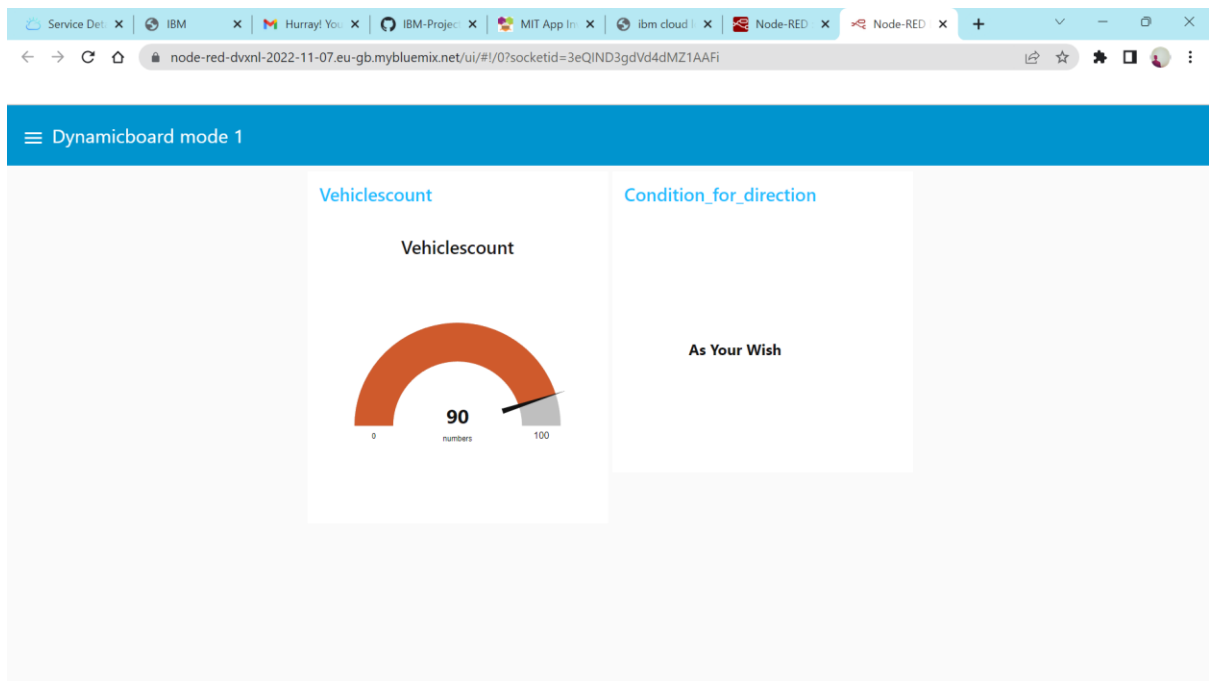
Published:{"Vehiclescount": 41}
Published:{"Condition_for_Direction": "As Your Wish"}

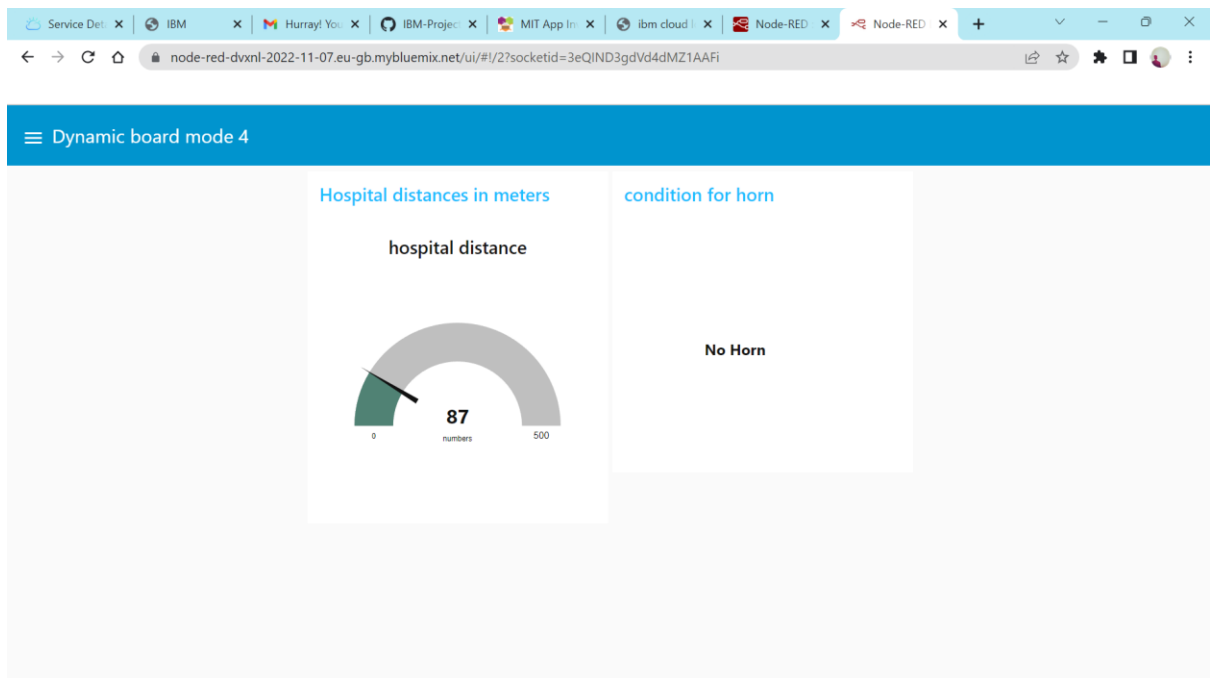
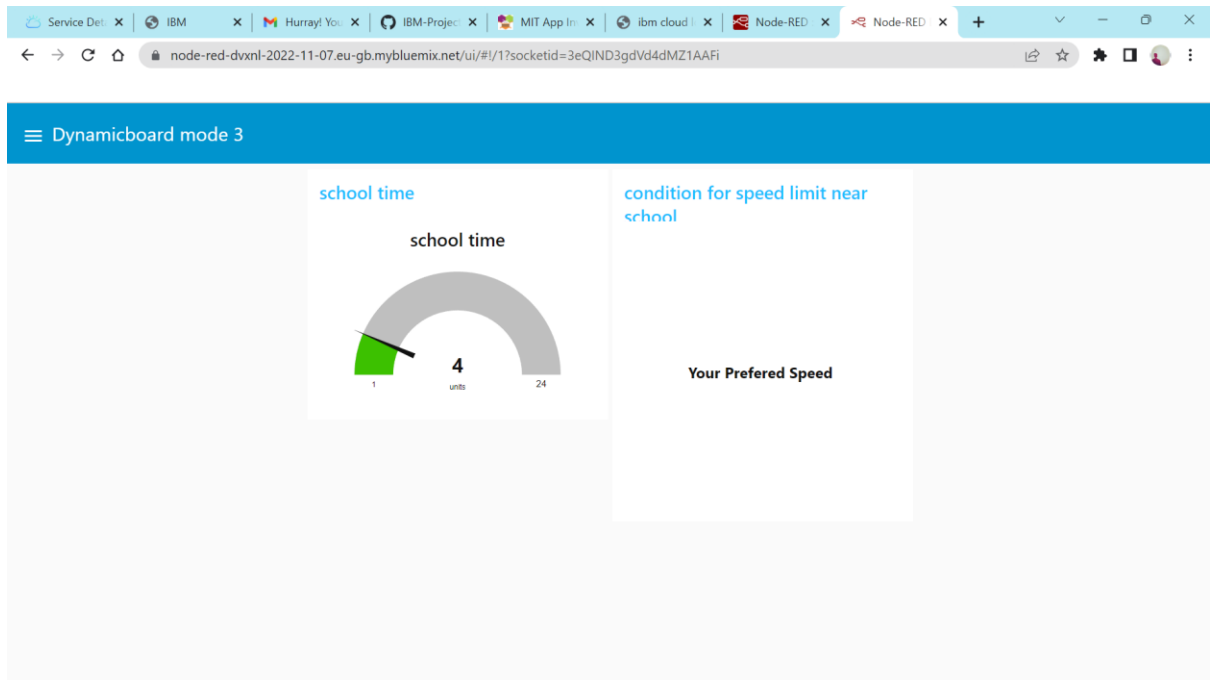
Published:{"Schooltime": 5}
Published:{"Condition_for_Speed_limit_School": "Your Preferred Speed"}

Published:{"Distance_for_Hospital": 88}
Published:{"caution": "No Horn"}

Published:{"Restaurant_distance": 23}
```

NODE-RED DASHBOARD:





Dynamic board mode 5

restaurant_distance

meters

99