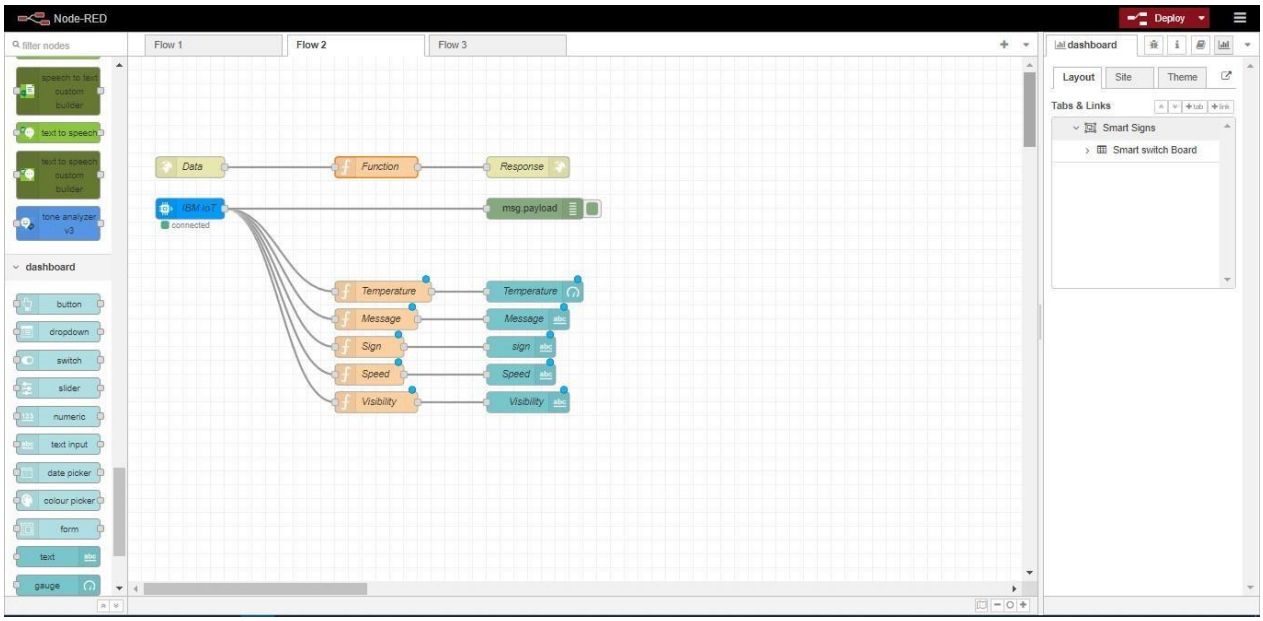
PROJECT DEVELOPMENT PHASE

Sprint - 4

DATE	**16/11/2022**
TEAM ID	**PNT2022TMID14966**
PROJECT	**SIGNS WITH SMART CONNECTIVITY FOR BETTER ROADSAFETY**

DEVELOPIN GROUTE BASED ON THE PROGRAM :

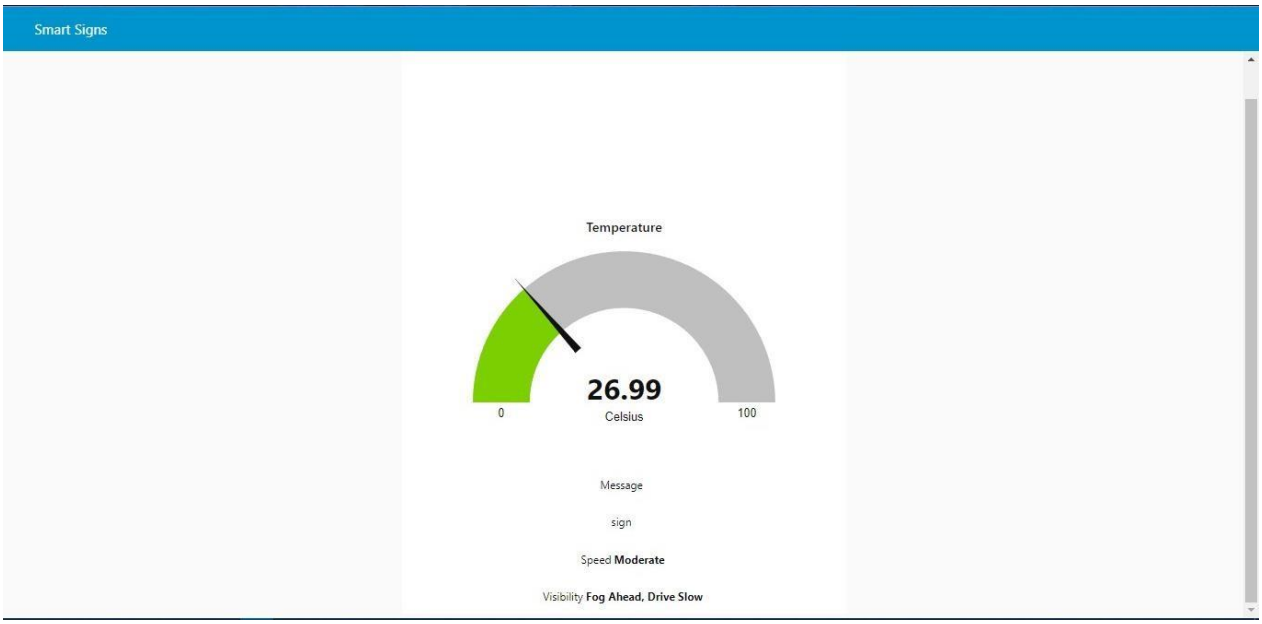
Here based on the project the routing is developed by using appropriate nodes.



OUTPUT FOR ODERED :

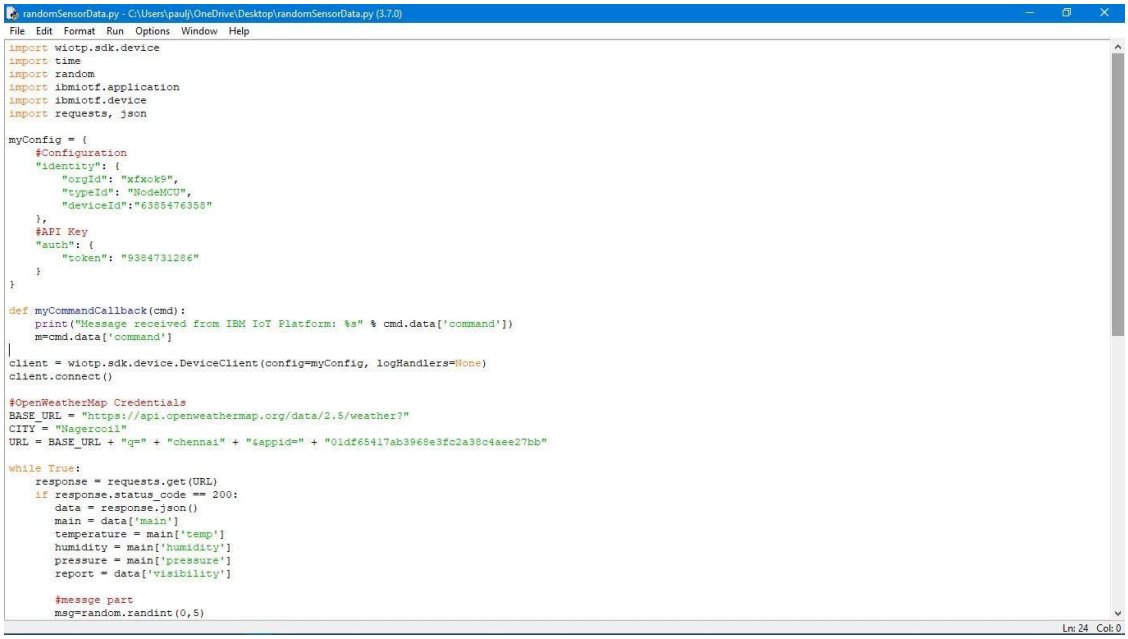
After making the proper connection between nodes the deploy button is enabled and the result is displayed on the node-reddashboard.

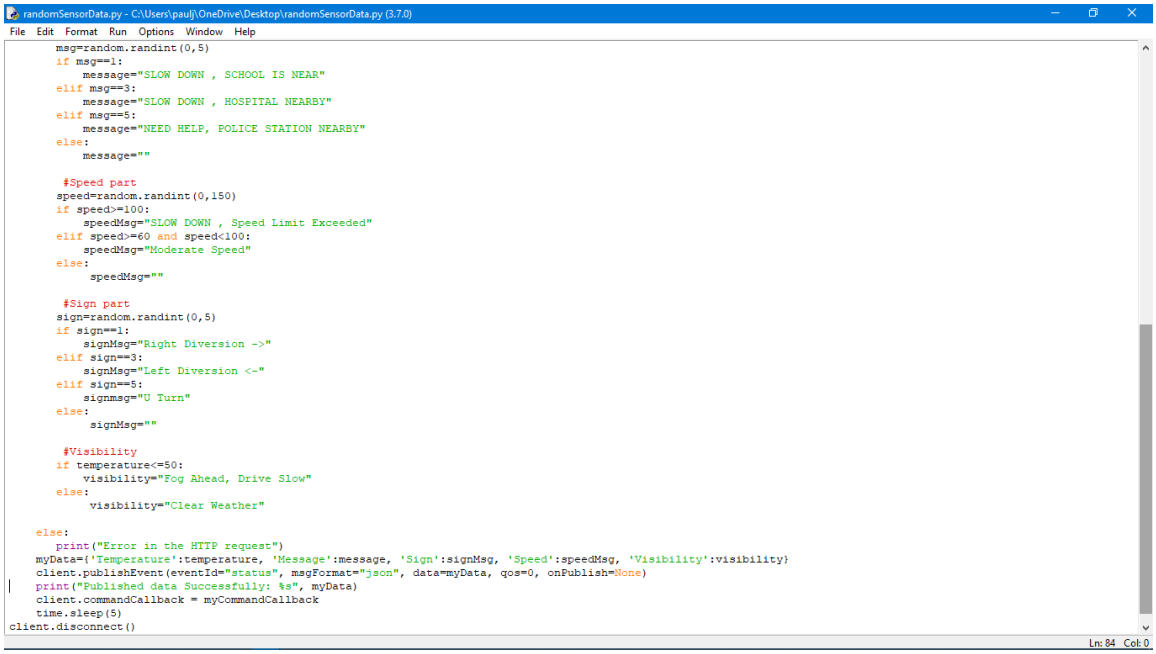
Its hows theres ultina diagrammatic structure :



CODE IN PYTHON IDLE:

PROGRAM :





Program used in the code:

import wiotp.sdk.device
importti

```
import random
importibmiotf.applicationimrt
ibmiotf.deviceimportrequest
s,json

myConfig =
    {#Configuration"i
    dentity":{
        "orgId":"xfxok9",
        "typeId":
        "NodeMCU","deviceId":"63854
        76358"
    },
    #APIKey
    "auth":{
        "token":"9384731286"
    }
}


defmyCommandCallback(cmd):
    print("MessagereceivedfromIBMIoTPlatform:%s"%cmd.data['command'])
    m=cmd.data['command']

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

#OpenWeatherMap
CredentialsBASE_URL=
"https://api.openweathermap.org/data/2.5/weather?"
```

```
CITY="Chennai"
URL=BASE_URL+"q="+"chennai"+"&appid="+"01df65417ab3968e3fc2a38c4aee27
bb"

whileTrue:
    response=requests.get(URL)
    ifresponse.status_code==200:data=r
       esponse.json()
       main = data['main']temperature
       = main['temp']humidity =
       main['humidity']pressure=main[
       'pressure']report=data['visibility'
       ]

       #messge
       partmsg=random.randint(0,5)i
       fmsg==1:
           message="SLOWDOWN,SCHOOLISNEAR"
       elifmsg==3:
           message="SLOWDOWN,HOSPITALNEARBY"
       elifmsg==5:
           message="NEEDHELP,POLICESTATIONNEARBY"
       else:
           message=""

        #Speed
       partspeed=random.randint(0,150)if
       speed>=100:
           speedMsg="SLOWDOWN,SpeedLimitExceeded"elifspeed>=6
       0andspeed<100:
```

```
            speedMsg="Moderate
        Speed"else:
             speedMsg=""

         #Sign
        partsign=random.randint(0,5)i
        fsign==1:
            signMsg="Right Diversion -
        >"elifsign==3:
            signMsg="Left Diversion <-
        "elifsign==5:
            signmsg="UTurn"els
        e:
             signMsg=""

         #Visibility
        iftemperature<=50:
            visibility="FogAhead,DriveSlow"else:
             visibility="ClearWeather"

    else:
        print("Error in the HTTP request")myData={'Temperature':temperature,
    'Message':message,
'Sign':signMsg, 'Speed':speedMsg,
    'Visibility':visibility}client.publishEvent(eventId="status",msgFormat="json",
data=myData, qos=0, onPublish=None)print("Published
    data Successfully: %s",
    myData)client.commandCallback=myCommandCallbac
    ktime.sleep(5)
```

client.disconnect()

Output displayed in Python Idle:

The output of the code was displayed in python idle shell mode.