

SPRINT 3

TOPIC : SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY.

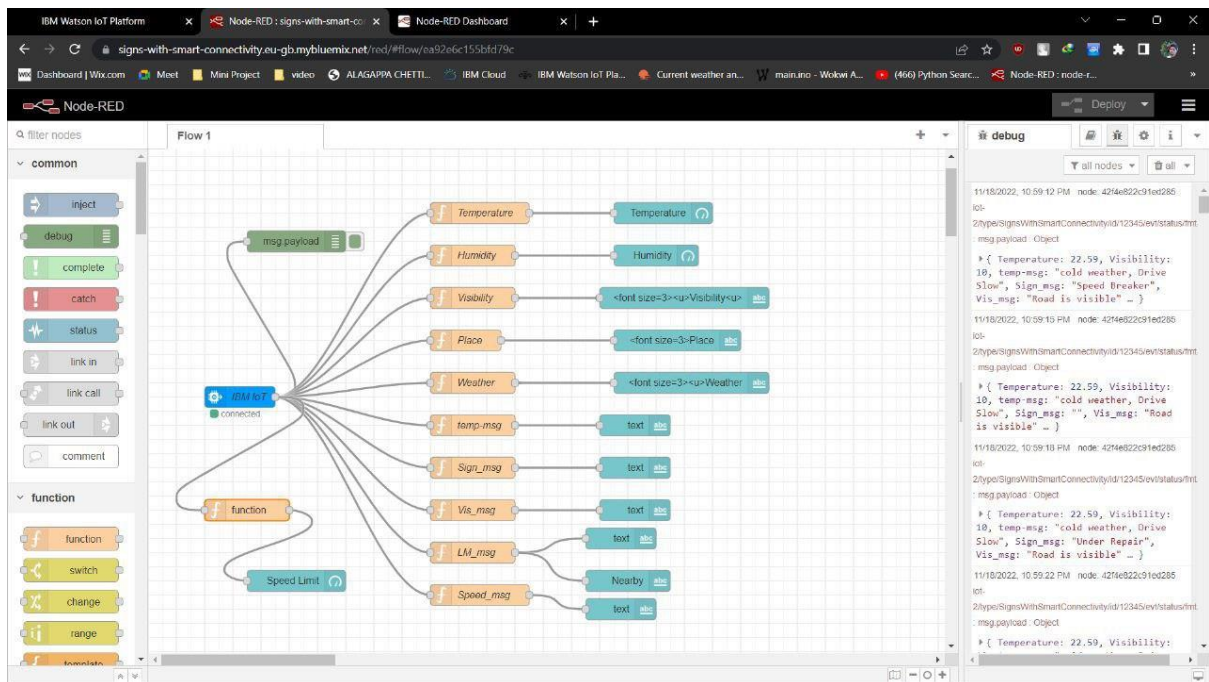
TEAM ID: PNT2022 TMID06138

DATE : 10 NOV 2022

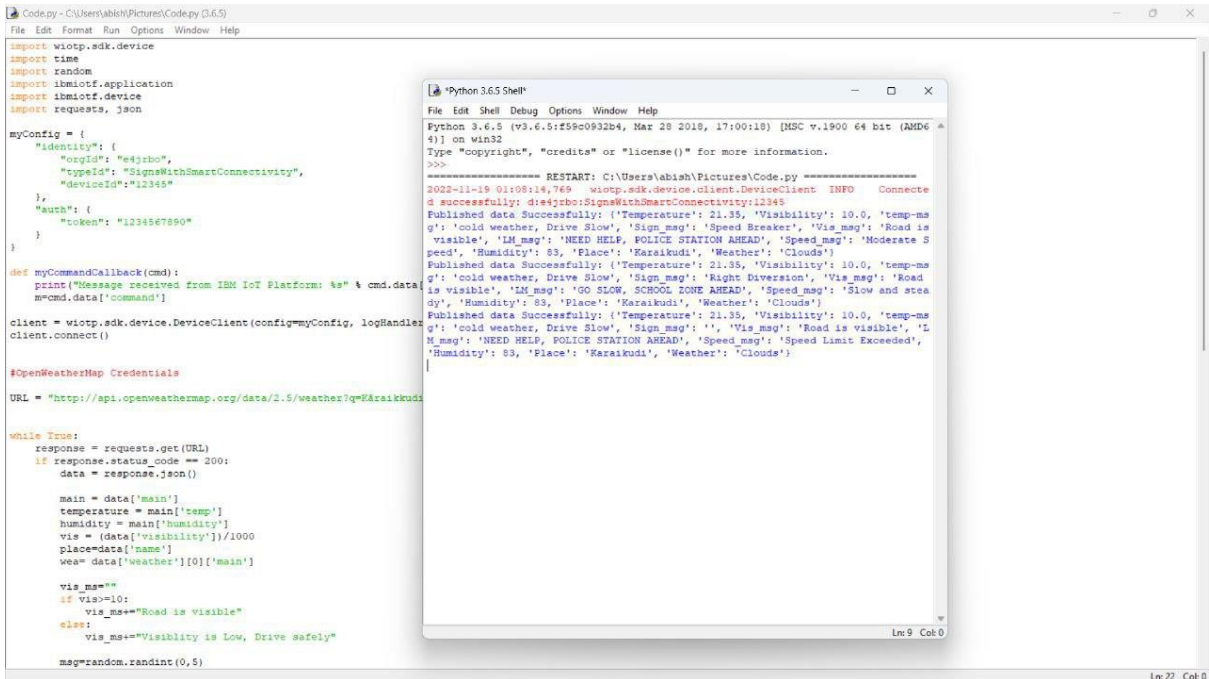
SOFTWARE USED:

- Node red.
- Python.

US 1: Creating web UI view using node red.



US 2: Getting data from cloud and displaying it.



The image shows a Python script in a Code.py editor and its execution output in a Python 3.6.5 Shell terminal.

```
import wiotp.sdk.device
import time
import random
import ibmiotf.application
import ibmiotf.device
import requests, json

myConfig = {
    "identity": {
        "orgId": "e4jzbo",
        "typeId": "SignsWithSmartConnectivity",
        "deviceId": "12345"
    },
    "auth": {
        "token": "1234567890"
    }
}

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

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandler=client.connect())

#OpenWeatherMap Credentials
URL = "http://api.openweathermap.org/data/2.5/weather?q=Karaikudi"

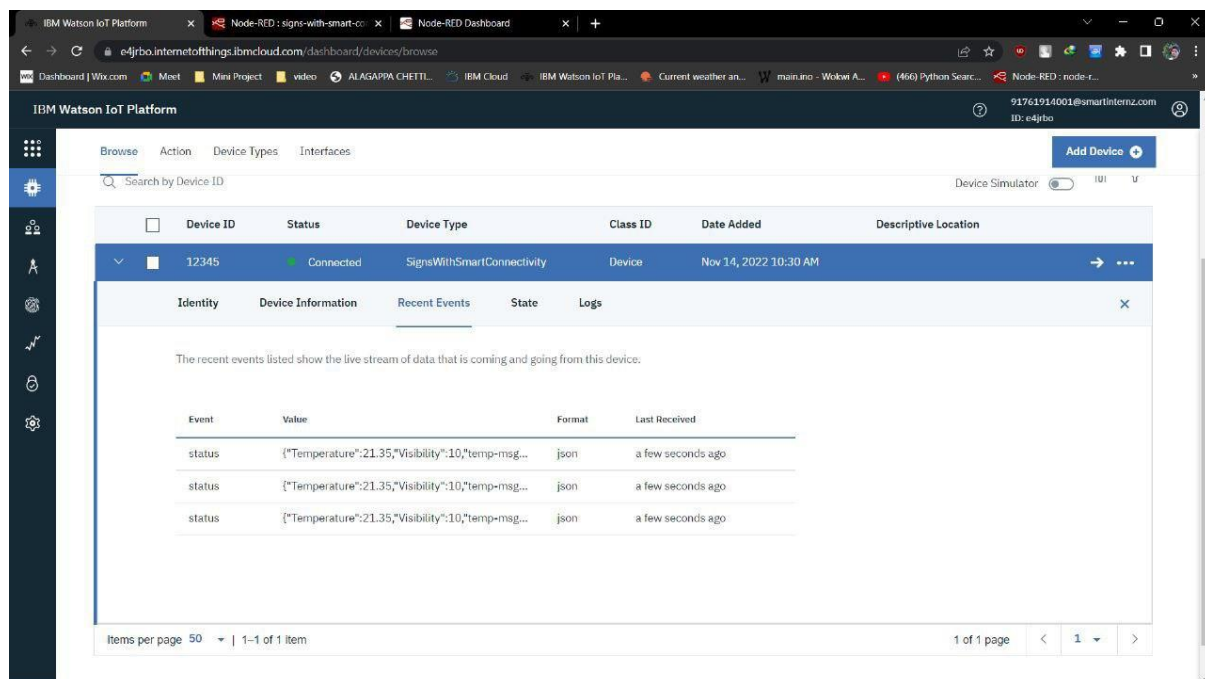
while True:
    response = requests.get(URL)
    if response.status_code == 200:
        data = response.json()

        main = data['main']
        temperature = main['temp']
        humidity = main['humidity']
        vis = (data['visibility'])/1000
        place=data['name']
        wea= data['weather'][0]['main']

        vis_ms=""
        if vis<10:
            vis_ms+="Road is visible"
        else:
            vis_ms+="Visibility is Low, Drive safely"

        msg=random.randint(0,5)
```

The terminal output shows the script's execution, including a restart message and several successful data fetches from the OpenWeatherMap API, displaying temperature, humidity, visibility, and weather conditions for Karaikudi.



The image shows the IBM Watson IoT Platform dashboard for a device named "SignsWithSmartConnectivity" (Device ID: 12345). The device is connected, and the dashboard displays recent events and logs.

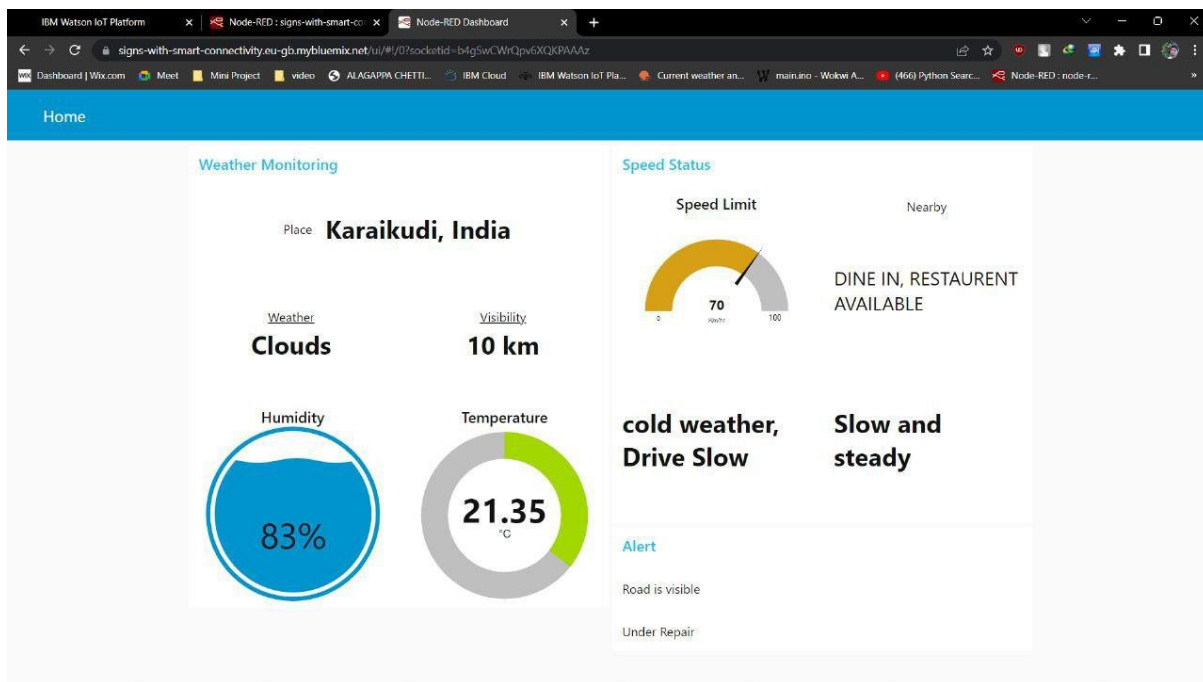
Device Information:

- Device ID: 12345
- Status: Connected
- Device Type: SignsWithSmartConnectivity
- Class ID: Device
- Date Added: Nov 14, 2022 10:30 AM

Recent Events:

Event	Value	Format	Last Received
status	["Temperature":21.35,"Visibility":10,"temp-msg...	json	a few seconds ago
status	["Temperature":21.35,"Visibility":10,"temp-msg...	json	a few seconds ago
status	["Temperature":21.35,"Visibility":10,"temp-msg...	json	a few seconds ago

The dashboard also includes a "Device Simulator" toggle and a "Add Device" button.



LINK:

<https://signs-with-smart-connectivity.eu-gb.mybluemix.net/ui>