PROJECT DEVELOPMENT PHASE

SPRINT-2

Date	17 November 2022
Team ID	PNT2022TMID04551
Project Name	Signs with Smart Connectivity for Better Road Safety

SPRINT-2:

- In sprint-2, we have developed a python code to get data from open weather api and upload to Watson cloud.

- We have also implemented a condition such that speed is calculated based on humidity.

- This helps in reducing accidents ,to avoid clashes and to promote safe driving experience.

PYTHON CODE:

```
Users > aswanthr > ibm_wat > ...
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random
import requests
import json
from datetime import datetime
import time
myConfig = {
    "identity": {
        "orgId": "2twix2",
        "typeId": "Nodemcu",
        "deviceId":"12345"
    },
    "auth": {
        "token": "Sx)o)Pt-@LEBp9IApX"
    }
}

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()
api_key = "528a86c2c07e0b806236f3e039d5f808"
weather_url = 'http://api.openweathermap.org/data/2.5/weather?q=' + 'Chennai' + '&appid='+api_key


while True:
```

```
while True:
    response = requests.get(weather_url)
    wea (variable) weather_data: Any
    if weather_data['cod'] == 200:
        kelvin = 273.15
        t = int(weather_data['main']['temp'] - kelvin)
        h = weather_data['main']['humidity']
        c = weather_data['weather'][0]['description']
    time.sleep(3)
    temp= str(t)+'°'+'C'
    humid= str(h)+'%'
    Climate = c
    Location = "Chennai"
    if(h<40):
        Speed = '100' +'kmph'
    elif(h <50 and h >40):
        Speed = '75' + 'kmph'
    elif(h >50 and h<60 ):
        Speed = '50' + 'kmph'
    elif(h > 60):
        Speed = '40' + 'kmph'
    myData={'temperature':temp, 'humidity':humid, 'c':Climate, 'l':Location,'s':Speed}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(5)
client.disconnect()
```

IBM IoT WATSON PLATFORM: