API Scavenger Hunt: Sejal Bansal

Task 1: Open Weather API:
I wrote the code in Java to get the api response. The project in Maven and added the required maven dependencies to send/receive the response from api.

Code: The code is pushed on GitHub for all the api calls. I have attached the code snippets for the api call made, and the code is slightly bigger compared to other programming languages, so I thought I'll push my code on GitHub as the document was getting too long.

GitHub Link: https://github.com/sejal-bansal/api-scavenger-hunt

Path to the folder: src/main/java/api/WeatherApi.java

API:
https://api.openweathermap.org/data/2.5/weather?q=London,UK&appid=7c5284574b6edd0883ad588adfcba5b8

Code Snippet:

```java
2 usages
private static final String API_KEY = "7c5284574b6edd0883ad588adfcba5b8";
2 usages
private static final String BASE_URL = "https://api.openweathermap.org/data/2.5/";

± Sejal Bansal
public static void main(String[] args) {
    String londonWeather = getCurrentWeather( location: "London,UK");
    System.out.println("Current Weather in London, UK:");
    System.out.println(londonWeather);

    String tokyoForecast = getFiveDayForecast( location: "Tokyo,JP");
    System.out.println("\n5-Day Forecast for Tokyo, Japan:");
    System.out.println(tokyoForecast);
}

1 usage   ± Sejal Bansal
private static String getCurrentWeather(String location) {
    String endpoint = BASE_URL + "weather?q=" + location + "&appid=" + API_KEY;
    return makeApiRequest(endpoint);
}

1 usage   ± Sejal Bansal
private static String getFiveDayForecast(String location) {
    String endpoint = BASE_URL + "forecast?q=" + location + "&appid=" + API_KEY;
    return makeApiRequest(endpoint);
}
```

Response:
Current Weather in London, UK:

{"coord":{"lon":-0.1257,"lat":51.5085},"weather":[{"id":803,"main":"Clouds","description":"broken clouds","icon":"04n"}],"base":"stations","main":{"temp":281.66,"feels_like":279.53,"temp_min":279.82,"temp_max":283.01,"pressure":966,"humidity":94},"visibility":10000,"wind":{"speed":3.6,"deg":280},"clouds":{"all":75},"dt":1699154126,"sys":{"type":2,"id":2075535,"country":"GB","sunrise":1699167617,"sunset":1699201670},"timezone":0,"id":2643743,"name":"London","cod":200}

API:

https://api.openweathermap.org/data/2.5/forecast?q=Tokyo,JP&appid=7c5284574b6edd0883ad588adfcba5b8

Response:
5-Day Forecast for Tokyo, Japan:
{"cod":"200","message":0,"cnt":40,"list":[{"dt":1699164000,"main":{"temp":296.39,"feels_like":296.44,"temp_min":296.34,"temp_max":296.39,"pressure":1025,"sea_level":1025,"grnd_level":1021,"humidity":64,"temp_kf":0.05},"weather":[{"id":803,"main":"Clouds","description":"broken clouds","icon":"04d"}],"clouds":{"all":81},"wind":{"speed":2.67,"deg":26,"gust":2.73},"visibility":10000,"pop":0.12,"sys":{"pod":"d"},"dt_txt":"2023-11-05 06:00:00"},{"dt":1699174800,"main":{"temp":295.64,"feels_like":295.59,"temp_min":295.25,"temp_max":295.64,"pressure":1026,"sea_level":1026,"grnd_level":1022,"humidity":63,"temp_kf":0.39},"weather":[{"id":500,"main":"Rain","description":"light rain","icon":"10n"}],"clouds":{"all":85},"wind":{"speed":3.71,"deg":75,"gust":4.34},"visibility":10000,"pop":0.2,"rain":{"3h":0.22},"sys":{"pod":"n"},"dt_txt":"2023-11-05 09:00:00"},{"dt":1699185600,"main":{"temp":294.07,"feels_like":294.02,"temp_min":294.07,"temp_max":294.07,"pressure":1027,"sea_level":1027,"grnd_level":1022,"humidity":69,"temp_kf":0},"weather":[{"id":803,"main":"Clouds","description":"broken clouds","icon":"04n"}],"clouds":{"all":62},"wind":{"speed":2.89,"deg":94,"gust":3.63},"visibility":10000,"pop":0.02,"sys":{"pod":"n"},"dt_txt":"2023-11-05 12:00:00"},{"dt":1699196400,"main":{"temp":293.22,"feels_like":293.21,"temp_min":293.22,"temp_max":293.22,"pressure":1026,"sea_level":1026,"grnd_level":1021,"humidity":74,"temp_kf":0},"weather":[{"id":800,"main":"Clear","description":"clear sky","icon":"01n"}],"clouds":{"all":1},"wind":{"speed":1.93,"deg":113,"gust":2.55},"visibility":10000,"pop":0.03,"sys":{"pod":"n"},"dt_txt":"2023-11-05 15:00:00"},{"dt":1699207200,"main":{"temp":292.82,"feels_like":292.88,"temp_min":292.82,"temp_max":292.82,"pressure":1024,"sea_level":1024,"grnd_level":1019,"humidity":78,"temp_kf":0},"weather":[{"id":500,"main":"Rain","description":"light rain","icon":"10n"}],"clouds":{"all":6},"wind":{"speed":2.16,"deg":152,"gust":3.76},"visibility":10000,"pop":0.35,"rain":{"3h":0.12},"sys":{"pod":"n"},"dt_txt":"2023-11-05 18:00:00"},{"dt":1699218000,"main":{"temp":292.95,"feels_like":293,"temp_min":292.95,"temp_max":292.95,"pressure":1023,"sea_level":1023,"grnd_level":1018,"humidity":77,"temp_kf":0},"weather":[{"id":500,"main":"Rain","description":"light rain","icon":"10n"}],"clouds":{"all":38},"wind":{"speed":3.63,"deg":181,"gust":7.48},"visibility":10000,"pop":0.48,"rain":{"3h":0.4},"sys":{"pod":"n"},"dt_txt":"2023-11-05 21:00:00"},{"dt":1699228800,"main":{"temp":294.86,"feels_like":294.84,"temp_min":294.86,"temp_max":294.86,"pressure":1023,"sea_level":1023,"grnd_level":1018,"humidity":67,"temp_k

f":0},"weather":[{"id":500,"main":"Rain","description":"light rain","icon":"10d"}],"clouds":{"all":53},"wind":{"speed":6.27,"deg":192,"gust":9.81},"visibility":10000,"pop":0.42,"rain":{"3h":0.27},"sys":{"pod":"d"},"dt_txt":"2023-11-06 00:00:00"},{"dt":1699239600,"main":{"temp":297.01,"feels_like":296.94,"temp_min":297.01,"temp_max":297.01,"pressure":1020,"sea_level":1020,"grnd_level":1015,"humidity":57,"temp_kf":0},"weather":[{"id":803,"main":"Clouds","description":"broken clouds","icon":"04d"}],"clouds":{"all":70},"wind":{"speed":9.66,"deg":188,"gust":12.43},"visibility":10000,"pop":0.01,"sys":{"pod":"d"},"dt_txt":"2023-11-06 03:00:00"},{"dt":1699250400,"main":{"temp":296.97,"feels_like":296.87,"temp_min":296.97,"temp_max":296.97,"pressure":1018,"sea_level":1018,"grnd_level":1013,"humidity":56,"temp_kf":0},"weather":[{"id":803,"main":"Clouds","description":"broken clouds","icon":"04d"}],"clouds":{"all":84},"wind":{"speed":9.85,"deg":190,"gust":14.74},"visibility":10000,"pop":0,"sys":{"pod":"d"},"dt_txt":"2023-11-06 06:00:00"},{"dt":1699261200,"main":{"temp":295.46,"feels_like":295.6,"temp_min":295.46,"temp_max":295.46,"pressure":1017,"sea_level":1017,"grnd_level":1012,"humidity":71,"temp_kf":0},"weather":[{"id":804,"main":"Clouds","description":"overcast clouds","icon":"04n"}],"clouds":{"all":87},"wind":{"speed":8.54,"deg":186,"gust":13.14},"visibility":10000,"pop":0.04,"sys":{"pod":"n"},"dt_txt":"2023-11-06 09:00:00"},{"dt":1699272000,"main":{"temp":295.13,"feels_like":295.32,"temp_min":295.13,"temp_max":295.13,"pressure":1016,"sea_level":1016,"grnd_level":1011,"humidity":74,"temp_kf":0},"weather":[{"id":804,"main":"Clouds","description":"overcast clouds","icon":"04n"}],"clouds":{"all":94},"wind":{"speed":9.13,"deg":191,"gust":14.55},"visibility":10000,"pop":0.04,"sys":{"pod":"n"},"dt_txt":"2023-11-06 12:00:00"},{"dt":1699282800,"main":{"temp":295.03,"feels_like":295.21,"temp_min":295.03,"temp_max":295.03,"pressure":1013,"sea_level":1013,"grnd_level":1008,"humidity":74,"temp_kf":0},"weather":[{"id":804,"main":"Clouds","description":"overcast clouds","icon":"04n"}],"clouds":{"all":100},"wind":{"speed":9.46,"deg":192,"gust":16.26},"visibility":10000,"pop":0.16,"sys":{"pod":"n"},"dt_txt":"2023-11-06 15:00:00"},{"dt":1699293600,"main":{"temp":295.23,"feels_like":295.58,"temp_min":295.23,"temp_max":295.23,"pressure":1009,"sea_level":1009,"grnd_level":1005,"humidity":80,"temp_kf":0},"weather":[{"id":500,"main":"Rain","description":"light rain","icon":"10n"}],"clouds":{"all":100},"wind":{"speed":13.91,"deg":189,"gust":21.11},"visibility":10000,"pop":0.35,"rain":{"3h":0.1},"sys":{"pod":"n"},"dt_txt":"2023-11-06 18:00:00"},{"dt":1699304400,"main":{"temp":295.59,"feels_like":296.06,"temp_min":295.59,"temp_max":295.59,"pressure":1007,"sea_level":1007,"grnd_level":1003,"humidity":83,"temp_kf":0},"weather":[{"id":500,"main":"Rain","description":"light rain","icon":"10n"}],"clouds":{"all":100},"wind":{"speed":15.08,"deg":194,"gust":23.7},"visibility":10000,"pop":0.91,"rain":{"3h":1.72},"sys":{"pod":"n"},"dt_txt":"2023-11-06 21:00:00"},{"dt":1699315200,"main":{"temp":294.98,"feels_like":295.46,"temp_min":294.98,"temp_max":294.98,"pressure":1008,"sea_level":1008,"grnd_level":1003,"humidity":86,"temp_kf":0},"weather":[{"id":501,"main":"Rain","description":"moderate rain","icon":"10d"}],"clouds":{"all":100},"wind":{"speed":8.13,"deg":212,"gust":14.23},"visibility":10000,"pop":1,"rain":{"3h":5.44},"sys":{"pod":"d"},"dt_txt":"2023-11-07 00:00:00"},{"dt":1699326000,"main":{"temp":296.17,"feels_like":296.28,"temp_min":296.17,"temp_max":296.17,"pressure":1008,"sea_level":1008,"grnd_level":1003,"humidity":67,"temp_kf":0},"weather":[{"id":500,"main":"Rain","description":"light rain","icon":"10d"}],"clouds":{"all":100},"wind":{"speed":3.26,"deg":221,"gust":6.14},"visibility"

:10000,"pop":0.57,"rain":{"3h":0.49},"sys":{"pod":"d"},"dt_txt":"2023-11-07 03:00:00"},{"dt":1699336800,"main":{"temp":296.79,"feels_like":296.8,"temp_min":296.79,"temp_max":296.79,"pressure":1008,"sea_level":1008,"grnd_level":1003,"humidity":61,"temp_kf":0},"weather":[{"id":804,"main":"Clouds","description":"overcast clouds","icon":"04d"}],"clouds":{"all":89},"wind":{"speed":1.66,"deg":18,"gust":4.08},"visibility":10000,"pop":0.46,"sys":{"pod":"d"},"dt_txt":"2023-11-07 06:00:00"},{"dt":1699347600,"main":{"temp":294.9,"feels_like":295.04,"temp_min":294.9,"temp_max":294.9,"pressure":1011,"sea_level":1011,"grnd_level":1006,"humidity":73,"temp_kf":0},"weather":[{"id":801,"main":"Clouds","description":"few clouds","icon":"02n"}],"clouds":{"all":23},"wind":{"speed":5.63,"deg":28,"gust":7.67},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-07 09:00:00"},{"dt":1699358400,"main":{"temp":292.44,"feels_like":292.17,"temp_min":292.44,"temp_max":292.44,"pressure":1015,"sea_level":1015,"grnd_level":1010,"humidity":67,"temp_kf":0},"weather":[{"id":801,"main":"Clouds","description":"few clouds","icon":"02n"}],"clouds":{"all":23},"wind":{"speed":5.36,"deg":39,"gust":6.92},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-07 12:00:00"},{"dt":1699369200,"main":{"temp":291.27,"feels_like":290.47,"temp_min":291.27,"temp_max":291.27,"pressure":1016,"sea_level":1016,"grnd_level":1011,"humidity":51,"temp_kf":0},"weather":[{"id":803,"main":"Clouds","description":"broken clouds","icon":"04n"}],"clouds":{"all":74},"wind":{"speed":5.29,"deg":344,"gust":6.69},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-07 15:00:00"},{"dt":1699380000,"main":{"temp":290.18,"feels_like":289.19,"temp_min":290.18,"temp_max":290.18,"pressure":1018,"sea_level":1018,"grnd_level":1013,"humidity":48,"temp_kf":0},"weather":[{"id":802,"main":"Clouds","description":"scattered clouds","icon":"03n"}],"clouds":{"all":39},"wind":{"speed":5.42,"deg":341,"gust":7.62},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-07 18:00:00"},{"dt":1699390800,"main":{"temp":289.55,"feels_like":288.58,"temp_min":289.55,"temp_max":289.55,"pressure":1020,"sea_level":1020,"grnd_level":1015,"humidity":51,"temp_kf":0},"weather":[{"id":800,"main":"Clear","description":"clear sky","icon":"01n"}],"clouds":{"all":2},"wind":{"speed":4.75,"deg":348,"gust":6.75},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-07 21:00:00"},{"dt":1699401600,"main":{"temp":290.6,"feels_like":289.6,"temp_min":290.6,"temp_max":290.6,"pressure":1023,"sea_level":1023,"grnd_level":1018,"humidity":46,"temp_kf":0},"weather":[{"id":802,"main":"Clouds","description":"scattered clouds","icon":"03d"}],"clouds":{"all":31},"wind":{"speed":3.9,"deg":9,"gust":3.91},"visibility":10000,"pop":0,"sys":{"pod":"d"},"dt_txt":"2023-11-08 00:00:00"},{"dt":1699412400,"main":{"temp":292.73,"feels_like":291.84,"temp_min":292.73,"temp_max":292.73,"pressure":1022,"sea_level":1022,"grnd_level":1017,"humidity":42,"temp_kf":0},"weather":[{"id":802,"main":"Clouds","description":"scattered clouds","icon":"03d"}],"clouds":{"all":41},"wind":{"speed":1.99,"deg":86,"gust":2.4},"visibility":10000,"pop":0,"sys":{"pod":"d"},"dt_txt":"2023-11-08 03:00:00"},{"dt":1699423200,"main":{"temp":293.36,"feels_like":292.59,"temp_min":293.36,"temp_max":293.36,"pressure":1023,"sea_level":1023,"grnd_level":1018,"humidity":44,"temp_kf":0},"weather":[{"id":802,"main":"Clouds","description":"scattered clouds","icon":"03d"}],"clouds":{"all":34},"wind":{"speed":3.46,"deg":120,"gust":2.71},"visibility":10000,"pop":0,"sys":{"pod":"d"},"dt_txt":"2023-11-08 06:00:00"},{"dt":1699434000,"main":{"temp":291.69,"feels_like":290.91,"temp_min":291.69,"t

emp_max":291.69,"pressure":1024,"sea_level":1024,"grnd_level":1019,"humidity":50,"temp_kf":0},"weather":[{"id":801,"main":"Clouds","description":"few clouds","icon":"02n"}],"clouds":{"all":11},"wind":{"speed":5.29,"deg":109,"gust":4.62},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-08 09:00:00"},{"dt":1699444800,"main":{"temp":290.44,"feels_like":289.71,"temp_min":290.44,"temp_max":290.44,"pressure":1026,"sea_level":1026,"grnd_level":1021,"humidity":57,"temp_kf":0},"weather":[{"id":800,"main":"Clear","description":"clear sky","icon":"01n"}],"clouds":{"all":6},"wind":{"speed":4.28,"deg":94,"gust":4.78},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-08 12:00:00"},{"dt":1699455600,"main":{"temp":289.85,"feels_like":289.12,"temp_min":289.85,"temp_max":289.85,"pressure":1026,"sea_level":1026,"grnd_level":1021,"humidity":59,"temp_kf":0},"weather":[{"id":800,"main":"Clear","description":"clear sky","icon":"01n"}],"clouds":{"all":0},"wind":{"speed":2.86,"deg":78,"gust":3.4},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-08 15:00:00"},{"dt":1699466400,"main":{"temp":289.4,"feels_like":288.65,"temp_min":289.4,"temp_max":289.4,"pressure":1026,"sea_level":1026,"grnd_level":1021,"humidity":60,"temp_kf":0},"weather":[{"id":800,"main":"Clear","description":"clear sky","icon":"01n"}],"clouds":{"all":3},"wind":{"speed":2.98,"deg":59,"gust":3.8},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-08 18:00:00"},{"dt":1699477200,"main":{"temp":289.14,"feels_like":288.39,"temp_min":289.14,"temp_max":289.14,"pressure":1027,"sea_level":1027,"grnd_level":1022,"humidity":61,"temp_kf":0},"weather":[{"id":803,"main":"Clouds","description":"broken clouds","icon":"04n"}],"clouds":{"all":64},"wind":{"speed":3.09,"deg":62,"gust":4.18},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-08 21:00:00"},{"dt":1699488000,"main":{"temp":290.03,"feels_like":289.29,"temp_min":290.03,"temp_max":290.03,"pressure":1027,"sea_level":1027,"grnd_level":1022,"humidity":58,"temp_kf":0},"weather":[{"id":803,"main":"Clouds","description":"broken clouds","icon":"04d"}],"clouds":{"all":82},"wind":{"speed":2.94,"deg":49,"gust":3.44},"visibility":10000,"pop":0,"sys":{"pod":"d"},"dt_txt":"2023-11-09 00:00:00"},{"dt":1699498800,"main":{"temp":291.3,"feels_like":290.53,"temp_min":291.3,"temp_max":291.3,"pressure":1026,"sea_level":1026,"grnd_level":1021,"humidity":52,"temp_kf":0},"weather":[{"id":804,"main":"Clouds","description":"overcast clouds","icon":"04d"}],"clouds":{"all":100},"wind":{"speed":1.87,"deg":69,"gust":1.93},"visibility":10000,"pop":0,"sys":{"pod":"d"},"dt_txt":"2023-11-09 03:00:00"},{"dt":1699509600,"main":{"temp":292.44,"feels_like":291.65,"temp_min":292.44,"temp_max":292.44,"pressure":1025,"sea_level":1025,"grnd_level":1020,"humidity":47,"temp_kf":0},"weather":[{"id":803,"main":"Clouds","description":"broken clouds","icon":"04d"}],"clouds":{"all":72},"wind":{"speed":1.1,"deg":137,"gust":1.88},"visibility":10000,"pop":0,"sys":{"pod":"d"},"dt_txt":"2023-11-09 06:00:00"},{"dt":1699520400,"main":{"temp":292.26,"feels_like":291.48,"temp_min":292.26,"temp_max":292.26,"pressure":1025,"sea_level":1025,"grnd_level":1020,"humidity":48,"temp_kf":0},"weather":[{"id":800,"main":"Clear","description":"clear sky","icon":"01n"}],"clouds":{"all":9},"wind":{"speed":2.01,"deg":148,"gust":2.79},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-09 09:00:00"},{"dt":1699531200,"main":{"temp":291.35,"feels_like":290.79,"temp_min":291.35,"temp_max":291.35,"pressure":1025,"sea_level":1025,"grnd_level":1020,"humidity":60,"temp_kf":0},"weather":[{"id":800,"main":"Clear","description":"clear

sky","icon":"01n"}],"clouds":{"all":7},"wind":{"speed":2.06,"deg":128,"gust":2.81},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-09 12:00:00"},{"dt":1699542000,"main":{"temp":290.74,"feels_like":290.25,"temp_min":290.74,"temp_max":290.74,"pressure":1024,"sea_level":1024,"grnd_level":1019,"humidity":65,"temp_kf":0},"weather":[{"id":804,"main":"Clouds","description":"overcast clouds","icon":"04n"}],"clouds":{"all":90},"wind":{"speed":1.21,"deg":158,"gust":2.41},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-09 15:00:00"},{"dt":1699552800,"main":{"temp":290.28,"feels_like":289.75,"temp_min":290.28,"temp_max":290.28,"pressure":1023,"sea_level":1023,"grnd_level":1018,"humidity":65,"temp_kf":0},"weather":[{"id":803,"main":"Clouds","description":"broken clouds","icon":"04n"}],"clouds":{"all":80},"wind":{"speed":0.41,"deg":287,"gust":0.93},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-09 18:00:00"},{"dt":1699563600,"main":{"temp":290.3,"feels_like":289.77,"temp_min":290.3,"temp_max":290.3,"pressure":1022,"sea_level":1022,"grnd_level":1017,"humidity":65,"temp_kf":0},"weather":[{"id":804,"main":"Clouds","description":"overcast clouds","icon":"04n"}],"clouds":{"all":93},"wind":{"speed":0.59,"deg":42,"gust":1.18},"visibility":10000,"pop":0,"sys":{"pod":"n"},"dt_txt":"2023-11-09 21:00:00"},{"dt":1699574400,"main":{"temp":290.42,"feels_like":289.98,"temp_min":290.42,"temp_max":290.42,"pressure":1021,"sea_level":1021,"grnd_level":1016,"humidity":68,"temp_kf":0},"weather":[{"id":804,"main":"Clouds","description":"overcast clouds","icon":"04d"}],"clouds":{"all":96},"wind":{"speed":0.48,"deg":310,"gust":0.72},"visibility":10000,"pop":0,"sys":{"pod":"d"},"dt_txt":"2023-11-10 00:00:00"},{"dt":1699585200,"main":{"temp":291.49,"feels_like":291.21,"temp_min":291.49,"temp_max":291.49,"pressure":1017,"sea_level":1017,"grnd_level":1012,"humidity":70,"temp_kf":0},"weather":[{"id":804,"main":"Clouds","description":"overcast clouds","icon":"04d"}],"clouds":{"all":100},"wind":{"speed":2.96,"deg":207,"gust":5.93},"visibility":10000,"pop":0,"sys":{"pod":"d"},"dt_txt":"2023-11-10 03:00:00"}],"city":{"id":1850144,"name":"Tokyo","coord":{"lat":35.6895,"lon":139.6917},"country":"JP","population":12445327,"timezone":32400,"sunrise":1699131978,"sunset":1699170196}}

Task 2: Google Maps API

I wrote a script in JavaScript, and used html and CSS for frontend to display the map. I created two functions, one to display a map centered on New York City and other to display the shortest route by car using the google maps JavaScript api.

Code Snippet:

```
    </style>
    <script src="https://maps.googleapis.com/maps/api/js?key=AIzaSyA0JU53zqjKWiZrPq9mp80iXEV
    KrQG3uUQ&callback=initMap" async defer></script>

    <script>
    var newYorkMap;
    var directionsMap;

    function initMap() {
        newYorkMap = new google.maps.Map(document.getElementById('newYorkMap'), {
            center: {lat: 40.7128, lng: -74.0060}, // Coordinates of New York City
            zoom: 10
        });

        initDirectionsMap();
    }

    function initDirectionsMap() {
        var directionsService = new google.maps.DirectionsService;
        var directionsRenderer = new google.maps.DirectionsRenderer;
        directionsMap = new google.maps.Map(document.getElementById('directionsMap'), {
            zoom: 7,
            center: {lat: 34.0522, lng: -118.2437} // Coordinates of Los Angeles
        });
        directionsRenderer.setMap(directionsMap);

        calculateAndDisplayRoute(directionsService, directionsRenderer);
    }
```
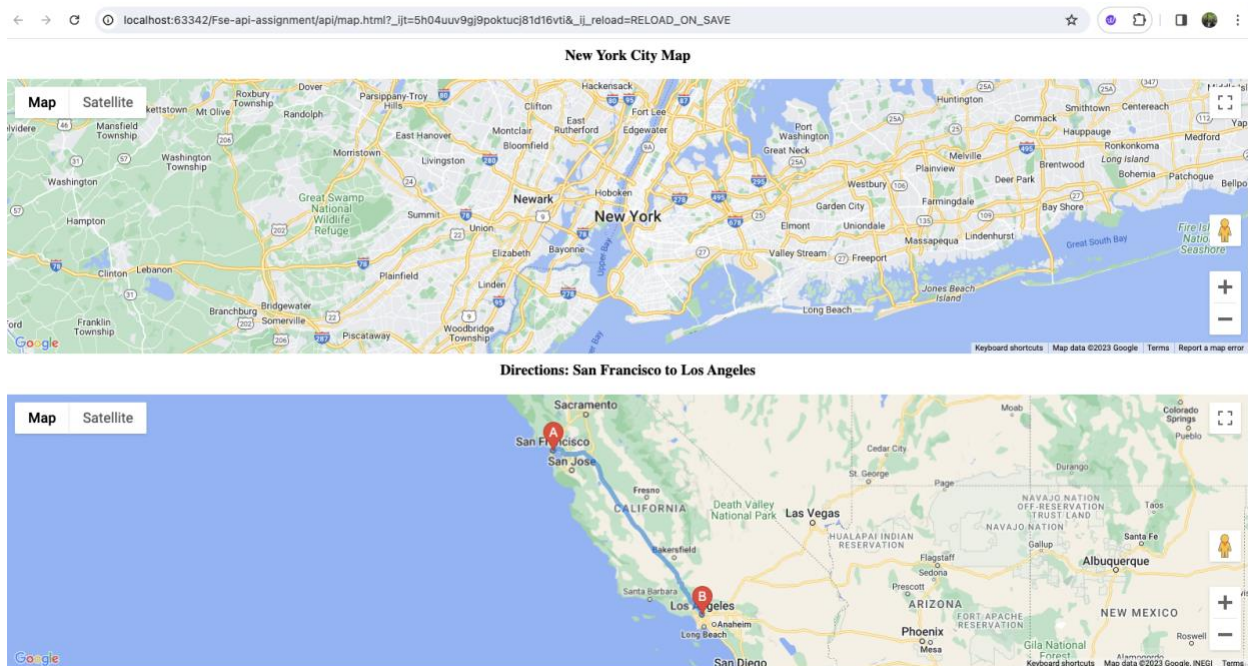
Path to the folder: src/main/java/api/map.html

API:
https://maps.googleapis.com/maps/api/js?key=AIzaSyA0JU53zqjKWiZrPq9mp80iXEVKrQG3uUQ&callback=initMap

Output:

Task3: REST Countries API

The Api gives all the information about the Brazil. So, for this task, using json formatter in Java, I have fetched only the required information.

Code Snippet:

```java
2 usages    ± Sejal Bansal *
public class RestCountriesApi {

    ± Sejal Bansal *
    public static void main(String[] args) {
        HttpClient client = HttpClient.newHttpClient();

        HttpRequest requestBrazil = HttpRequest.newBuilder()
                .uri(URI.create("https://restcountries.com/v3.1/name/brazil"))
                .build();
        System.out.println(requestBrazil);

        client.sendAsync(requestBrazil, HttpResponse.BodyHandlers.ofString()) CompletableFuture<HttpResponse<String>>
                .thenApply(HttpResponse::body) CompletableFuture<String>
                .thenAccept(RestCountriesApi::parseBrazilInfo) CompletableFuture<Void>
                .join();


        HttpRequest requestAfrica = HttpRequest.newBuilder()
                .uri(URI.create("https://restcountries.com/v3.1/region/africa"))
                .build();
        System.out.println(requestAfrica);

        client.sendAsync(requestAfrica, HttpResponse.BodyHandlers.ofString()) CompletableFuture<HttpResponse<String>>
                .thenApply(HttpResponse::body) CompletableFuture<String>
                .thenAccept(RestCountriesApi::parseAfricaCountries) CompletableFuture<Void>
                .join();
    }
}
```

Path to the folder: src/main/java/api/RestCountries.java

API: For Brazil
https://restcountries.com/v3.1/name/brazil

Brazil Information:
Population: 212559409
Area: 8515767.0
Official Language: por
Capital: Brasília
Latitude: -10.0
Longitude: -55.0
Region: Americas
Subregion: South America
Currency: BRL

API:
https://restcountries.com/v3.1/region/9frica GET
Response: The api gives a list of 59 countries, and I took the response from my code and just added tables, so that the response is displayed in a neat format.
Countries in Africa:

Malawi	Zimbabwe	Cape Verde	Libya
Cameroon	Togo	Guinea-Bissau	Algeria
Nigeria	British Indian Ocean Territory	Mali	São Tomé and Príncipe
Western Sahara	Tanzania	South Sudan	Angola
Lesotho	Gabon	Seychelles	Niger
Mayotte	Burundi	Chad	Réunion
Rwanda	Ethiopia	Djibouti	Senegal
Sierra Leone	Madagascar	Namibia	Morocco
Benin	Republic of the Congo	Mozambique	Somalia
Ghana	Gambia	Mauritius	DR Congo
Central African Republic	Guinea	Saint Helena, Ascension and Tristan da Cunha	Mauritania
Kenya	Zambia	Comoros	South Africa
Egypt	Eritrea	Equatorial Guinea	Liberia
Tunisia	Burkina Faso	Uganda	Eswatini
Sudan	Ivory Coast	Botswana	

Task 4: Currency Converter API

For this task, I was not able to use the given api, as it asked to register and they'll take 3-5 business day to respond back with the api key. So, I found an api online, which instantly upon registration gave me the api key, and I was able to perform the task.

Code Snippet:

```java
1 usage
private final String apiKey = "12be5cf2890545822a519cca";

2 usages    ± Sejal Bansal
public double convertCurrency(String fromCurrency, String toCurrency, double amount) throws IOException {
    String url = "https://v6.exchangerate-api.com/v6/" + apiKey + "/pair/" + fromCurrency + "/" + toCurrency + "/" + amount;

    Request request = new Request.Builder()
            .url(url)
            .build();
    System.out.println(request);

    try (Response response = httpClient.newCall(request).execute()) {
        if (!response.isSuccessful()) throw new IOException("Unexpected code " + response);

        // Parse the response to extract the conversion result
        String responseBody = response.body().string();
        JSONObject jsonObject = new JSONObject(responseBody);
        double conversionResult = jsonObject.getDouble( key: "conversion_result");

        return conversionResult;
    }
}
```

Path to the folder: src/main/java/api/CurrencyConverterApi.java

API:
method=GET,
url=https://v6.exchangerateapi.com/v6/12be5cf2890545822a519cca/pair/USD/EUR/100.0
Response:
100 USD is 93.2 EUR

API:
method=GET,
url=https://v6.exchangerateapi.com/v6/12be5cf2890545822a519cca/pair/JPY/GBP/1000.0
Response:
1000 JPY is 5.396 GBP