WhiteHat Jr
Live Online Coding for Kids

INSTRUCTIONS:

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Goal of the Project:

In Class 179, we have learned how we can add interactive maps using Mapbox JS GL library in our web applications.

We have also learned to add controls using GeolocateControl, to get the current location of the user and MapboxDirections control, to get the directions to travel from the source to till the destination.

In this project, you will practice the concepts learned in the class.

Story:

An NGO that looks after physically impaired people wants to take them on a road trip. Their biggest obstacle is not being able to communicate the weather conditions of any particular location to all of their people verbally, therefore they have hired you, an expert in AR, to build them an AR application through which they can visualise the weather conditions of a given location to their people.
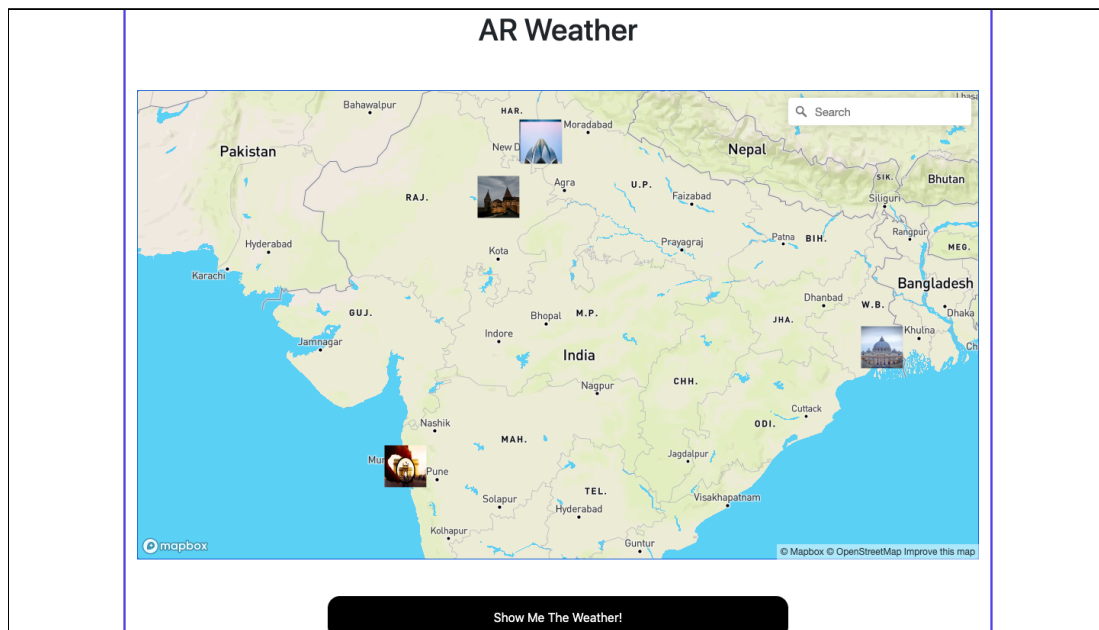
*This is just for your reference. We expect you to apply your own creativity to the project.

Getting Started:

1. Open C-178's Project Solution in VS Code Editor.

Specific Tasks to complete the Project:

1. In **main.js** file:
   - Take **latitude, longitude and destination** as global variables.
   - Create a **$(document).ready()** function in which **alert()** the user to allow their device to know their location. Also call a function **initGeolocation()** in the **$(document).ready()** function.
   - Create the **initGeolocation()** function which will take the current position of the user and pass it to the **success()** callback function.
   - Create the **success()** callback function and fetch the **latitude and the longitude** based on the user's current location and save it in the corresponding global variables.
   - Move your Map's code inside this **success()** callback function.
   - Add an **onResult()** function to the map's geocoder to save the destination position. (Refer to Hint 1)
   - Create an **onClick()** event inside a **$(function(){})** to navigate the user to a separate page called **ar_weather** and pass the **source latitude and longitude and the destination** as query parameters. (Refer to Hint 2)
   - Build a corresponding button and style it in **main.html**

2. Create a new file **ar_weather.html**. Inside this file -
   - Create the basic HTML structure with **html, head and body tags**.
   - Add the **jQuery's** Script tag in the **<head>** just like in **main.html**
   - Add a script tag in **<body>** adding **ar_weather.js** file in this html
   - Add **AFrame CDN**
     - <script src="https://aframe.io/releases/1.0.4/aframe.min.js"></script>
     - <script src="https://unpkg.com/aframe-look-at-component@0.8.0/dist/aframe-look-at-component.min.js"></script>
     - <script src="https://raw.githack.com/AR-js-org/AR.js/master/aframe/build/aframe-ar-nft.js"></script>

3. Create a new file **ar_weather.js**. Inside this file -
    - Create a global variable called **coordinates,** which will be an **empty object**.
    - Create a **$(document).ready()** function and call a **get_coordinates()** function inside it.
    - Create the **get_coordinates()** function and using **URLSearchParams()**, get the source and destination latitude and longitudes.
    - Save the **source_latitude, source_longitude, destination_latitude and destination_longitude** in the **coordinates object**.

Submitting the Project:

1. Upload your completed project to your own GitHub account.
2. Create a new repository named **Project 179**.
3. **Upload** your project code to this GitHub repository.
4. Submit the published link of the project in the Student Dashboard.

Hints:

1. Adding **onResult()** on map's geocoder:

```
map.addControl(
        new MapboxGeocoder({
                accessToken: mapboxgl.accessToken,
                mapboxgl: mapboxgl
        }).on('result', function (e) {
                destination = e.result.center
        })
);
```

2. Navigating to the **ar_weather** page:

```
$(function () {
        $("#navigate-button").click(function () {
                window.location.href = `ar_weather.html?source=${latitude};${longitude}&destination=${destination[1]};${destination[0]}`
        })
})
```

REMEMBER...
Try your best, that's more important than being correct.
After submitting your project your teacher will send you feedback on your work.

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