Lab 6 – Sunrise Sunset API Dashboard

Introduction

This lab will have you build an HTML, CSS, and JS dashboard to show sunset and sunrise times at the current location or any searched location.

Requirements

- Use this API endpoint for your data: https://sunrisesunset.io/api/
- Read the API documentation page to see how to make requests, the format the response will be, and how to handle errors
- There is no specific mockup for this lab. Please come up with your own layout and design as long as it meets the requirements below. Do not do the same exact layout as another student.
- You may want to look at one of the site examples for ideas for presentation of data.
- There should be two options for the user to get sunrise and sunset data for a given location.
    - **441 Students** – Add a select list with specific named locations that you want to include (at least 10) that the user can choose from. You can get GPS coordinates for those locations in plenty of places on the web or using Google Maps.
    - **541 Students** – In addition to the select list above, users should be able to use current location with a button or somehow uses the Geolocation API.
- You may use any AJAX approach to request the data and process it.
- Upon a successful response your dashboard should be updated to show the following from the response data
    - Sunrise and Sunset for both Today and Tomorrow
    - Dawn and Dusk for both Today and Tomorrow
    - The day length for both Today and Tomorrow
    - What time is solar noon for both Today and Tomorrow
    - What time zone are the times shown in
- Be creative with how you display the info. Use modern CSS layout methods like flexbox and grid to display the data. Try to use some images/icons to make it look nicer.
- Please show placeholder content or empty reserved space before the user submits the request.
- If there is an error with the response show the user an error message that explains what happened. Don't show broken data or markup in your dashboard.
- Make sure you style the dashboard nicely with CSS. I will be looking at the layout and styling to determine how well the information is presented to the user.
- Make sure the user can do another search using the UI without having to reload the webpage in the browser. No dead ends in the UI.
- **Test completely** before submitting.
- Make sure the HTML document uses the HTML5 page structure we talked about in class.

- Add your CSS and JS as **external files**.
- You may use a CSS framework if you like.
- Make sure you credit the API on your page as described in the "Example Requests" section of the API doc page.
- 441 students just need to make it work and look nice on desktop. 541 students need to make sure it still is usable on smaller screen sizes like mobile. Resize your browser window or use the develop tools in mobile mode to test. 541 Students should be using media queries.
- Submit your project files as a zip file to the Canvas assignment. All files needed for your project need to be in the zip.
- If needed include any instructions needed to run the lab in a Readme file in the project or in the text field when submitting your zip to Canvas.

Graduate Additional Requirements

If you are involved in **any section of 541** you need to complete the additional requirements listed here.

Make sure the user interface works well at mobile phone sized screens. You can do this with responsive CSS or with a creative way of laying out the UI, so it works well on both desktop and mobile. Use browser dev tools to test on mobile. Also, there is a higher expectation on the quality of CSS used for 541 students.

README File

Not Required for this Lab

Due Date / Late Policy

This assignment is due **Saturday November 30, 2024, 11:59 PM Chicago Time**. **No Extensions or Exceptions. No assignments will be accepted after Dec 1 and finals week begins.**

Submission Guidelines

You must upload your submission, to the canvas assignment by the due date. The submission must be in the following format and structure. If you do not submit your assignment exactly as specified, you will receive an immediate 10% deduction.

Submission Format Specification:

Submit to the canvas assignment a zip file containing all your code needed for the lab. You should expect us to be able to unzip the file, run the code, and test it. Test before you submit.

Resources
https://sunrisesunset.io/
https://sunrisesunset.io/api/