

### In-Class Activity: Song Search

For this activity, you'll work in pairs (doesn't need to be someone from your group) to create a search page.

When you are finished, compress all files needed to run your code into a zip file. In the name of the zip file, include the names of *both* group members. Only one group member needs to turn in this assignment on Moodle. It is worth 15 points, graded on completion, not correctness.

In the same folder where you found these instructions, there are two example JSON data files. One contains my top Spotify songs as reported by the Spotify API in Fall 2023. The other contains my most up-to-date top Spotify songs. You can use either file for this activity.

You can demo my working version of the search page here, as long as you're in the same room as me and my laptop:

<http://156.143.166.96:5500/www/search.html>

Don't look at the source code though—that would spoil the fun!

The search page should contain the following elements:

- A text input field for the user's search query
- A dropdown menu for the field to search within (title, artists, or genres)
- A dropdown menu for the order in which to sort the results (by popularity score or duration)
- A checkbox that determines whether explicit songs will appear in the results
- A search button that, when clicked, performs the search

Note that you may use a GET or POST request for the search operation. It's up to you, but choose wisely!

Hints:

- Set the value attributes of your option elements in the dropdowns to match up with the keys in the JSON file for ease of programming.
- Pay close attention to the structure of the JSON file. For example, note that each song's title is a string, but its artists and genres are both *lists* of strings.
- Implement one feature at a time. Start with just the text field, the "search by" dropdown, and the search button. Then, try adding the explicit checkbox. Last, add the sort dropdown.
- Start with the frontend layout, then write the corresponding backend code. Finally, write the JavaScript code which brings data from the backend to the frontend.
- For more information about HTML form elements, read this page: [https://developer.mozilla.org/en-US/docs/Learn/Forms/How\\_to\\_structure\\_a\\_web\\_form](https://developer.mozilla.org/en-US/docs/Learn/Forms/How_to_structure_a_web_form)