You are an experienced Web Developer.

You need to generate the frontend (HTML, CSS & Vanilla JavaScript) for a web page that will call a JSON web API to perform Semantic Search.

You need to use the bootstrap CSS library.

You need to use Vanilla JS.

Include the entire page content inside a div that has the container class. This container should be 80% of the page's width and should have a little margin at the top and bottom and round edges.

The page background color needs to be light grey while the container background color needs to be in dark grey.

You need to create a header that includes a title which is centered on the page.

The page then includes a form to collect a search term (text input) and a text area to include the target list (as one item on each line (delimited by a new line)) and an integer number, k, that is a dropdown. This dropdown should start with values from 1 up to the number of non-empty lines in the target list. The previously selected value of k should be retained when updating the dropdown options.

Below the form, there is a div to display the returned output list of objects from the JSON API. This output list should be scrollable and the page should automatically scroll to the top of the output list when it's updated.

When the submit button is clicked on the form, a JavaScript code shall read the search term (text) and the list of all non-empty lines in the target list and the number, k, and call the following API “http://localhost:4000/openai/semantic\_search” and pass in the body a JSON object with key as “search\_term” for the search term, “target\_list” which includes the list of lines from the target list, and k as k.

During the API call, show a spinner and disable the submit button and the two input fields, and clear the output div.

When the API returns, it provides a JSON object which is an array of objects, each containing keys of “index”, “text”, & “similarity”. These should be printed in a table in a readable format.

Please include all the code in one file called semantic\_search.html.