**CMPS 356 – Fall 2022**
**Web Applications Design and Development**

**Assignment 03**
**Transitions and Queries**

**Instructions**

1. The deadline for completing your work is Saturday, December 3, 2022 at 11:59:59pm

2. Push your code to your private repository under `assignments/assignment03`

3. Commit often and use meaningful message summaries and descriptions

4. Complete your work before the deadline; a late push will be ignored

5. Deploy your site using Vercel (`https://vercel.com`) and include a link in `link.txt`

6. Any form of plagiarism will be treated seriously and reported

1. **Efficient Word Search**

1. Create a Next **13** application under `assignment03`.

    1.1. Use React to complete the following tasks.

    1.2. Use React Query for fetching the data.

    1.3. Use a React component library for the user interface.

2. Use an input under `/words` to allow the user to search for words with a similar meaning to their query using the Datamuse API at `https://www.datamuse.com/api`.

3. Display the results as a table. Create a component to render this table of words along with their score and tags.

4. Display a progress indicator or spinner while the results are being fetched from `/words`.

5. Optimize the search by using a transition for the value of the query text. Highlight the input when the transition is pending.

6. Use the `/sug` endpoint from the Datamuse API to offer suggestions for completing the user's input.

7. Display a progress indicator or spinner while the results are being fetched from `/sug`.

8. Allow the user to select words of interest and keep track of them. Serialize this list and reload it between sessions using a Zustand store.

9. Allow the user to update the search query by clicking on their words of interest.

10. Provide a query parameter so that the results can be directly accessed using `/words?query=word`, for example, `/words?query=computer`.

11. Update the browser's location to match with the query whenever it is updated by the user.