

CMPS 356 – Fall 2022

Web Applications Design and Development

Assignment 02

State and Navigation

Instructions

1. The deadline for completing your work is Sunday, November 6, 2022 at 11:59:59pm
2. Push your code to your private repository under `assignments/assignment02`
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. Tile Matching

1. Create a Next application under `assignment02`.
 - 1.1. Use React to complete the following tasks.
 - 1.2. Use MUI for your user interface components.
2. Display, in a responsive grid, a random list of emojis that the user must match in pairs. Use an even number of emojis: 2, 4, 6, etc.
 - 2.1. The first level is made up of 2 emojis.
 - 2.2. You can use a package to generate the random list of Unicode emojis.
 - 2.3. Your emoji pairs must be unique, that is, no duplicate pairs.
3. Your tile matching game should be accessible through `/tiles`.
4. Highlight a cell when it is clicked and clear the selection whenever there is a match with another cell or a mismatch. The cells matched so far in a level should be marked so that the user can track their progress.
5. Display a link to move to the next level whenever the user completes a level.
 - 5.1. The levels should be accessed using `/tiles?level=1`, `/tiles?level=2`, etc.
 - 5.2. Redirect to user to `/tiles?level=1` when they access `/tiles` directly.
 - 5.3. Each level should increase the size of the grid by two rows and two columns.
6. Apply rotations to your tiles to make the levels a bit more challenging.
7. Store the user progress in local storage so that it is saved between sessions. The level, progress, tiles, and rotations must be serialized.