

S18 CSCI470 Web Science

Phillip J. Curtiss, Assistant Professor

Lab-180202 Tower of Hanoi SPWA
Ch-1-6; HTML5 IIEF CSS DnD Grid

Due Date: 2018-02-11 by 11:59:59p

PURPOSE: Create an interactive *single page web application* (SPWA) that allows the user to solve the *towers of hanoi* game.

LAB ENVIRONMENT:

You may use the Lab PCs location in CBB 001 for this Lab. This material will be posted to the Moodle area for the course.

SUBMISSION OF LAB REPORT:

Your lab report for this assignment must be typed and contain all of the information requested from the lab assignment to receive full credit. Your report *must* include, at a minimum, the course name **CSCI 470 Web Science**, the date of the lab, and your full name.

Once you have completed your lab report, please submit the report, along with any code, to the GITLab.

Do not forget to add the instructor to your project area on GITLab for review and grading purposes.

LAB ACTIVITIES:

Please perform the following activities in the completion of the lab assignment.

For each of the enumerated tasks below, please provide in your lap report the following:

1. Review the provided lab files on GitLab
2. Modify the CSS to allow the data-blocks to be centered in each data-stack and appear on the bottom of the stack as they are moved.
3. Implement the HTML5 drag-and-drop behaviors in the JavaScript file to allow the user to drag the blocks and move them from one data-stack to another, without violated the rules of the game.
4. Detect when the user has won the game and display a message to this effect.
5. Make sure to adhere to the *progressive enhancement* approach toward development - keeping structure, presentation and behavior as separate as possible.
6. Make sure you create your JavaScript behavior layer using the *namespace* and *module* design patterns we discussed in class.
7. Modify the application to include the ability to reset the game.
8. (Extra Credit) Modify the application to allow the user to select the level of difficulty by choosing between four (minimum) and seven (maximum) discs.