CS-639 Building User Interfaces, Fall 2020, Professor Mutlu

React 1 β (3 Points)

Reimagining Layout, Structure, & Navigation

In this assignment, you will explore the concepts we learned in the lecture, titled "*Interaction Design: Structure, Layout, & Navigation*."

Part 1—Analysis: In this part, you will analyze your current solution for the *React 1 α* Assignment in terms of its structural, layout, and navigational elements.

Part 2—Redesign: This part will involve using the principles and components covered in class to redesign your solution and describe your design choices.

Part 3—Implementation: In this part, you will implement your new design by extending your implementation for the *React 1 α* Assignment using additional React and/or Bootstrap components.

Submission Details

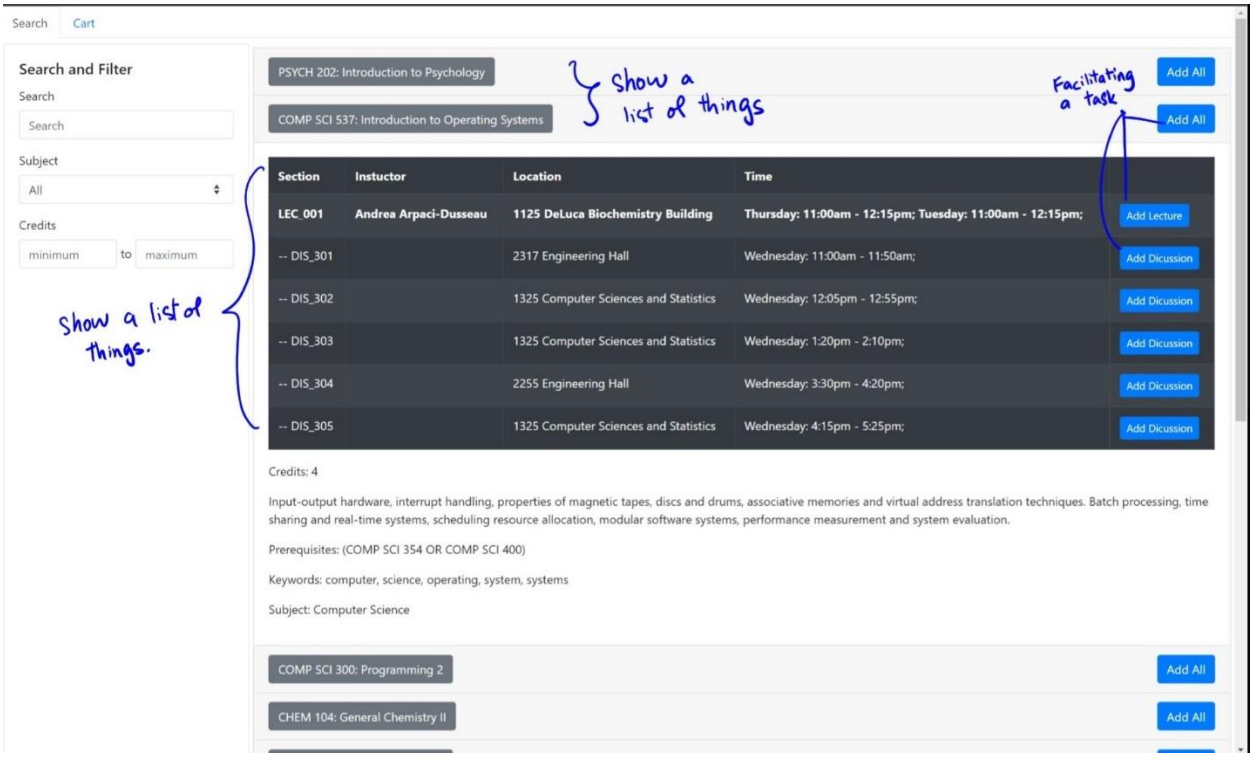
GitHub Classroom Starter Code

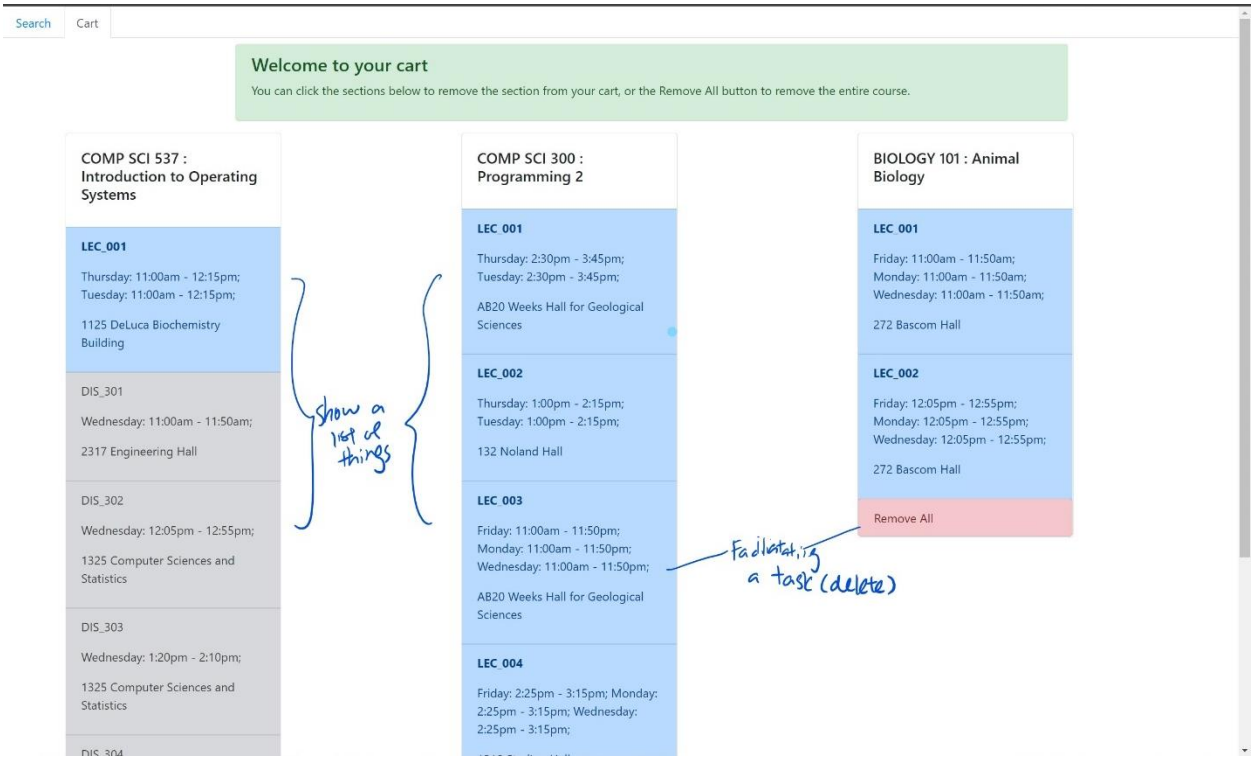
React 1 β will build on your implementation of React 1 α. You should copy your code from your React 1 α project to the React 1 β repository linked above, as that will be your starter code. When you commit and push, ensure that you are committing and pushing to the react1-beta repository, not react1-alpha.

To complete the assignment, you will need to submit a completed version of this document as PDF to Canvas. In addition, you will submit your repository name and latest commit hash from GitHub Classroom, e.g. react1-beta-ctnelson1997, 2b0ef83.

Part 1: Analysis (0.6 Points)

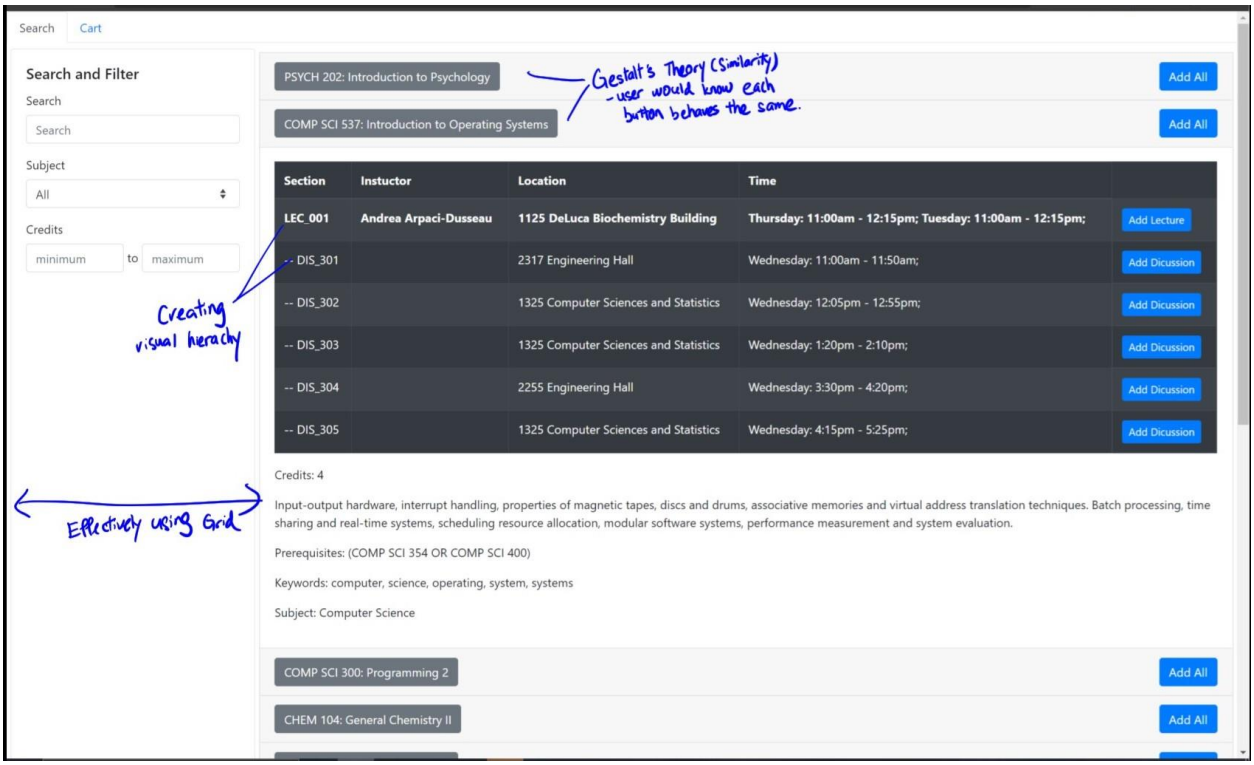
(0.2 Points) **Step 1. Analyze Structures.** What kind of structure(s) (e.g., "Show one single thing") can you identify in your *React 1* ☒ implementation? Does it follow a single structure or combine structures? Take a screenshot of your implementation and annotate it to point at the structure(s) you identify, briefly (2-3 sentences) describing them and explaining why parts or all of your implementation follow these structures.



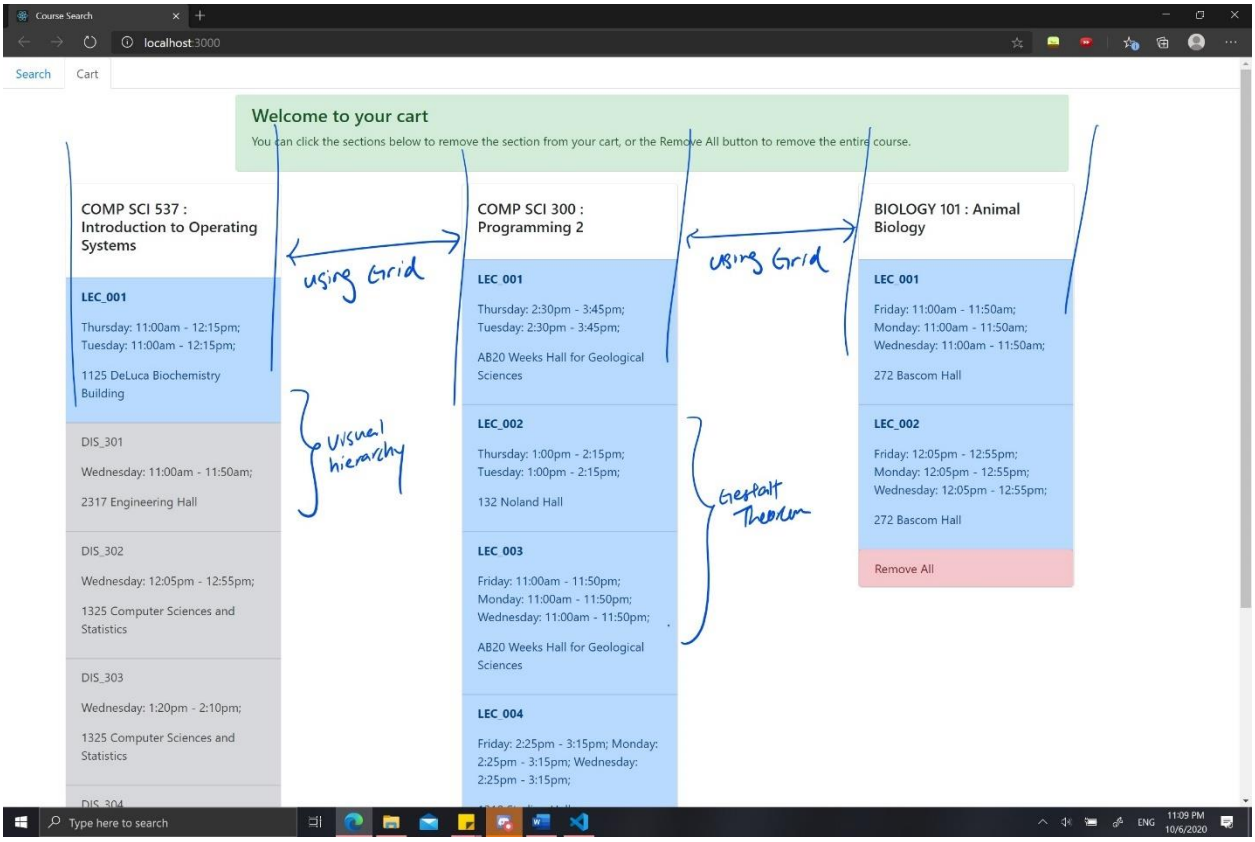


1. Show a list of things (courses) – There are a list of courses user can choose from. Showing a list of these courses allow users to easily glance through the courses that they want to choose. This is to easily let the users glance through the courses they want without much context switching.
2. Show a list of things (sections) – Enable users to glance through the many “options” of the course they want to select. Allow the user to choose a section they want in particular course at a glance without much context swtiching.
3. Facilitating a task – The buttons are example of facilitating a task, and it allows user to add/remove these courses to the cart.

(0.2 Points) **Step 2. Analyze Layout.** Describe the current layout of your *React 1 ☒* implementation, identifying what principles of layout design (e.g., golden proportion, visual hierarchy, visual scan patterns) it currently follows (at least two principles). Use the same (unannotated) screenshot from Step 1 and draw or annotate the principles you identified. Either make additional copies of the screenshots or use different colors for multiple principles.



1. Gestalt's Theory (Similarity): User would know that clicking another courses would expand the detailed options since all buttons looked the same.
2. Creating visual hierarchy: The section is bolded, and subsections are not.
3. Effectively using grids: Search and filter panel used grid to better use the SPA space.

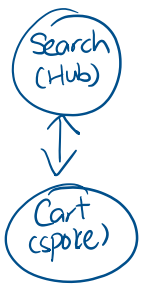


1. Gestalt Theorem: User can easily know elements by look at the color (blue are lectures and greys are discussions).
2. Using Grid: to easily glance through many sections and create organized aesthetic.
3. Visual hierarchy: Different colors (blue, grey) creates hierarchy of the sections (lectures > discussions).

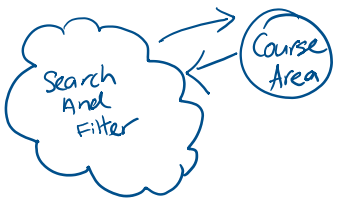
(0.2 Points) **Step 3. Analyze Navigation.** Consider your *React 1* ☒ implementation, what navigation model(s) does it use? Below, draw the navigation model that your implementation follows the same way navigation models were described in class.

---

1. Hub and Spoke

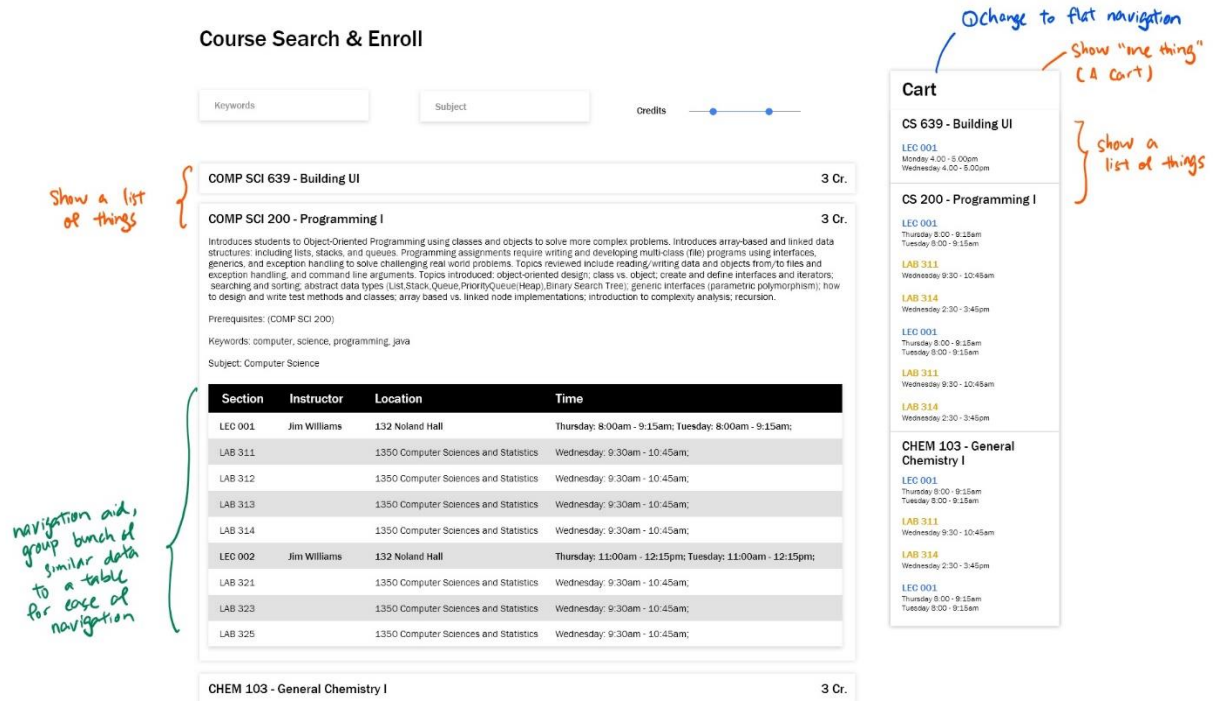


2. Flat navigation

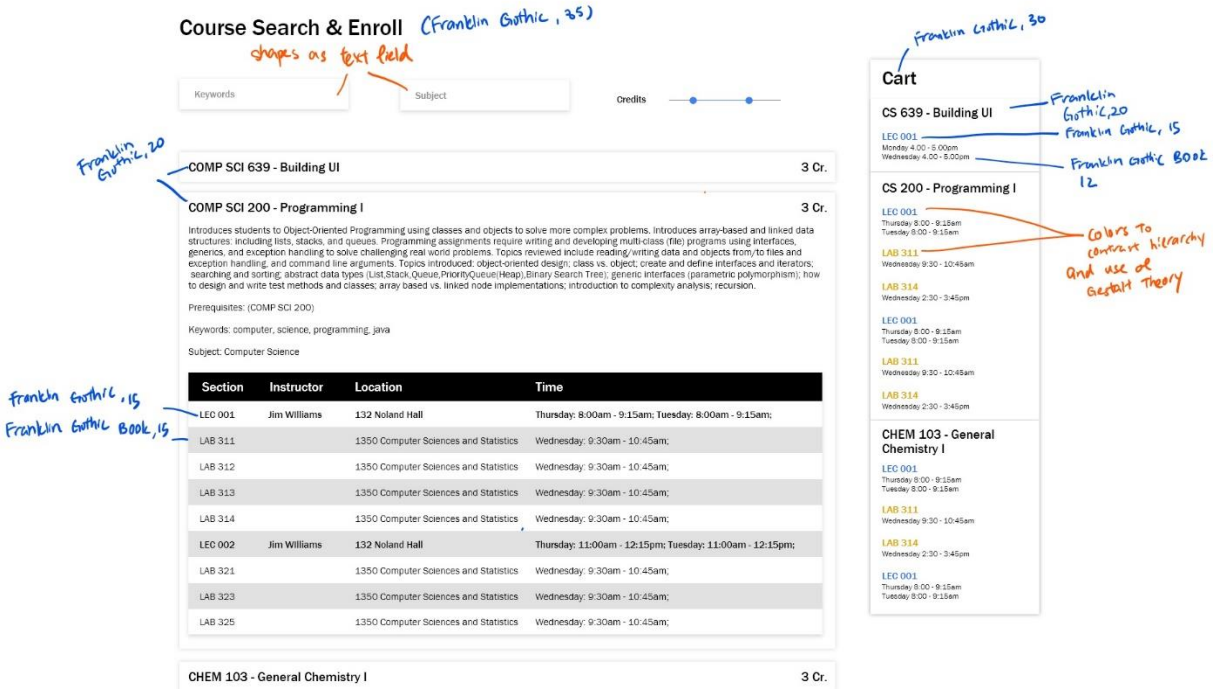


Part 2: Redesign (0.8 Points)

(0.4 Points) **Step 1. Conceptual Redesign.** In this step, you will reimagine your *React 1* implementation, such that it uses a different set of structures, navigation models, and/or principles of layout design. Your goal should not be to change your implementation for the sake of changing it, but consider ways in which the structures and layout and navigation principles might improve your implementation. Your conceptual redesign should involve the use of at least one layout principle, make at least one change in the navigation model, and introduce at least one element/aid to improve navigation. The use of additional or a different set of structures is optional. Provide a hand-drawn or digitally created (e.g., in Adobe XD) mock-up of your design below. Annotate your design to describe your design choices, highlighting the specific principles you employed.



(0.4 Points) **Step 2. Detailed Redesign.** In this step, you will build on your mock-up to create a detailed design, determining image, color (for background and elements), type, size, icons, and so on (as we also did, to some extent, in the Javascript β Assignment). Provide a digitally created mock-up (e.g., in Adobe XD) that shows your design choices. Annotate your mock-up to describe your design choices.



1. Font – Franklin Gothic for bold/emphasized text, and Franklin Gothic Book for normal text
2. Font size: Depends on the hierarchy which follows (Title, course name, sections, details)
3. Black and white color scheme for course (unity)
4. Clickable items are elevated to show affordances and direct user attention.
5. Contrast (of hierarchy) are created using font-weight.

Part 3: Implementation (1.6 Points)

(0.3 Points) **Step 1. Inspect Library Elements.** In this step, you will inspect the standard React component library, the Bootstrap component library, and/or an alternative that you are comfortable working with to see how you can realize detailed design you created in the previous part using these components. You are not expected to change the library components to exactly match your design choices, but to identify which component elements might best meet your design goals. Below, copy the design and the choices you generated in Part 2 and annotate them to describe which components from the library you will use to accomplish your design goals.

(1.3 Points) **Step 2. Implement Redesign.** The last step of this part will involve implementing the design improvements you described in Part 2, using the layout and components you described in the previous step. You can use standard React components, Bootstrap components, and/or an alternative library in your implementation. You do not have to implement new *functionality*; focus on implementing your *design*.

Your deliverable will be a completed version of this document, attached to the canvas assignment as a PDF, and the GitHub Classroom repository name and latest commit hash.