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* 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* 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.

- The Search page has the combined structures of "show a list or set of things" and "facilitate a task"

The implementation follows this structure is simply due to the fact that we want to show users the list of courses meet the searching criteria and add the courses/sections/subsections they want. So that the page is divided into two part: one part allows users to set their search criteria ("facilitate a task"), the other part shows users the courses that meet their criteria (" show a list or a set of things") Although there are some buttons in each of those item in the list to either add course/section/ subsection or show sections, as we are thinking of the overall structure, the bigger picture would focus on the list of items instead of those small tools inside the items.

- The Cart page also has the structure of "show a list or set of things"

The implementation follows this structure due to the fact that we want to show the users what courses/sections/subsections/ they added and enable them to remove the added courses/sections/subsections from the cart. Therefore, the cart page show a list of added courses ("show a list or set of things") to give users clearer views about the courses. Again, although there are some buttons inside the items of the list for users to remove course/section/subsection, as we are thinking of the overall structure, the bigger picture would focus on the overall list of courses inside of those tools inside.

(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.


- The current design utilized grids to show the sections and subsections. In this way, the info are showed in an clear, orderly and balanced way.
- The current design creates contrast and emphasis with the colored button for add/remove courses/sections/subsections. There are also contrast and emphasis with the different font choices,

such as the font for course number and title are bolder and much larger, but not enough contrast in colors are used to draw users' attentions to those elements.

- The current design created visual hierarchy with the different font sizes and colored buttons. For example, for the font size, the course title number has the largest font size, then the credit and subject has larger font size and other texts have smaller font sizes.

(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.

It uses a fully connected model as the only two pages, search page and cart page, are linked to each other. We define the search page as the central page as this is the page where user see when they load the website (also because our website is called course search).
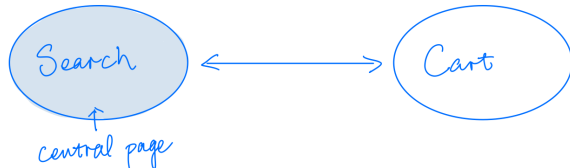
Part 2: Redesign (0.8 Points)

(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.

- Change the **navigation model** to a flat navigation, where the search and cart page is on the same page. More specifically, we can narrow the sidebar, have search area in the middle and cart in the left with smaller width than the search area. In this way, it is easier for the users to see the courses that they selected in one page and in a clearer view instead of swapping between pages to reduce the cost of navigation.
- As we now have the search and cart on one page, we do not need to display a lot of details of the courses in the cart, so we will only have the course number, name, and added sections shown in the cart to have a clearer "a list or set of things" structure for the cart section. Also, the overall structure of

the page will be changed into a combined structure with left sidebar to "facilitate a task", and the show courses and cart sections to be two "lists or sets of things" **structure**.

- We will have the cart section highlighted for some seconds once there are changes made to cart to let user know the change so that they will navigate to the cart section and use this as an **aid to improve the navigation.** Also, add a header to let the users know where they are.
- **Improve the grids** lengths of the sections/subsections. Right now, the length of grids depend on the length of contents inside, which will change for different courses. As the grid provide an ordered and balanced view of the large number of sections/subsections, I will keep this layout, but I will unify the same length for the grids to improve the order and balance.
- **Keep and improve the layout for Hierarchy** in the current design as we still want the users to focus on courses number and titles first. We can improve the hierarchy by
- **Lower the contrast of the add courses button** and **put more contrasts on the courses number and title** as we want to have the users to focus on the courses number and title more than the add courses button (but the color of the current button seems to draw users' attentions too much)
- **Add more negative spaces** in the layout to increase the hierarchy.
- Shorten some input boxes to have a clearer view, such as minimum to min as the user input is only a number that is short and there is no need to have a really long input box (min can also be understood clearly)

(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.

- For the color choices, we still want to use the color for web on UW website just as JS Beta, but use those color for different purpose. The colors can be found here: https://brand.wisc.edu/web/colors/
- We use a display font (Pralines) for the header because we want to have a sense of showing the title as an icon and "times new roman" for the remaining texts to show the info clearly.
- We want to separate the lecture with discussion/lab in the grid of sections with colors. However, if we use a different color for those sections, the sections will stand out and draw users' attentions more than the course titles, which is not what we want. We will fix this by emphasizes the courses title more with contrasted color to increase its hierarchy.

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.

- Use bootstrap margin/padding for the margin and padding instead of setting it with style
- Try to use bootstrap class of background color or text colors to unify all the elements easier.
- Use a container of grids of bootstrap to separate the page into three sections
- Use table and collapse for the sections

(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.

- Normal, without highlight

COURSE SEARCH

Search and Filter

Search

[Search]

Subject

[All]

Credits

[Min] to [Max]

Course List

PSYCH 202: Introduction to Psychology

Credits: 3

Subject: Psychology

Behavior, including its development, motivation, frustrations, emotion, intelligence, learning, forgetting, personality, language, thinking, and social behavior.

Requisites: None
Keywords: psychology, behavior, emotion, intelligence, brain

[Add Course]

[Hide Sections]

Number	Instructor	Location	Meeting Times	Option
LEC_001	Jeff Henriques	105 Brogden Psychology Building	thursday: 9:30am - 10:45am tuesday: 9:30am - 10:45am	[Add Lecture]
LEC_002	Jeff Henriques	105 Brogden Psychology Building	thursday: 11:00am - 12:15pm tuesday: 11:00am - 12:15pm	[Add Lecture]
LEC_003	C. Shawn Green	105 Brogden Psychology Building	monday: 8:00am - 9:15am wednesday: 8:00am - 9:15am	[Add Lecture]
LEC_004	Patti Coffey	105 Brogden Psychology Building	thursday: 1:00pm - 2:15pm tuesday: 1:00pm - 2:15pm	[Add Lecture]
LEC_005	Sarah Gavac	105 Brogden Psychology Building	thursday: 2:30pm - 3:45pm tuesday: 2:30pm - 3:45pm	[Add Lecture]
LEC_006	Patti Coffey	101 Brogden Psychology	thursday: 2:30pm - 3:45pm	[Add Lecture]

Course Cart

COMP SCI 537: Introduction to Operating Systems
4 Credits

[Remove Course]

Number	Meeting Times	Option
LEC_001	thursday: 11:00am - 12:15pm tuesday: 11:00am - 12:15pm	[Remove Lecture]
DIS_301	wednesday: 11:00am - 11:50am	[Remove Section]
DIS_302	wednesday: 12:05pm - 12:55pm	[Remove Section]
DIS_303	wednesday: 1:20pm - 2:10pm	[Remove Section]
DIS_304	wednesday: 3:30pm - 4:20pm	[Remove Section]
DIS_305	wednesday: 4:15pm - 5:25pm	[Remove Section]

- Highlighted

COURSE SEARCH

Search and Filter

Search

[Search]

Subject

[All]

Credits

[Min] to [Max]

Course List

PSYCH 202: Introduction to Psychology

Credits: 3

Subject: Psychology

Behavior, including its development, motivation, frustrations, emotion, intelligence, learning, forgetting, personality, language, thinking, and social behavior.

Requisites: None
Keywords: psychology, behavior, emotion, intelligence, brain

[Add Course]

[Show Sections]

COMP SCI 537: Introduction to Operating Systems

Credits: 4

Subject: Computer Science

Input-output hardware, interrupt handling, properties of magnetic tapes, discs and drums, associative memories and virtual address translation techniques. Batch processing, time sharing and

Course Cart

PSYCH 202: Introduction to Psychology
3 Credits

[Remove Course]

Number	Meeting Times	Option
LEC_001	thursday: 9:30am - 10:45am tuesday: 9:30am - 10:45am	[Remove Lecture]
LEC_002	thursday: 11:00am - 12:15pm tuesday: 11:00am - 12:15pm	[Remove Lecture]
LEC_003	monday: 8:00am - 9:15am wednesday: 8:00am - 9:15am	[Remove Lecture]
LEC_004	thursday: 1:00pm - 2:15pm tuesday: 1:00pm - 2:15pm	[Remove Lecture]
LEC_005	thursday: 2:30pm - 3:45pm tuesday: 2:30pm - 3:45pm	[Remove Lecture]
LEC_006	thursday: 2:30pm - 3:45pm tuesday: 2:30pm - 3:45pm	[Remove Lecture]
LEC_009	monday: 4:30pm - 5:15pm wednesday: 4:30pm - 5:15pm	[Remove Lecture]