



A white speech bubble is centered on a background composed of overlapping triangles in shades of red, teal, brown, light blue, and cream.

REACT 1

App.js

API

CourseArea

Gives data

"Facilitate a task": provides a faceted search field that help users to customize their search by keywords, subject, and number of credits. This structure is followed, since users should be able to perform the task of searching courses effectively.

The screenshot shows a user interface for course search. On the left, there's a sidebar with a search bar and dropdown menus for 'Subject' (set to 'Computer Science') and 'Credits' (with 'minimum' and 'maximum' fields). The main area displays a course card for '(COMP SCI 200) Programming 1 | 3 credits'. The card includes the subject ('Computer Science'), a detailed description of the course content, prerequisites ('None'), keywords ('computer, science, programming, java'), and a section list. The section list starts with 'Sections:' and includes 'LEC_001' with its details: Instructor (Jim Williams), Location (132 Noland Hall), and Meeting Times (thursday: 8:00am - 9:15am, tuesday: 8:00am - 9:15am).

Combining Structures

This screenshot shows a list of subsections under the 'Subsection' heading. Each subsection entry includes a title (e.g., LAB_311, LAB_312, LAB_314, LAB_315), a remove button, and a 'Add Subsection' button. Each entry also lists course details like room numbers (1350 Computer Sciences and Statistics) and meeting times (e.g., LAB_311: wednesday: 9:30am - 10:45am; LAB_315: wednesday: 4:00pm - 5:15pm).

"Show one single thing": Focusing on conveying comprehensive information on a specific course for students to check its details (number of credits, subjective, description, etc.) and add that course to cart or remove. Content is the course info; supporting tool is the add/remove course button. This structure is followed, since we want to direct user's attention to this course, while eliminating other distractions.

"Show a list or set of things": this part provides rows of subsections, and users can choose to add anyone or multiple of them to cart or remove. This structure is used to display all subsections with options to the user.

#1

"Creating contrast and emphasis": Empty space (left) vs. Filled space (right)

Search Cart

Search and Filter

Search

Subject Computer Science

Credits minimum to maximum

COMP SCI 200) Programming 1 | 3 credits Remove Course

Subject: Computer Science

Learn the process of incrementally developing small (200-500 lines) programs along with the fundamental Computer Science topics. These topics include: problem abstraction and decomposition, the edit-compile-run cycle, using variables of primitive and more complex data types, conditional and loop-based flow control, basic testing and debugging techniques, how to define and call functions (methods), and IO processing techniques. Also teaches and reinforces good programming practices including the use of a consistent style, and meaningful documentation. Intended for students who have no prior programming experience.

Requisites: None

Keywords: computer, science, programming, java

Sections:

- LEC_001 Remove Section
 - Instructor: Jim Williams
 - Location: 132 Noland Hall
 - Meeting Times
 - thursday: 8:00am - 9:15am
 - tuesday: 8:00am - 9:15am

Subsection

- LAB_311 Remove Subsection
 - 1350 Computer Sciences and Statistics
 - Meeting Times
 - wednesday: 9:30am - 10:45am
- LAB_312 Add Subsection
 - 1350 Computer Sciences and Statistics
 - Meeting Times
 - wednesday: 11:00am - 12:15pm
- LAB_314 Add Subsection
 - 1350 Computer Sciences and Statistics
 - Meeting Times
 - wednesday: 2:30pm - 3:45pm
- LAB_315 Add Subsection
 - 1350 Computer Sciences and Statistics
 - Meeting Times
 - wednesday: 4:00pm - 5:15pm

#2

"Integrating type": Use of "headline" to guide user's attention to this message

"#4 Creating visual hierarchy":
Use relative positioning (top to bottom) and sizing (big to small) to communicate which information is more important and should be looked into first

#3 Using negative space: Blank space provides visual break and create balance .

#1

"Creating contrast and emphasis" principle:
Using color contrast (yellow- warm color vs. blue - cool colors) to establish hierarchy (parallel) and contrast information (remove vs. add subsection)

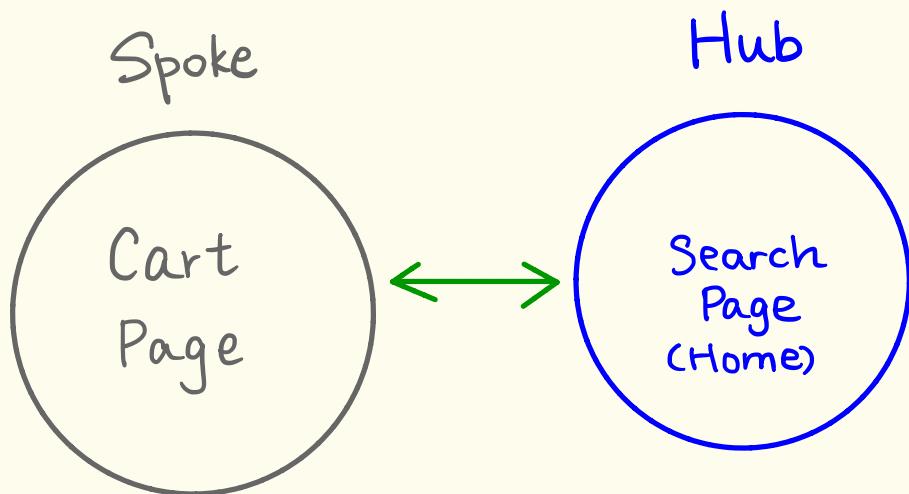
#5

"Grouping using Gestalt Theory": The similarity of format of those 4 subsections predict that users will perceive them as one category

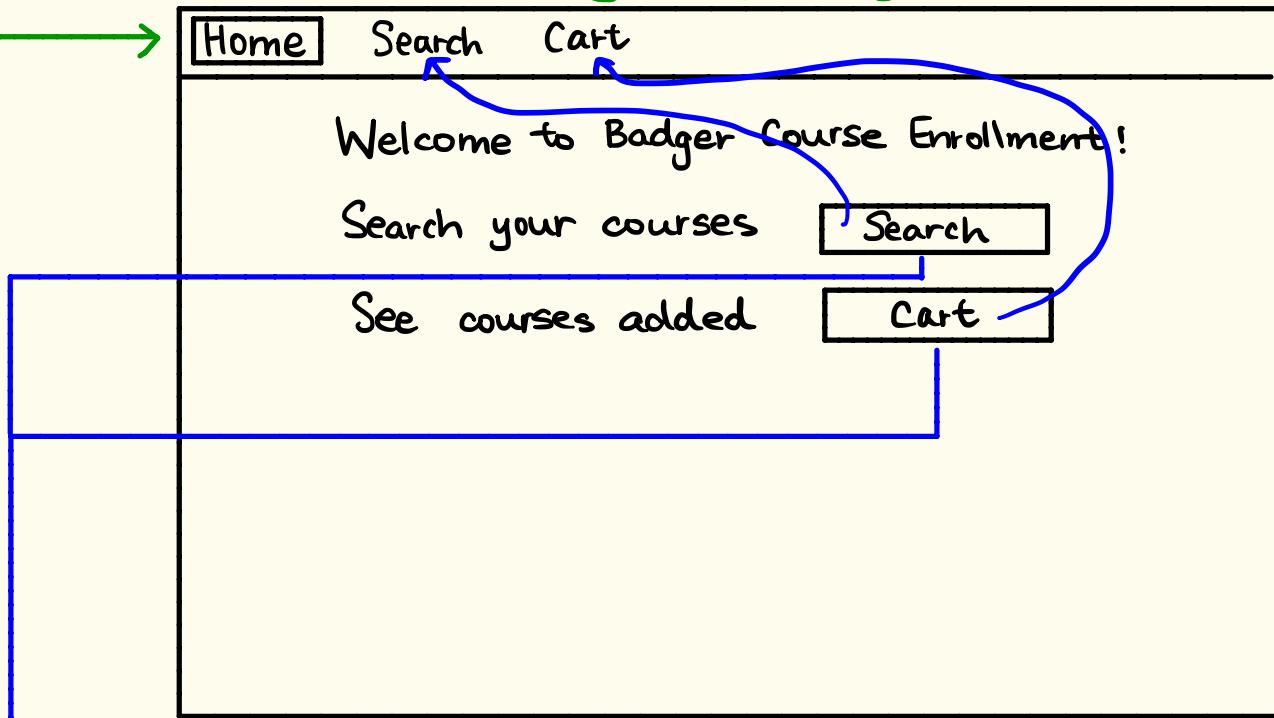
↳ "Effectively using grids": Use grids to organize subsections in an orderly fashion

#6

Hub & Spoke Model:

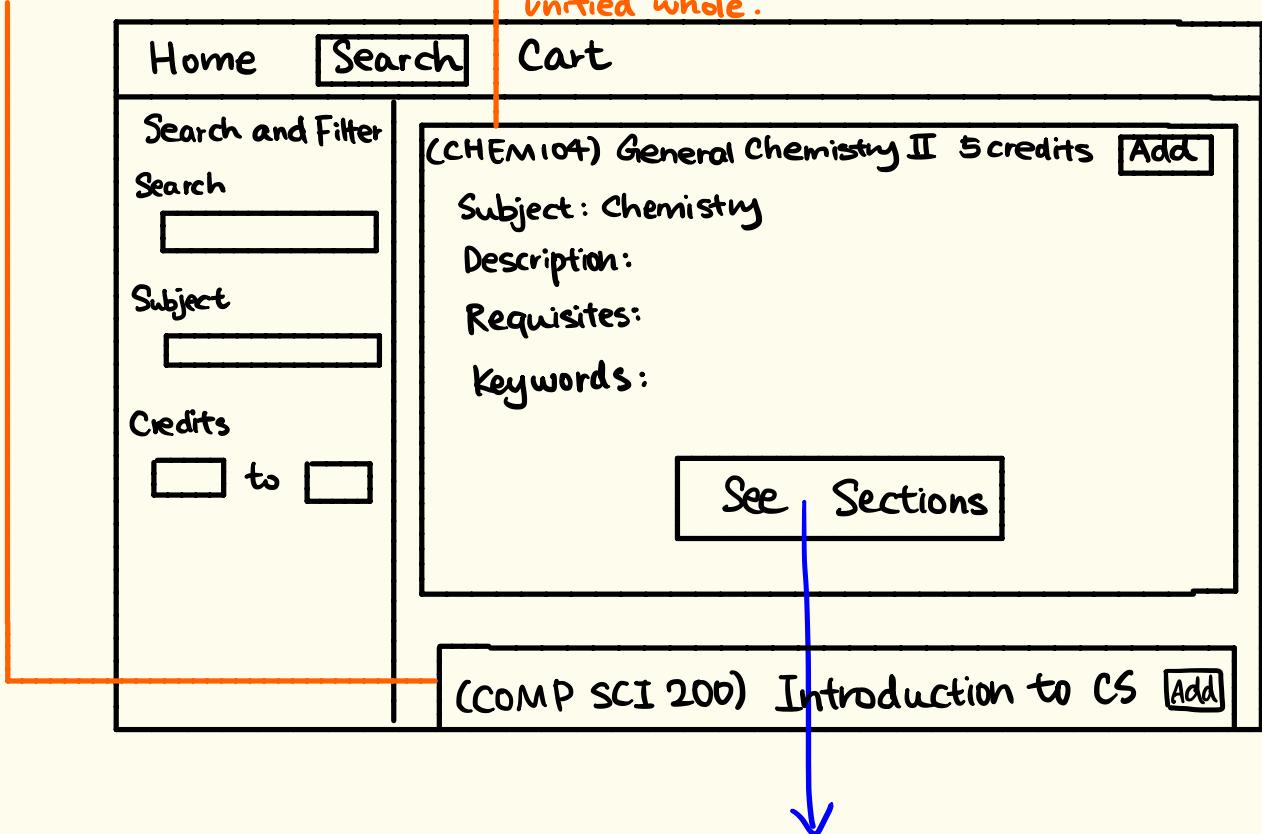


"Fully Connected" Navigation Model: Home Page is the central component/page, which is linked to other components (Search, Cart), and those two components are also linked to each other (by directly clicking tabs)



Improve navigation: This two buttons tell users about the contents of the above two tabs and help users to navigate to those tabs by clicking on it.

"Grouping using Gestalt Theory" (Proximity): Organize a course's information in a box by its own and separate (create space) it from other courses. The proximity of a course information guides users to perceive all information about one course as a unified whole.



"Modal Panel" Navigation Modal: Within the "Search" tab, modal dialog about a course's section information is overlaid on the canvas, to help users to view and select sections and subsections. Those information shows up only when a user is interested in that specific course.

The diagram illustrates a user interface design. At the top, there are three tabs: "Home", "Search" (which is highlighted with a green box), and "Cart". Below the tabs is a search and filter form. On the left side of the form, there are fields for "Search" (with an empty input box) and "Subject" (with an empty input box). Below these is a "Credits" section with two input boxes separated by a "to" placeholder. A green line points from the "Search" tab to the title of the modal dialog. The modal dialog is titled "General Chemistry II" and contains the following content:

- Section: Lec_001
- Sub-sections:
 - Instructor
 - Location
 - Meeting Times

Below this is a "Subsections" heading and a table:

#	Location	Meeting Times	Cart
DIS. 4d	123 Van Hise	M: 9:00-10:00 am	<input type="button" value="Add"/>
DIS. 4e	123 Van Hise	W: 9:00-10:00 am	<input type="button" value="Remove"/>

At the bottom of the modal, there is another section labeled "Lec_002" with a "Remove Section" button.

"Effectively using grids": Use this table to organize a section's subsections information in an orderly and balanced fashion

Improve navigation: If no courses is in the cart, we want to guide the users to add courses to their cart. The "search" button directly takes users to where they can add courses.



This is what cart looks like when it is not empty:

A hand-drawn diagram of a computer interface. At the top, there is a horizontal bar with three items: "Home", "Search", and a box labeled "Cart". Below this is a large rectangular area representing a window. Inside this window, at the top left, is the text "(CHEM104) General Chemistry II 5 credits". To the right of this text is a small rectangular box containing the word "Remove". Below this, there are four lines of descriptive text: "Subject: Chemistry", "Description:", "Requisites:", and "Keywords:". At the bottom center of the window is another rectangular box containing the text "See Sections".

Use color "beige" to create a feeling of a piece of paper, to relieve stress to eyes, and create visual contrast to other elements on page

Home Search Cart

Welcome to Badger Course Enrollment!

Use Search to search for courses

Go to Search

Check out your added courses in cart

Go to Cart

Font: Time New Romans, to create a sense of formality and order
Bold to highlight information to first-time users.

This box helps group information together and directs user attention

Use blue for navigation button, follow conventions

This box groups information together and direct user attention
Font: larger font for important info (course number, subject, credits, ...)

The screenshot shows a web-based course search interface. At the top, there are navigation links: Home, Search, and Cart. Below these, a sidebar titled "Search and Filter" contains fields for "Search" (with a search input field) and "Subject" (with a dropdown menu showing "All"). Below that is a "Credits" section with input fields for "minimum" and "maximum". To the right, a large course card is displayed for "CHEM 104" General Chemistry II, which has 5 credits. The card includes the course number, title, subject, a detailed description of the course content, prerequisites ("(MATH 114) AND (CHEM 103)"), keywords, and a "See Sections" button. A green "Add Course" button is located in the top right corner of the card. A vertical orange line highlights the entire course card. Below this, another course card is partially visible for "COMP SCI 400" Programming, which has 3 credits. This card includes the course number, title, subject, and a yellow "Remove Course" button. A horizontal orange line highlights the entire course card.

Home Search Cart

Search and Filter

Search

Search

Subject

All

Credits

minimum to maximum

(CHEM 104) General Chemistry II 5 credits

Add Course

Subject: Chemistry

Description: Principles and application of chemical equilibrium, coordination chemistry, oxidation-reduction and electrochemistry, kinetics, nuclear chemistry, introduction to organic chemistry. Lecture, lab, and discussion.

Requisites: (MATH 114) AND (CHEM 103)

Keywords: chemistry

See Sections

(COMP SCI 400) Programming 3 3 credits

Remove Course

Subject: Computer Science

Highly contrast colors: Green (success) suggests adding to cart, Yellow (warning) to call users attention, blue for more info. Green (cool) vs. Yellow (warm) to facilitate users' selections.

Contrasting colors between adjacent subsections:
to differ subsections and help users to perceive information

The screenshot shows a web-based course management system. At the top, there's a navigation bar with 'Home', 'Search' (which is active), and 'Cart'. Below this is a sidebar titled 'Search and Filter' containing fields for 'Search', 'Subject' (with dropdown options 'All', 'Math', 'Science', 'Humanities', 'Social Sciences'), and 'Credits' (with input fields for 'minimum' and 'maximum').

The main content area displays course information for 'General Chemistry II' (Section 'Lec_001'). It includes the instructor ('Linda Zelewski'), location ('B10 Ingraham Hall'), and meeting times ('thursday: 9:30am - 10:45am', 'tuesday: 9:30am - 10:45am').

Below this, a table lists 'Subsection' details. The first subsection, 'DIS_401' (Location: 123 Van Hise Hall, Meeting Times: monday: 2:25 pm - 5:25 pm, thursday: 11:00 pm - 11:50 pm, tuesday: 11:00 am - 11:50 pm), has an 'Add Subsection' button (green). The second subsection, 'DIS_402' (Location: 123 Van Hise Hall, Meeting Times: monday: 2:25 pm - 5:25 pm, thursday: 11:00 pm - 11:50 pm, tuesday: 11:00 am - 11:50 pm), has a 'Remove Subsection' button (yellow).

A large green vertical bar is positioned on the left side of the page, extending from the top to the bottom of the 'Search and Filter' sidebar. A red horizontal bar highlights the 'Add Subsection' button for the first subsection.

Contrasting colors to call users' attention and differ the functionalities
of those two buttons

This information tells people that their cart is empty (if it is) and guides users to perform further actions.

Home Search Cart

Your Cart is empty.

Please Search and add more courses to your Cart

Search

Helps navigation, takes users to search tab.

Highlights which tab the user is in



Home Search Cart

(CHEM 104) General Chemistry II 5 credits

[Remove Course](#)

Subject: Chemistry

Description: Principles and application of chemical equilibrium, coordination chemistry, oxidation-reduction and electrochemistry, kinetics, nuclear chemistry, introduction to organic chemistry. Lecture, lab, and discussion.

Requisites: (MATH 114) AND (CHEM 103)

Keywords: chemistry

[See Sections](#)

(COMP SCI 400) Programming 3 3 credits

[Remove Course](#)

Subject: Computer Science

Jumbotron

Home Search Cart

Welcome to Badger Course Enrollment!

Use Search to search for courses

Go to Search

Check out your added courses in cart

Go to Cart

Button

Jumbotron, Container

Home Search Cart

Search and Filter

Search

Subject ▼

Credits to

(CHEM 104) General Chemistry II 5 credits Add Course

Subject: Chemistry

Description: Principles and application of chemical equilibrium, coordination chemistry, oxidation-reduction and electrochemistry, kinetics, nuclear chemistry, introduction to organic chemistry. Lecture, lab, and discussion.

Requisites: (MATH 114) AND (CHEM 103)

Keywords: chemistry

See Sections

(COMP SCI 400) Programming 3 3 credits Remove Course

Subject: Computer Science

Button

Row, Column

Modal

Button

Home Search Cart

Search and Filter

Search

Subject

All

Credits

minimum to maximum

(C) Sub Des che intro Req Key

General Chemistry II

Lec_001 Add Section

- Instructor: Linda Zelewski
- Location: B10 Ingraham Hall
- Meeting Times
 thursday: 9:30am - 10:45am
 tuesday: 9:30am - 10:45am

Subsection

#	Location	Meeting Times	Cart
DIS_401	123 Van Hise Hall	monday: 2:25 pm - 5:25 pm thursday: 11:00 pm - 11:50 pm tuesday: 11:00 am - 11:50 pm	Add Subsection
DIS_402	123 Van Hise Hall	monday: 2:25 pm - 5:25 pm thursday: 11:00 pm - 11:50 pm tuesday: 11:00 am - 11:50 pm	Remove Subsection

Table

Alert

Tabs

Button

Home Search Cart

Your Cart is empty.

Please Search and add more courses to your Cart

Search

Jumbotron

[Home](#)[Search](#)[Cart](#)

(CHEM 104) General Chemistry II 5 credits

[Remove Course](#)

Subject: Chemistry

Description: Principles and application of chemical equilibrium, coordination chemistry, oxidation-reduction and electrochemistry, kinetics, nuclear chemistry, introduction to organic chemistry. Lecture, lab, and discussion.

Requisites: (MATH 114) AND (CHEM 103)

Keywords: chemistry

[See Sections](#)

(COMP SCI 400) Programming 3 3 credits

[Remove Course](#)

Subject: Computer Science