CMPT 363 - USER INTERFACE DESIGN

Assignment 5

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Team 6

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DESIGN RATIONALE

Our final prototype had only minor changes from the previous horizontal and vertical prototypes. Most changes were only small tweaks to incorporate both prototypes in one environment, without adding inconsistency.

We also implemented one of the suggestions from Heuristic Evaluation before the presentation, which was adding shading to the current tab in the navigation bar. This prevents users from erroneously attempting to navigate to their current location, and could help classmates watching the walkthrough more easily understand the flow throughout the site during tasks.

Our prototype boasts a very simple and flexible navigation system, with access to all major pages on every page, in a consistent, compact layout. This is possible because nearly all users tasks can be completed on the main four pages, without any additional navigation during tasks.

The design has several areas that could use future improvement.
- More advanced functionality for experienced users.Shortcuts on common tasks.
- Undo and edit functionality added to message boards and other permanent actions.
- The family tree system may be simpler with a total redesign, as several aspects are confusing.
- The Health page has no easy way to look up specific information.

COGNITIVE WALKTHROUGHS

Tasks
- **Find a possible relative, investigate them to confirm their relation, and add them to your family tree.**

  Actions:
  1. Login on the main Page
  2. Four options show up, choose "Family"
  3. Choose "Sarah Bobs" as the potential relative
  4. Click on "Sarah Bobs"
  5. On "Sarah Bobs" page click on "add as known relative"

  This is a fairly complex task involving navigation throughout different sections of the site in the same workflow.

- **Look for health risks and find the most significant result, post a comment on the result page comment thread. Then look up lifestyle recommendations and share findings via social media.**

  Actions:
  1. Login on the main Page
  2. Four options show up, choose "Health"
  3. Click on the "Risks" dropdown menu
  4. Select the most significant risk, "Heart Failure"
  5. On comment section click post to make a comment.
  6. Click on "Lifestyle" dropdown menu
  7. Click on "Protein Consumption" suggestion
  8. Click on the "share" button

  This task uses a single page in greater depth, and explores more of the site's social features.

Problems We Encountered

- Users cannot undo or edit posts in message boards.
- Share icon may not be known to some users.
    - Replace with "Share" text.
    - Tooltip or tutorial on first use?
- There is no way to undo adding a family member as known family.
- The interactivity behind the family tree is non-obvious. Until the tree has already been clicked on (to select a family member), there are no buttons displayed, and the tree appears static.
    - Add prompting text "Select a family member to edit."
- Current method for adding family members to the family tree (add as parent or child of member already on the tree) may be unintuitive to some. A user may want to add family in some arbitrary order, but is instead forced into an order based on distance from the user on the tree.
    - Consider reworking to allow arbitrary relations between family members. This could greatly increase complexity of the family tree.
    - Instead of asking the user to manually add modifying the family tree, the family member can be automatically added when adding them as known family by defining their relation. This would require carefully defining the relationship, as in "great uncle on father's mother's side", but would simplify other areas of the interface.

Summary

The most apparent problem we found through the cognitive walkthrough is with the interface in creating a family tree. The lack of editability is a problem, as the user is able to add people as parent or child, but there is no option to remove them. The interface for creating the family tree is non-intuitive, and the method of adding members into the family tree is slow and tedious. These problems can be fixed by reworking the family design as per the suggestions given.

Users also criticized the comment and share features, with comments being unable to be edited or deleted and the share button being hard to find. These can be solved easily by adding the option to edit comments, and making the share button more obvious with text.

HEURISTIC EVALUATION

Visibility of System Status

- Severity 2
  - Previous to the final prototype, a user's current page was not indicated in the navigation bar. This could result in users trying to navigate to their current position.
    - A solution was implemented in the final prototype by shading the currently selected tab in the navigation bar, making it stand out from unselected tabs.

User Control and Freedom

- Severity 3
  - Cannot remove added family members. This could be very important in case of misclick or misinformed decisions.
    - Directly underneath "Known family member" add a button for "Remove from family." This mirrors the placement for "Add to family."
- Severity 2
  - No option to delete or edit posts in message boards.
    - A simple options drop down on each of the user's own posts could provide these options with minimal clutter, while sticking to common conventions.

Consistency and Standards

- Severity 2
  - % indicators in Health page represent different values. The value is defined in the header for each table, but a user may not notice this.
    - Most solutions add unwanted verbosity, such as writing the unit of measurement on every row of the table, or more obviously separating categories.
      Determine if this is a significant problem for users, and consider redesigning the segment if necessary.
- Severity 1
  - Edit profile interaction buttons uses a blue hyperlink style, while most interactions use a button style.
    - Use standard button format.
  - Input bars do not line up on "Buy Kit" page.

- - - ■ Cleanup to maintain alignment.
    - ○ "Buy Kit" pages do not have a header, unlike every other page on the site.
      - ■ Add missing header bar using standard format.

Error Prevention
- Severity 2
  - ○ Current version allows placing family members in impossible orientations, such as parents being younger than their children.
    - ■ Intelligently filter family list when adding parent or child to only list valid entries.

Recognition Rather than Recall
- Severity 3
  - ○ Adding family requires recalling several steps and page navigations. There is no prompting or guidance for this, which may make the task confusing for new users.
    - ■ The workflow was built around the assumption that the user would need to research the family member before adding them, but this could frequently not be the case. Consider adding an "Add to Family" button directly in the list of possibly family members.
- Severity 2
  - ○ To locate a specific topic of interest in health, the user must first determine or recall its category.
    - ■ Consider a search bar for locating specific sub-pages in Health.

Flexibility and Efficiency of Use
- Severity 3
  - ○ Current design optimized for discovery, with most significant results first. Advanced users may be more interested in specific data.
    - ■ As referenced previously, a search bar in Health could allow users looking for specific data to find it much faster than searching by category and scrolling.

Help and Documentation
- Severity 1
  - ○ Help and documentation does not yet exist.
    - ■ The site design is very lightweight in most places, but more advanced features such as the interactive tree could use documentation. Consider a guided tutorial for first time users.

Summary

Most critically, we discovered major usability issues in adding other users as family members. This could not be undone, which would be a significant problem in case of misinformed or accidental action. Adding users as family also requires navigating to the user's profile, which adds extra unintuitive steps to the core task of adding family to the user's family tree. Both of these problems have simple solutions involving only small interface additions.

Further, the Health page results were designed for ease of discovery for first time users analyzing their results, but did not make affordances for advanced users looking for deeper learning. Specifically, finding a specific result is difficult, making it hard for the user to guide their own learning. A search bar addition for the health page was suggested to alleviate this.

APPENDIX: HEURISTICS EVALUATION FORMS

Heuristics Evaluation 1

By [Arsalan Macknojia]   **Date** [11/27/2018]

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1. Visibility of system status
• Always keep users informed about what is going on.
• Provide appropriate feedback within reasonable time.

Evaluation
[Enter your observation and evaluation of the degree to which this Heuristic has been satisfied. Use as much space as you see fit.]

Severity Rating: 0

Visibility of the system status is perfect. User is constantly informed about what is going on and what page they are on.

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2. Match between system and the real world
• Speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms.
• Follow real-world conventions, making information appear in a natural and logical order.

Evaluation

Severity Rating: 0

The terminology used is fairly simple to understand. Errors concisely depicts the problem and the information seems to appear in a logical order.

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3. User control and freedom
• Users often choose system functions by mistake.
• Provide a clearly marked "out" to leave an unwanted state without having to go through an extended dialogue.
• Support undo and redo.

Evaluation

Severity Rating: 0

User can easily navigate back and forward between windows. Most of the windows are split into half which enables user to easily access different information without actually navigating between the pages.

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4. Consistency and standards
- Users should not have to wonder whether different words, situations, or actions mean the same thing.
- Follow platform conventions.

Evaluation

Severity Rating: 0

All the pages are consistent with each other. The top part of each page is identical which helps the user to move between different tasks fairly quickly and easily. Locations of information, icon size, color, wording, and sequencing are perfect and consistent between pages.

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5. Error prevention
- Even better than good error messages is a careful design which prevents a problem from occurring in the first place.

Evaluation

Severity Rating: 1

The design has decent error prevention implementation such as selecting dates from calendar on sign up page, drop down menu where possible (Buy Kit page) and checkboxes on different pages. However, it can be further improved by removing or gray-out illegal choices. For instance, the remove button on family page can be gray-out when the family tree is empty to prevent error.

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6. Recognition rather than recall

- Make objects, actions, and options visible.
- User should not have to remember information from one part of the dialogue to another.
- Instructions for use of the system should be visible or easily retrievable whenever appropriate.

Evaluation

Severity Rating: 0

Recognition is a strong point of this design. Layout is consistent between the pages and information is carefully categorized into relevant group. User doesn't have to remember anything as most of the information is accessible by a single click.

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7. Flexibility and efficiency of use
- Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user so that the system can cater to both inexperienced and experienced users.
- Allow users to tailor frequent actions.

Evaluation

Severity rating: 2

There wasn't an option to reuse previously entered information. For instance, in the Buy Kit page, there should be an option to save the shipping address or maybe an option to use the default address as the shipping address.

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8. Aesthetic and minimalist design
- Dialogues should not contain information which is irrelevant or rarely needed.
- Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

Evaluation

Severity Rating: 2

Good graphic design and minimalistic approach makes the design aesthetically pleasing. There is a good balance between text and images. However, the absence of more colors choices in the final design should be addressed.

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9. Help users recognize, diagnose, and recover from errors
- Expressed in plain language (no codes)
- Precisely indicate the problem
- Constructively suggest a solution.

Evaluation

Severity Rating: 0

Error messages concisely states the problem and suggest user helpful directions to rectify it.

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10. Help and documentation
- Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation.
- Help information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

Evaluation

Severity Rating: 3

Although the website is fairly simple to use but there isn't any documentation present for the user. FAQ's are missing, help/suggestion box or virtual assistant is also not available.

Heuristics Evaluation 2

By Toren Darby   **Date** November 27th

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1. Visibility of system status
- Always keep users informed about what is going on.
- Provide appropriate feedback within reasonable time.

Evaluation

[Enter your observation and evaluation of the degree to which this Heuristic has been satisfied. Use as much space as you see fit.]

Previous to the final prototype, a user's current page was not indicated in the navigation bar. This could result in users trying to navigate to their current position.
Severity 1

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2. Match between system and the real world
- Speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms.
- Follow real-world conventions, making information appear in a natural and logical order.

Evaluation

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3. User control and freedom
- Users often choose system functions by mistake.
- Provide a clearly marked "out" to leave an unwanted state without having to go through an extended dialogue.
- Support undo and redo.

Evaluation

Cannot remove added family member
Severity 2

4. Consistency and standards
- Users should not have to wonder whether different words, situations, or actions mean the same thing.
- Follow platform conventions.

Evaluation

Edit profile interaction buttons uses a blue hyperlink style, while most interactions use a button style.
Severity 1

Input bars do not line up on "Buy Kit" page.
Severity 1

"Buy Kit" pages do not have a header, unlike every other page on the site.
Severity 1

% indicators in Health page represent different values. The value is defined in the header for each table, but a user may not notice this.
Severity 2

5. Error prevention
- Even better than good error messages is a careful design which prevents a problem from occurring in the first place.

Evaluation

Current version allows placing family members in impossible orientations, such as parents being younger than their children.
Severity 2

6. Recognition rather than recall

- Make objects, actions, and options visible.
- User should not have to remember information from one part of the dialogue to another.
- Instructions for use of the system should be visible or easily retrievable whenever appropriate.

Evaluation

To locate a specific topic of interest in health, the user must first determine or recall its category.
Severity 2

7. Flexibility and efficiency of use

- Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user so that the system can cater to both inexperienced and experienced users.
- Allow users to tailor frequent actions.

Evaluation

Current design optimized for discovery, with most significant results first. Advanced users may be more interested in specific data, and could benefit from a tool such as a search bar.
Severity 3

8. Aesthetic and minimalist design

- Dialogues should not contain information which is irrelevant or rarely needed.
- Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

Evaluation

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9. Help users recognize, diagnose, and recover from errors
- Expressed in plain language (no codes)
- Precisely indicate the problem
- Constructively suggest a solution.

Evaluation

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10. Help and documentation
- Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation.
- Help information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

Evaluation