

Assignment 2: User Research and Lo-fi Prototype

Team: CanvasByte

Members:

- Apurva Ajit Patil
- Radhika Ravindra Vartak
- Aditya Sanjay Dhage

I. Problem Description and Scope

Our project aims to enhance the GoodReads mobile application by addressing the current design challenges, thus increasing the user base and foot traffic to the app. We intend to make the app welcoming to new users and include helpful features for existing users.

Scope -

1. Fixing the issue that arose from Heuristic Evaluations and User Inspection
2. Main Targets -
 - a. UI Consistency
 - b. User Profile
 - c. User Reading Lists
 - d. Filters and Advanced Search

II. User Inspection Methods

A. Heuristics/Design Principles

We will be using three of Jakob Nielsen's 10 Usability Heuristics.

1. Visibility of System Status

The design should always keep users informed about what is going on, through appropriate feedback within a reasonable amount of time.

2. User Control and Freedom

This principle states that users should have the ability to undo their actions or back out of a process. This creates a sense of freedom and confidence.

3. Consistency and Standards

This principle emphasizes the importance of adhering to established industry conventions so that users do not need to question the meaning of various actions or situations.

4. Recognition Rather than Recall

This principle states that users should not have to be required to remember information from one part of the interface to another; instead, all relevant information should be readily visible.

5. Flexibility and Efficiency of Use

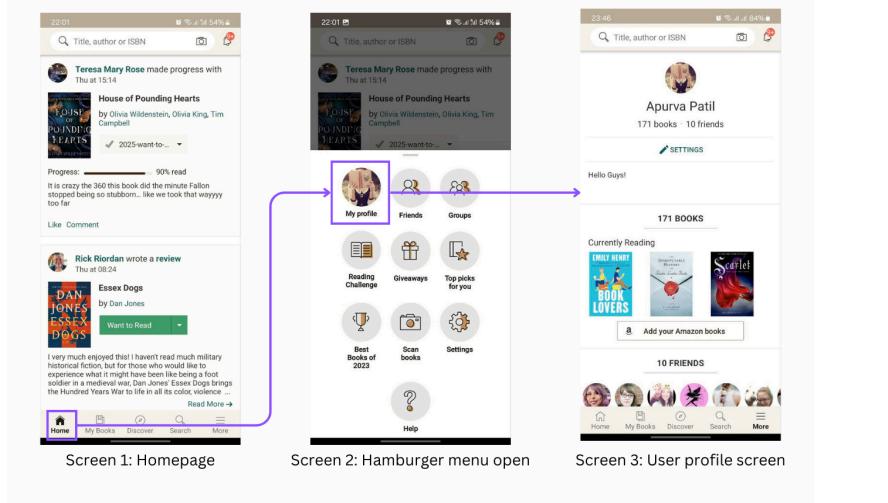
It emphasizes designing systems that cater to both novice and expert users by providing flexibility in interaction methods.

B. Tasks in the system for evaluation

We will be evaluating the following list of tasks for Heuristic Evaluation.

- Task 1: Access your profile.
 - Sequence of Screens:
 - Navigate to the user profile section.
 - Select the option to access the user's profile.
 - View the profile information.

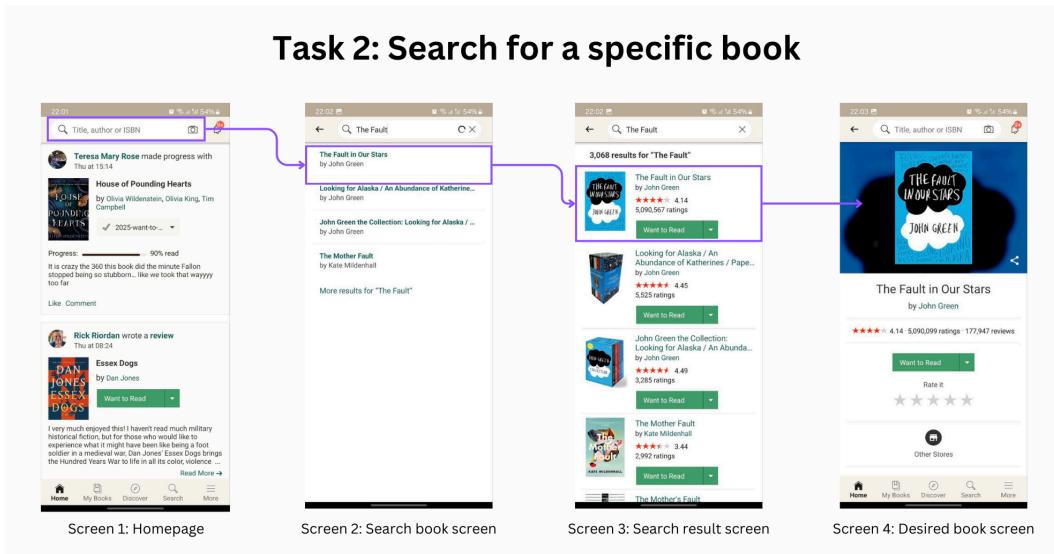
Task 1: Access your profile



- **Task 2: Search for a specific book.**

- Sequence of Screens:
 - Find the search bar or search icon on the app.
 - Enter the title or keywords of the book to search for.
 - Apply the required filters.
 - Browse through the search results to locate the desired book.

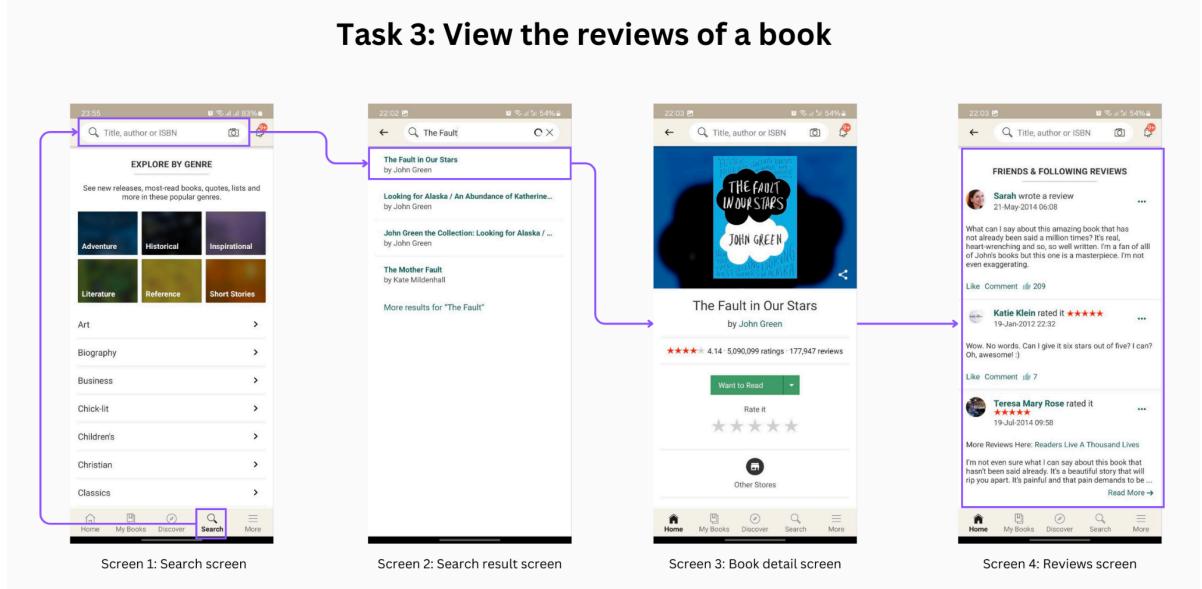
Task 2: Search for a specific book



- **Task 3: View the reviews of a book.**

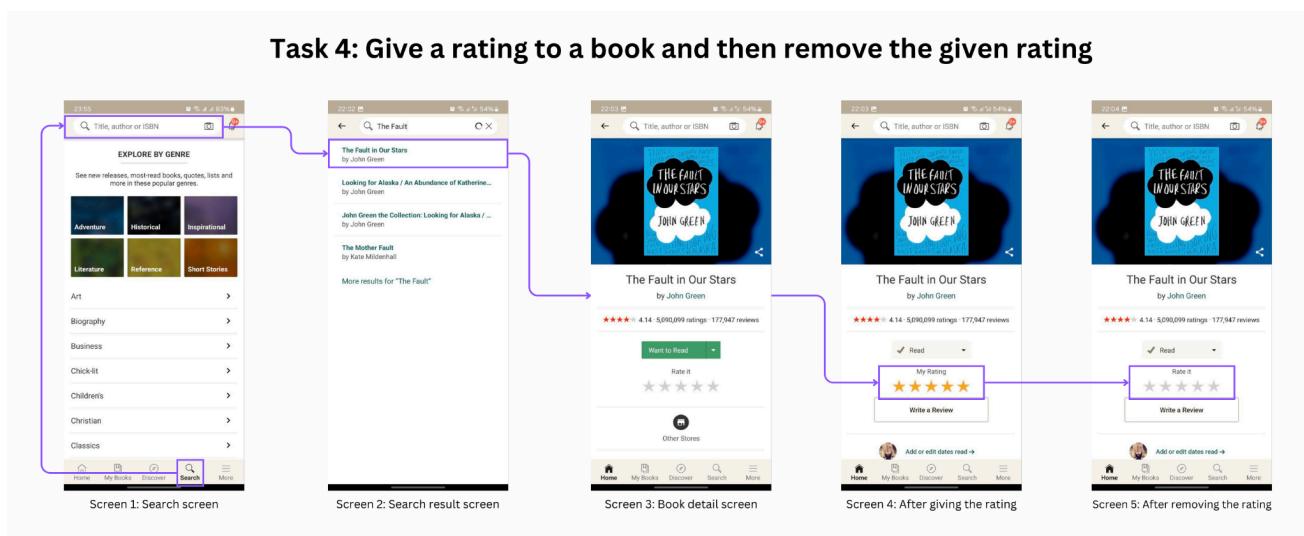
- Sequence of Screens:
 - Find the book.
 - Navigate to the book's details page.
 - Locate the section displaying the book's ratings.
 - View the accompanying reviews or comments.

Task 3: View the reviews of a book



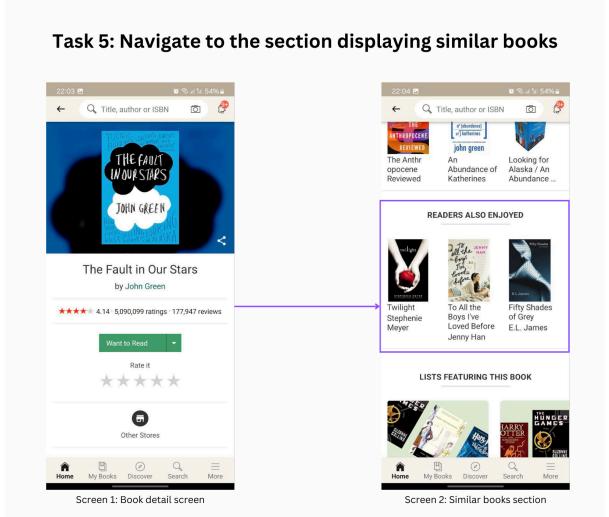
- Task 4: Give a rating to a book and then remove the given rating.
 - Sequence of Screens:
 - Navigate to the book's details page.
 - Locate the section displaying the book's rating.
 - Give a rating to the book.
 - Find the option to edit or remove the rating.
 - Confirm the removal action.

Task 4: Give a rating to a book and then remove the given rating



- Task 5: Navigate to the section displaying similar books.
 - Sequence of Screens:
 - Open the details page of the current book.
 - Navigate to the section that displays similar books.
 - Browse through the list of similar books displayed.

Task 5: Navigate to the section displaying similar books

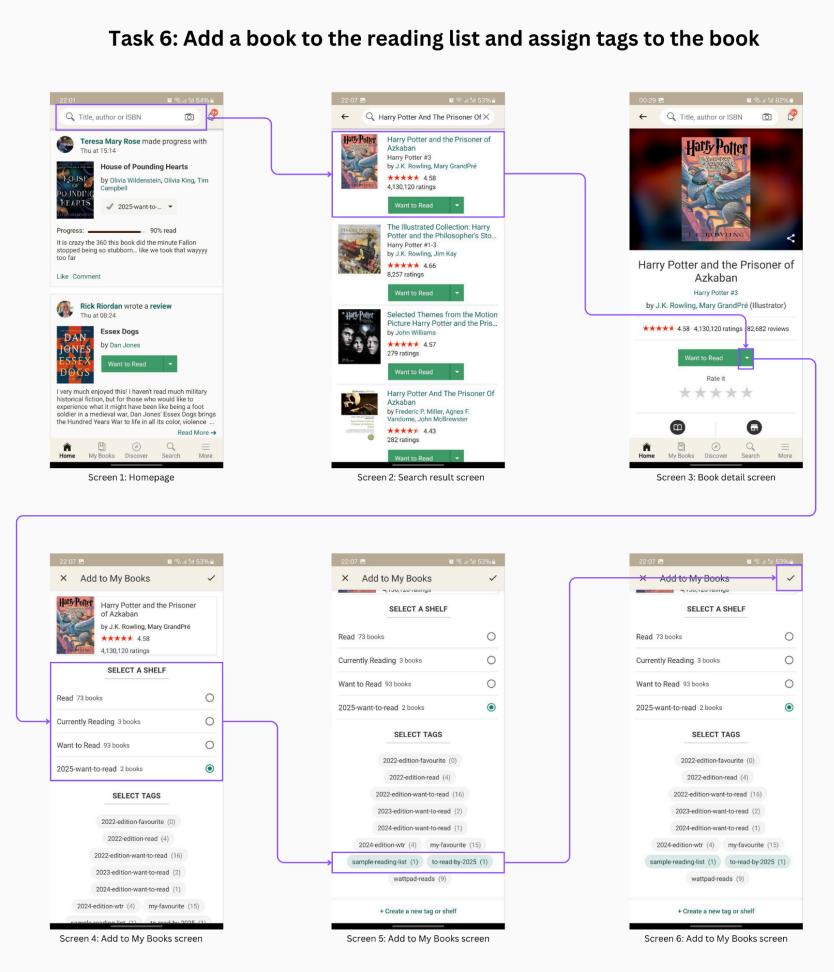


• Task 6: Add a book to the reading list and assign tags to the book.

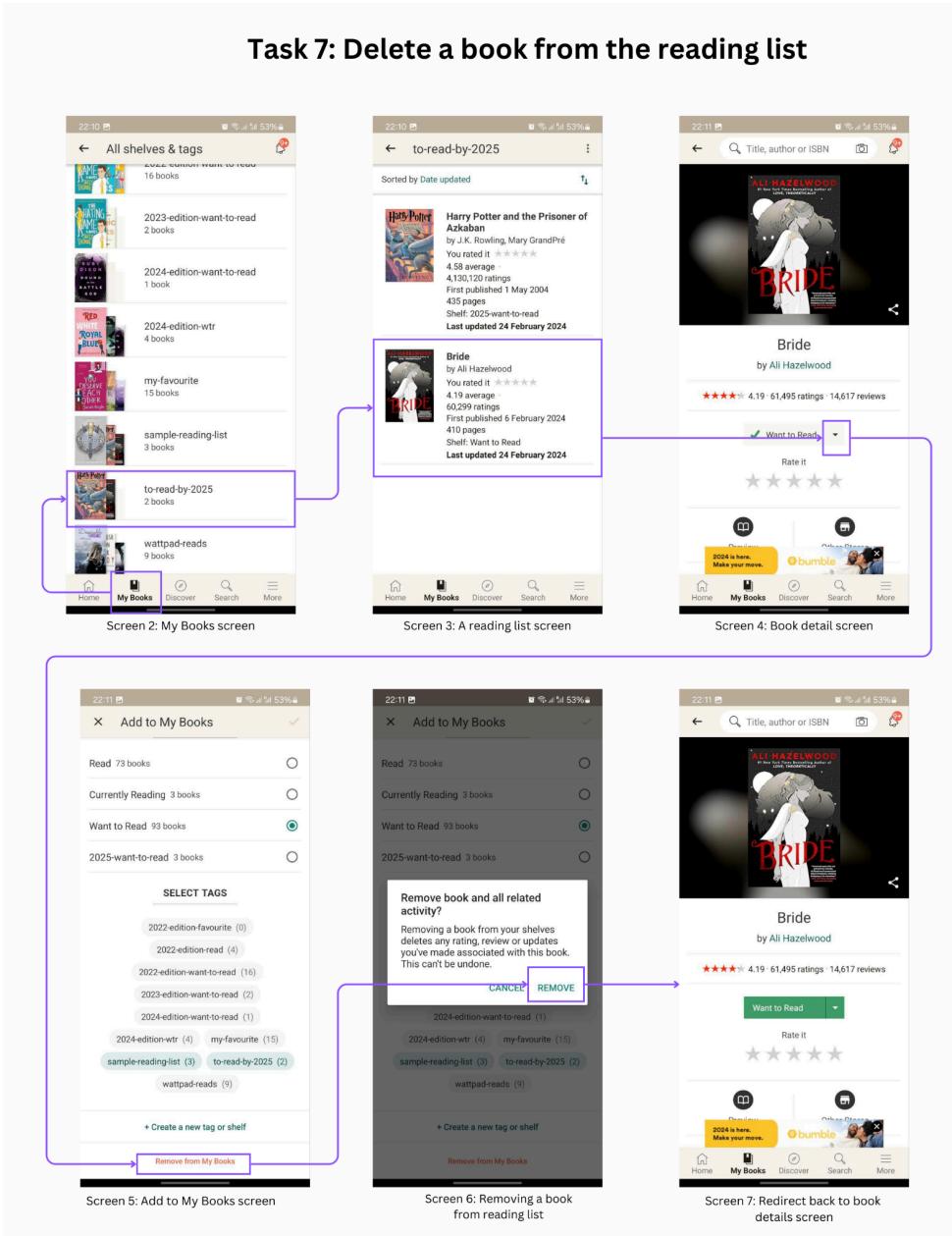
○ Sequence of Screens:

- Search for the desired book.
- Select the book from the search results.
- Access the option to add the book to the reading list.
- Choose the reading list to add the book to.
- Assign tags to the book if applicable.
- Confirm the action.

Task 6: Add a book to the reading list and assign tags to the book



- **Task 7: Delete a book from the reading list.**
 - Sequence of Screens:
 - Navigate to the reading list.
 - Identify the reading list to delete the book from
 - Identify the book to be removed.
 - Select the option to remove/delete the book.
 - Confirm the deletion action.



C. Issues Identified

Sr. No.	Identified Issue (with screen)	Heuristic #	Reasoning
1.	Lack of Consistency when Accessing Profile (Task 1 - Screen 1)	Consistency and Standards	The Goodreads app "Hamburger Menu" displays the menu items in the form of icons. However, according to industry conventions, a Hamburger Menu usually displays the menu items in a form of list. As this type of menu is uncommon for mobile app, the users are not familiar with this type of model.
2.	Lack of Advanced Search	Flexibility and	Users are unable to apply advanced search filters, such as

	Filters (Task 2 - Screen 3)	Efficiency of Use	filtering by genre or publication year, to narrow down their search results, this reduces the efficiency of the search process.
3.	Non-clickable Ratings (Task 3 - Screen 3)	Consistency and Standards	Normally, the "ratings" are clickable, i.e, these are links that redirect us to the reviews section. On the Goodreads app, the ratings are displayed as labels rather than clickable links.
4.	Rating Feedback (Task 4 - Screen 4 & 5)	Visibility of System Status	After users rate a book, they receive insufficient feedback regarding the system's status. Additionally, they encounter difficulty in removing a rating due to the process's lack of clarity and intuitiveness. The Goodreads app fails to provide adequate visibility, feedback, and options related to the status of rating actions.
5.	Element differentiation Issue (Task 5 - Screen 2)	Recognition Rather Than Recall	When users are presented with suggested books similar to the one they are currently reading, both the suggested book title and author name appear in the same font style, size, and color. This lack of differentiation makes it challenging for users to distinguish between the two pieces of text. Consequently, when encountering the same section again, users may struggle to recall which text corresponds to the book title and which to the author name.
6.	Tedious Book Adding and Tagging Process (Task 6 - Screen 3 to 6)	User Control and Freedom	Adding the book to the reading list or assigning tags to them can be a tedious process for the users, as they are required to click on a dropdown icon or risk having the book added to a default shelf. This process becomes tedious for users who wish to directly add a new book to a specific shelf or assign a tag to it without unnecessary steps.
7.	Irreversible Book Deletion (Task 7 - Screen 3 to 6)	User Control and Freedom	Once a user removes a book from their reading list, they cannot undo it. The delete action is permanent.

D. Final Findings and Issue List

Sr. No.	Findings	Priority
1	Lack of Consistency when Accessing Profile	High
2	Lack of Advanced Search Filters for Reading Lists	High
3	Tedious Book Adding and Tagging Process	High
4	Irreversible Book Deletion	High
5	Rating Feedback	Medium
6	Element Differentiation Issue	Medium
7	Non-clickable Rating	Low

II. User Inquiry Methods

- Provide a description of the user inquiry method you conducted

We conducted surveys on the current Goodreads app, allowing users to identify potential issues they are going through and provide feedback on questions listed in the survey based on sections.

For teams doing a survey

- Report the participant statistics as a table

Participant Statistics table:  Goodreads Mobile App Redesign Survey (Responses)

- Report the final survey that you published

Final Survey: <https://forms.gle/73QeyVxbAc4odJ4Q8>

- Give some descriptions of what the goal of the survey is, and your reasoning behind why these are good survey questions and good answer scales.

Goal of the survey: To gather comprehensive feedback from users regarding their experiences with the Goodreads mobile app, including usability, features, privacy concerns, and recommendations for improvements. The aim is to identify areas of strength and areas for enhancement to enhance user satisfaction and engagement with the platform.

Target population: Includes individuals who use Goodreads mobile app across the globe, collected from a diverse range of users, providing valuable insights into the experiences and preferences of the user base.

Reasoning behind the survey questions and answer scales: Please refer to the spreadsheet below for the reasoning behind the survey questions and answer scales.

Reasoning for survey questions

- Write a general overview of how the surveys went.

Overview of Survey

Overall, the survey responses indicate a mix of Android and iOS users, with a majority having used the Goodreads app. Users primarily use Goodreads for discovering new books and maintaining curated lists. Feedback on search & filter functionalities is mixed, with some users expressing difficulty in finding books and applying filters precisely. There are concerns about privacy and consistency in feature placement, while interest in new features like private reading lists and quotes integration is evident.

Analysis:

Perform qualitative/quantitative analysis on the interview transcripts/ survey responses to each question

Qualitative: Thematic Analysis

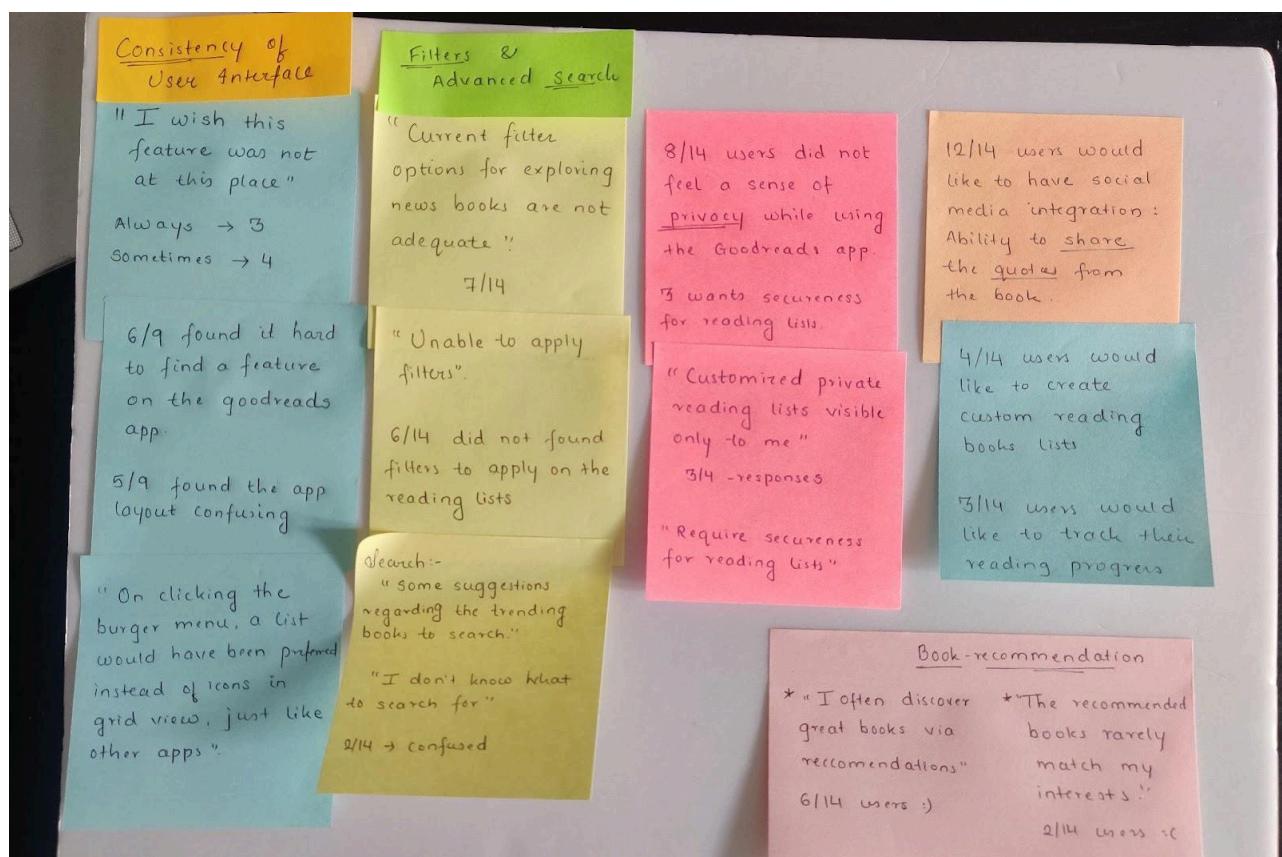
- Report the codeset table for the first cycle of codes

Code	Description	Example Quote	# of occurrences
Search Experience	Accuracy of search results, speed of search queries, intuitiveness of search features.	"The search function is fast, users are able to find books."	12
		"Some suggestions regarding the trending books to search."	2
		"Confused: I don't know what to search for."	2
Filter System	Filter functionality, effectiveness, and usability with regards to ease of use in applying filters.	"Unable to apply the filters."	1
		"The filter options for book searching are limited."	7
		"The filter options are not to be found."	6
Book Recommendation	User satisfaction with recommended books and its accuracy.	"I often discover great books through recommendations."	11
		"The recommended books rarely match my interests."	3

Privacy	Concerns, feedback, suggestions related to user privacy and data security while using the app.	"I feel my privacy is compromised on the app."	8
		"I feel secure using the app, my data is protected."	6
		"I want my reading lists to be visible only to myself."	3
User Interface - Consistency	Uniformity & coherence of app's interface across the app. Defines consistency of design elements, layout, navigation pathways, or terminology throughout the app.	"Finding it hard to locate the feature I am looking for."	6
		"The user interface is clean and easy to navigate."	4
		"I wish this feature was not at this place."	3
		"The app layout is confusing and cluttered."	7
New Feature	Potential new features that could be added. Users may propose ideas for enhancing functionality, improving user experience, or introducing new ideas to meet evolving needs.	"On clicking the burger menu, a list would have been preferred instead of icons in grid view, just like other apps"	1
		"Social media integration - ability to share the quotes."	12
		"Unable to view book cover in full screen, image is not zoomable."	1
		"I would like a feature to create custom reading book lists."	4
		"I am okay not able to access local files."	10
Local Files	Integration or support for local files within the app.	"Accessing local files would greatly enhance my experience."	3

- Conduct thematic analysis, report the final table of themes, definition of themes, example quotes for each theme.

Affinity Map: Data gathering, unitizing data and coding what the text is based on.



Themes:

Themes	Sub-themes based on codes	Sub-codes	Why as
User Experience and Engagement	User Interface Consistency		It influences the overall user experience with regards to navigating the coherence of the app, fostering user's app usage.
	Filter System Efficiency		The effectiveness of the filter system contributes significantly to user engagement by facilitating personalized book discovery.
	Enhanced Search Experience		An efficient search experience is crucial for user engagement as it allows users to quickly find desired books.
	Book Recommendation Effectiveness		The quality of book recommendations influences user engagement by offering personalized suggestions.
Security	Privacy for reading lists		It addresses users' worries about their personal data while using the app, which is fundamental for establishing trust.
New Feature Development	New features	1. List view on More 2. Quotes sharing 3. Zoomable book cover 4. Custom reading list	This sub-theme lists specific features that users have suggested to add. These suggestions indicate areas where users perceive potential for improvement or expansion of the app's capabilities.
	Local file readers		Relates to users' interest in integrating local file reading capabilities within the app.

Codeset - Cycle 2:

+ Goodreads - Qualitative Coding - Codeset - Analysis

III. UX Issues: Recommendations and Reasons

1. Lack of Consistency when Accessing Profile

Location: Application Home (Every Other Page as well)

Evidence:

1. Heuristic Analysis Table - Row 1
2. As per the heuristic analysis, the user profile accessibility is very limited in application
3. Please refer to Task 1 - Screens 1 & 2 (supplemental_1_screens), which show the Home Page and "More" menu that has the profile option

Importance:

1. Having accessibility to the user profile will make the application feel more personal
2. External consistency is not met for the placement of the profile icon and the "More" menu contents

Solutions:

1. Move the profile icon to the top right; it should be displayed on all the pages near the search bar
2. Hamburger menu - add list & grid toggle

Explanations:

1. Placing the user profile in the top right corner of the page is a traditional approach that enhances accessibility.
2. The "More" menu will maintain the old layout, with the added functionality to convert it into a list format. This approach aims to satisfy both old and new customers' perspectives, ensuring consistency and adherence to standards.

2. Irreversible Book Deletion from lists

Location: "My Books" tab, User Reading lists

Evidence:

1. Heuristic Analysis Table - Row 7

2. As per the heuristic evaluation removing a book from the user's reading list cannot be undone
3. Please refer to Task 7 (supplemental_1_screens) for the current deletion process

Importance:

1. Managing reading lists is one of the most important features of the application
2. There is a confirmation for deleting a book from said reading list but this action cannot be undone.
3. All the data the user has stored for the book is lost
4. This is an example of Lack of control and freedom heuristic for the user

Solutions:

1. Add a delete button at the top right corner of the book card in the shelf view of my book tab
2. Display a popup for 5 sec to undo with a progress bar

Explanations:

1. Adding a button to delete a book from a list view itself enables ease of execution for the user
2. Also if there is a miss in the click having a popup that shows an undo for the delete will enable user to recover from mistake

3. Tedious Book Adding and Tagging Process

Location: A new page upon clicking the drop-down beside the "Want to Read" button

Evidence:

1. Heuristic Analysis Table - Row 6
2. From heuristic analysis, we can see that the current process requires four clicks to add a book to the reading list.
3. A new page opens where we have to select the reading list from a list and then save the progress as well. Please refer to Task 6 (supplemental_1_screens).

Importance:

1. For the current process of adding a book to the reading list, the button includes a default list option and if the user wants to select a specific reading list then the user has to click a drop-down icon present beside the default reading list button.
2. Hence, if the user accidentally adds the book to the default reading list, then the user will have to click on the button again to make the appropriate changes. This approach is inefficient and can lead to user frustration.
3. Adding a book to the list should be a simple process.

Solution:

1. Instead of keeping a default list button and a drop-down, a single button can be used which will redirect us to the options page to select the appropriate reading list and tags.

Explanations:

1. Accidental addition of a book to the default list can be prevented.

4. Apply filters for user List on the Shelf

Location: My Books Tab -> Select any reading list -> "Read", "Currently Reading", "Want to Read"

Evidence:

1. User Inquiry Analysis - Filter System Section
2. When the user views the reading list, the user nowhere finds an option for application or filter on the reading list displaying a number of books in that listing.
3. 7/14 participants expressed their concerns over the filters not found.

Importance:

1. Filtering books based on sections was expected by the users, for quick access, as there may be hundreds of books in the listing, consuming user's time.
2. It is also an example of flexibility and efficiency based on heuristic design.

Solutions:

1. Filter options are to be provided at the top of the reading list besides sort feature.
2. They should filter out the book's listings based on user preferences.

Explanations:

1. A filter dropdown icon is to be provided to apply the filters. Applied filters will be visible besides the filter icon.



5. Lack of Privacy Control on the reading lists

Location: My Books Tab

Evidence:

1. User Inquiry Analysis - Privacy Section
2. Many participants stated they are not able to control the visibility of their reading lists.

Importance:

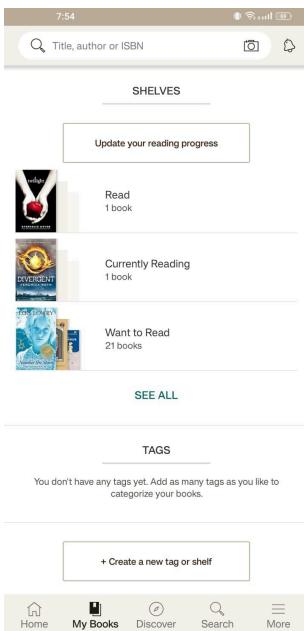
1. The visibility of the reading lists is tied to use of profile right now - that means if the user profile is public all of the user reading listings are public as well.

Solution:

1. In the My books tab, the shelves individually should have icons indicating whether the list is private or public and a quick toggle button to change the privacy should be present.

Explanations:

1. Having a more fine grain control over your book listings will make users feel more secure and comfortable with the application, fostering more app usage.



6. The book cover is not zoomable (blocking potential data to read)

Location: Click on any book -> Book Information Page

Evidence:

1. User Inquiry Analysis - Additional/New Feature
2. On the book overview page the user is not able to zoom in the book cover to read fine details.

Importance:

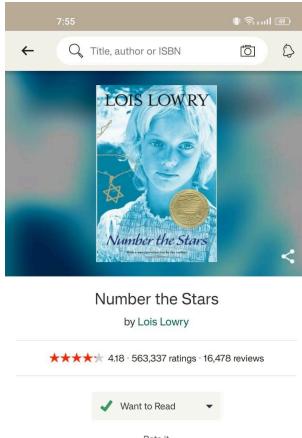
1. Due to the limited screen size on mobile devices, users should have the ability to view the book cover.
2. At times, it's crucial to verify the cover or simply to appreciate the artwork.
3. It establishes a visual connection or interaction for users with the book.

Solution:

1. In the "My Books" section, we can incorporate a feature allowing users to zoom in on the book cover to read its contents.
2. When the user clicks or holds down on the book cover, a pop-up will appear, displaying a magnified view of the book.
3. Also providing a zoom icon, to let users know that zoom functionality exists.

Explanations:

1. Considering external consistency, implementing this feature should be straightforward, as it's commonly utilized on many e-commerce websites for product images.
2. When you tap and hold on the book cover image or click the zoom icon, a popup will appear with an enlarged view of the book cover. Users can then slide their fingers across the screen to explore different areas of the enlarged image.



7. Visibility of Book Community Stats (Quotes, Reviews, Questions)

Location: Click on any book -> Book Information page

Evidence:

1. User Inquiry Analysis - UI Consistency Section
2. As per the survey, users have found quotes sections for each book just below the reviews.
3. However, this functionality is not present on the app.

Importance:

1. Incorporating this information exemplifies displaying application state and recognition rather than requiring users to recall how to access the zoom feature.
2. This information is also vital for community engagement on the application.
3. Implementing it ensures consistency across both the app and website interfaces, providing users with a uniform experience regardless of the platform they are using.

Solution:

1. On the book overview page, incorporate the same quotes section as present on the website. Make the same responsive for the app usage.

Explanations:

1. A simple addition would be required maintaining the consistency of the app and website, including the missing section below the reviews section on the book overview UI.

Website -

The screenshot shows a Goodreads book page for 'FEED' by Mira Grant. At the top, there's a navigation bar with links for Home, My Books, Browse, Community, Sign In, and Join. Below the header is a search bar and a sidebar with a user profile icon for 'Justine'. The main content area displays the book cover, a summary, and a review section. A quote from the book is highlighted. Social sharing metrics like 'Want to read' (122), 'Quotes' (61), and 'Discussions' (27) are shown at the bottom.

Mobile Application -

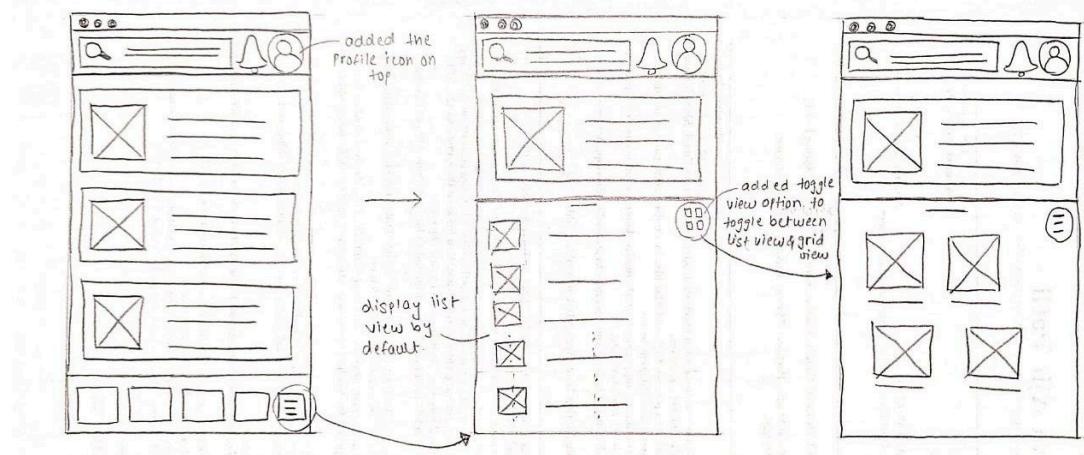
The screenshot shows a Goodreads mobile application screen for 'Somewhere Beyond the Sea' by T.J. Klune. It features a large book cover, a star rating, and a 'Want to Read' button. The interface is designed for mobile devices with a clean, modern look.

IV. Lo-fi prototype

1. Lack of Consistency when Accessing Profile - AP

The solution is to add a User Profile icon on the top-right corner of each screen to ensure consistency across the whole system.

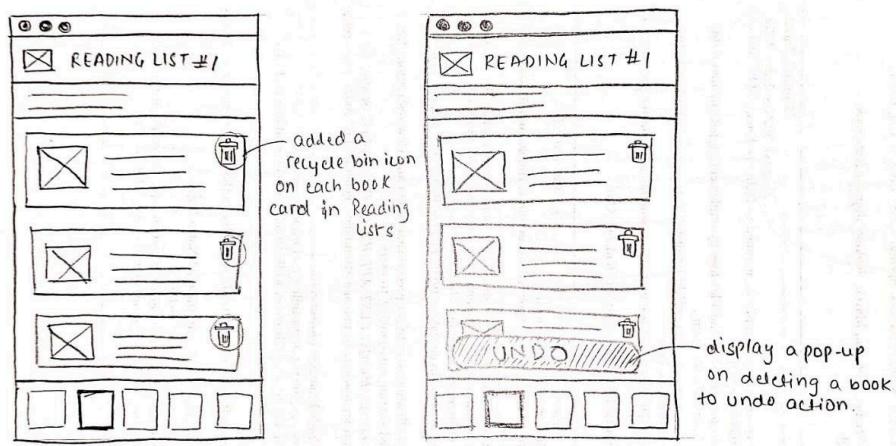
TASK #1: Access your Profile



2. Irreversible Book Deletion from lists - AP

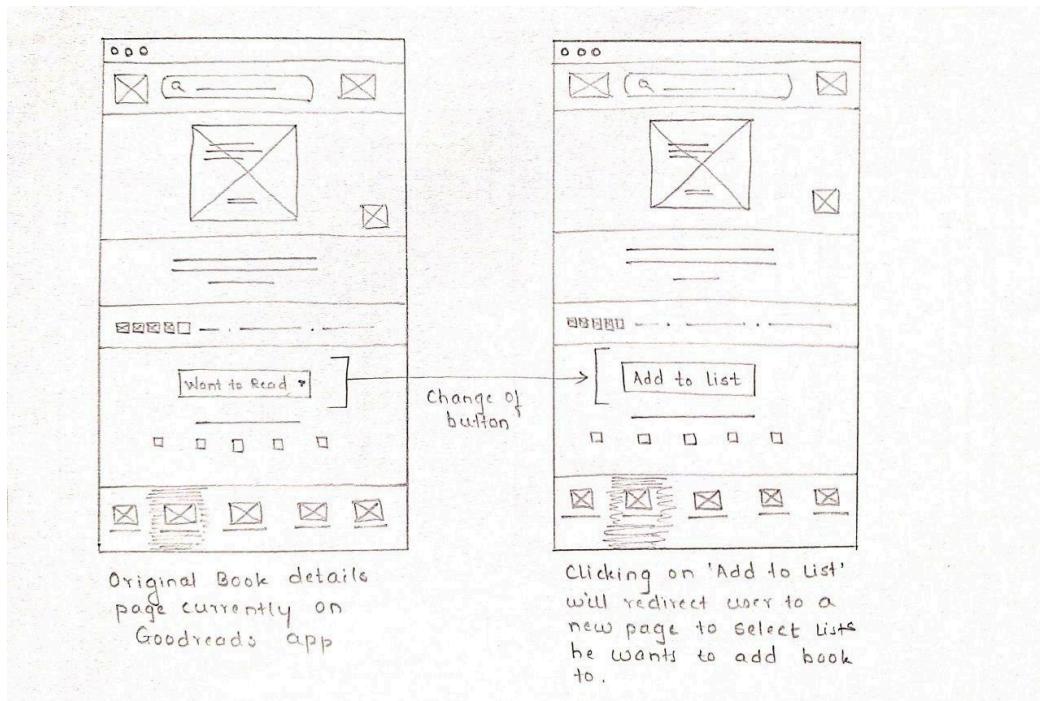
The users should be able to recover from accidental mistakes. Hence, now if a user deletes a book then a small pop will be displayed at the bottom of the screen for about 5 - 8 seconds to undo the action, enhancing user experience and minimizing the risk of accidental deletions.

TASK #2: Delete a book from Reading List



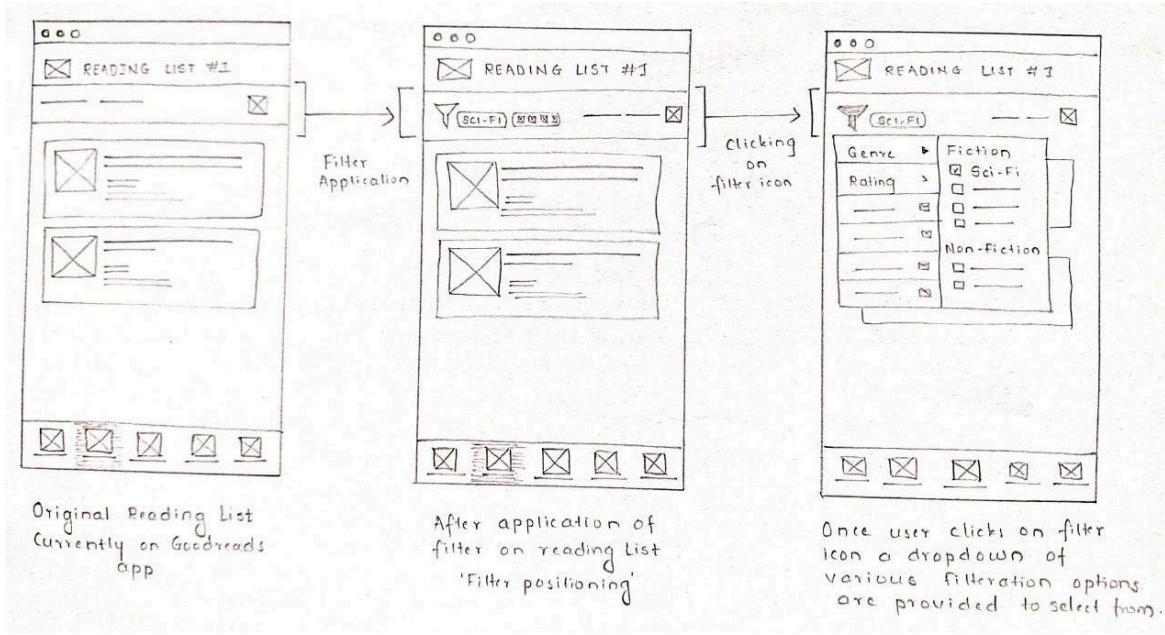
3. Tedious Book Adding and Tagging Process - RV

The solution is to avoid user confusion between default list button and a drop-down, instead a single button can be used which will redirect us to the options page to select the appropriate reading list and tags, enabling users to add books as per user's preference list and correct mistakes if any without dragging the task a lot.



4. Apply filters for Shelf - RV

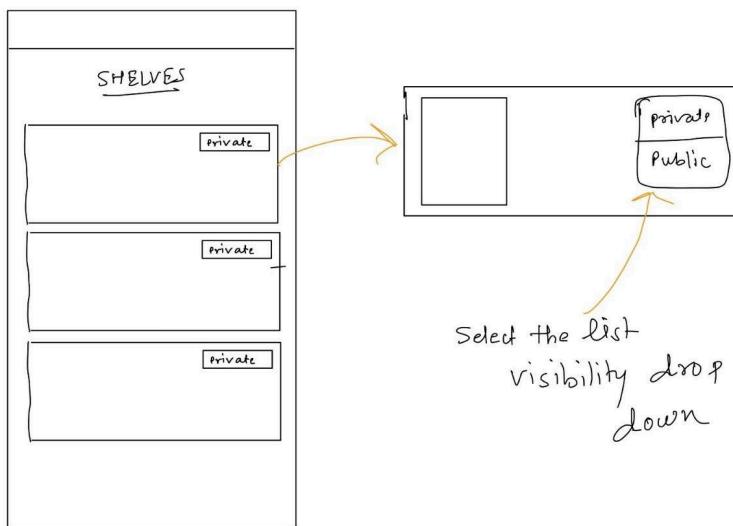
The solution is to provide filter options at the top of the reading list besides sort feature and they should filter out the book's listings based on user preferences.



5. Lack of Privacy Control on the reading lists - AD

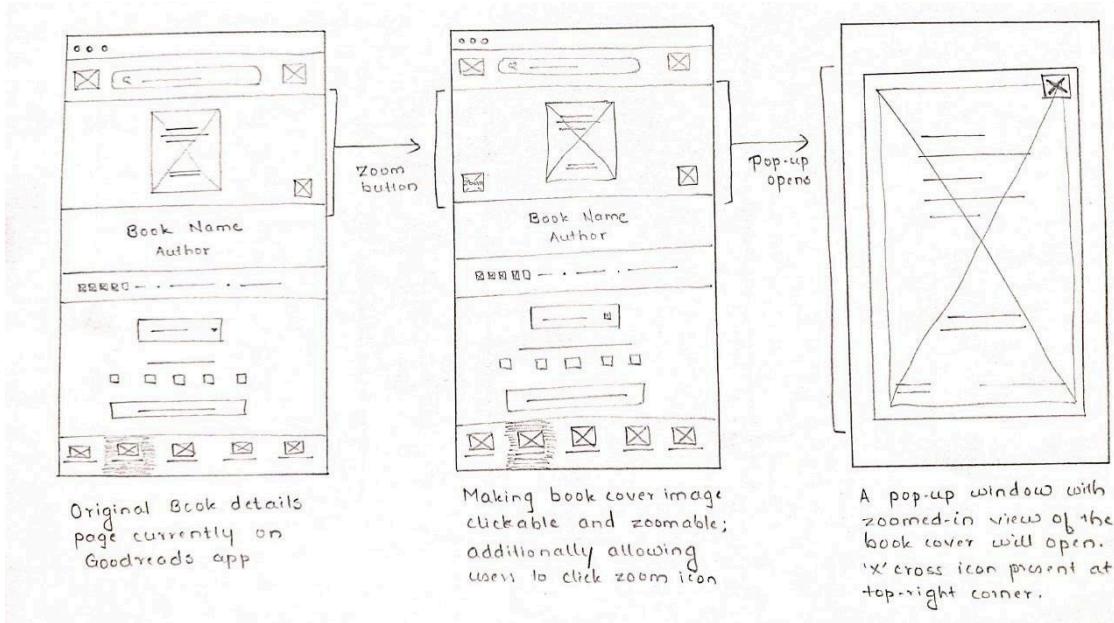
In the My books tab, the shelves individually should have icons indicating whether the list is private or public and a quick toggle button to change the privacy should be present.

Issue 5: Lack of Privacy Controls



6. The book cover is not zoomable (blocking potential data to read) - RV

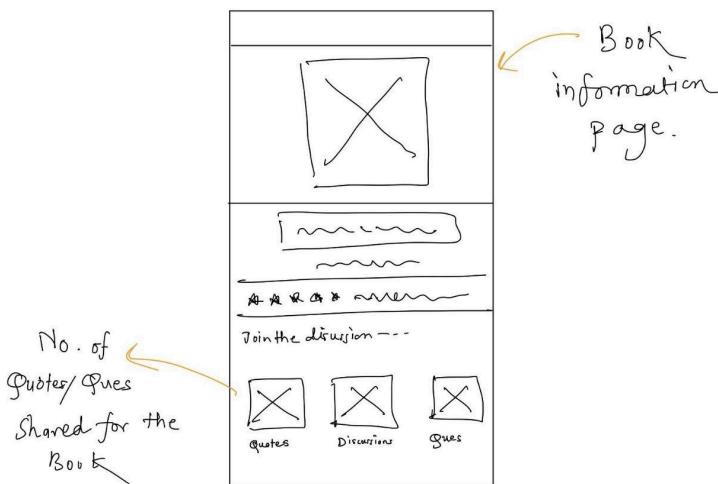
The solution is to incorporate a feature in the "My Books" section, allowing users to zoom in on the book cover to read its contents. When the user clicks or holds down on the book cover, a pop-up will appear, displaying a magnified view of the book. We would also be providing a zoom icon, to let users know that zoom functionality exists.



7. Visibility of Book Community Stats (Quotes, Reviews, Questions) - ADn:

On the book overview page, incorporate the same quotes section as present on the website. Make the same responsive for the app usage.

Issue 7: Visibility of Book Community States



V. Usability Testing Strategy

- **What tasks will the user perform during testing**

1. Change Profile Picture on User Profile
2. Add a book to the “want to read” list and check if the list is public. If yes, make it private.
3. Find Sci-Fi books from the current reading list, check the community stats for the first book, and zoom in on the book cover.
4. Open the “Read” list, filter by genre “Self Help,” and delete the last updated book.

- **How many users will you recruit**

1. 5 Users who are known users of the Goodreads mobile app.
2. Users will be selected from diverse demographics and geographical locations to ensure a varied perspective.

- **What data will you collect**

1. Record whether the user successfully completes each task
2. Gather qualitative feedback from users regarding their comfort level, ease of navigation, and overall experience during task execution.

3. Document any tasks that users were unable to complete or encountered difficulties with.
4. Note any additional comments, suggestions, or observations provided by users during or after the testing session.

- **What comparisons will you perform to show that your prototype improved the experience**

1. User Comfort/Ease Performing the Task: Compare the qualitative feedback on user comfort and ease of task execution between the pre-prototype and post-prototype testing phases.
2. User Success: Analyze the success rates for each task before and after implementing the prototype. Determine if there is a noticeable increase in task completion rates post-prototype.
3. Tasks Users Failed to Perform: Compare the tasks that users failed to perform between the pre-prototype and post-prototype testing sessions.

VI. Supplemental materials

Following is the supplemental material we used -

1. Anonymous Survey - Survey Link
2. Collected Data From the Survey
3. Usability Inspection Methods Screenshots (supplemental_1_screens)
4. (supp.) submit full list of final themes, what codes were put into what themes, and why as [supplemental_qual_raw]
5. (supp.) submit the thematically analyzed transcript, with tagged codes and themes as [supplemental_qual_analyzed]