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BookWurm
CSE 440 Section C
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Assignment 3d: Usability Testing Review

Our Three Usability Tests

Usability test 1: Our first usability test was conducted with a male, 20 years old, pursuing an HCI degree. We performed the usability test inside of the technology exploration lab of Mary Gates Hall, which we chose for its open space. For the usability study, we compiled a list of tasks, which we asked the participant to perform from our application. We had one individual read the script and tasks to the participant, while another was responsible for performing the necessary "wizard of oz" tasks. The additional two team members took notes during the process. The participant was asked to think aloud while walking through the tasks, which included:
- Syncing the bookmark to the application
- Skipping adding a book so they could explore the application
- Adding a new book
- Check upon an existing goal
- Check books that have been read
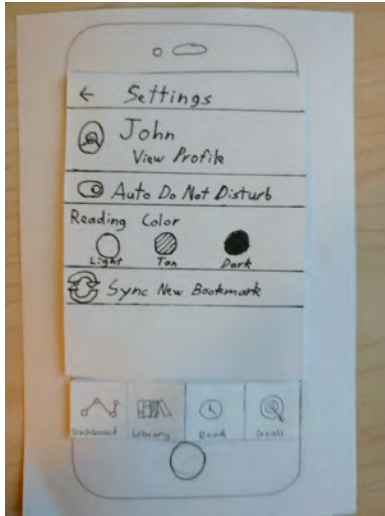- Correct information about a mistimed reading session

We discovered that some of the tasks did not make sense in the order in which they were presented (such as asking the participant to state what books they were reading, when the interface did not show any, and the task to add a book was introduced later). We hoped to change this in future usability tests.

Usability test 2: We conducted our second usability test with a male student majoring in Informatics who we found in the Collaboration Lab in the Mary Gates basement. The environment provided a good deal of desk space which allowed our usability test to proceed comfortably. Like in the first usability test, we had one facilitator, one computer, and two note takers. The participant was successfully able to skip the syncing screen to get to the application, but we noted that this task did not give us much information as to the usability of our application. We asked the participant to add a book next, instead of at a later time like in the previous usability test. The participant assumed that they needed to click "Read", but realized this was incorrect. The participant then correctly clicked on library, but was unable to locate the "Add" button. We cut the task short and continued on. The participant was able to successfully complete all other tasks, including updating the book being read, updating a goal and correcting a reading session, but still expressed difficulty with adding a book. The participant suggested that the way the question was asked may have played a part. In response to this usability test, we removed the idea of syncing from our future usability test and tried to word our questions more clearly.

Usability test 3: We conducted our final usability test with a male student majoring in Computer Science who we found in the UW CSE ACM Lounge. We chose to conduct our usability study in the ACM Lounge in order to get a different perspective from the usability tests we conducted in Mary Gates, and also because the table space was conducive to facilitating a usability test. We had one less notetaker than usual for this usability test. As identified in usability test 2, we omitted the task of skipping the sync screen as it did not further our understanding of our application. The participant for this usability test was able to add a book without issues, although they did take a pause for a second or two to find the add button. The participant expressed privacy issues with the idea of a barcode being brought up automatically. The participant was able to complete the task of changing the current book read and ending a reading session easily, but expressed confusion as to whether "Read" was supposed to be past or present tense. The participant was also able to add a goal, but said he would like to see the option of adding books as the goal is created. The participant was able to get through the rest of the specified tasks, but said he would like to see the title of a book visible on the bookmark and would like a clearer way to tell how to start or stop reading.

Issues identified from usability testing:

Issues identified from Usability Test 1:

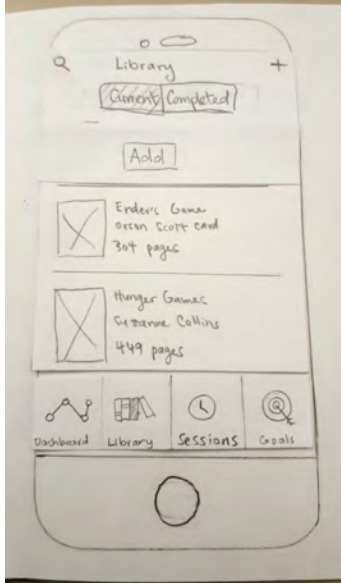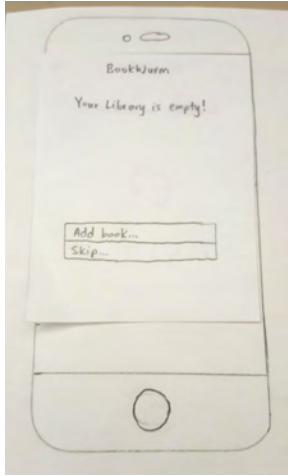| Before	After	Incident
	N/A	**Simple Bookmark Interface** A positive point in going through the usability test with our participant was the bookmark interface. For the participant, he noted that it was really simple and straightforward. He also noted that it took a significant portion of the work out of trying to record the time spent reading.
(No page existed for this previously)		**Settings Page (Severity 3)** A point of concern for our participant was in how they would connect to their bookmark, or how it is that they might go about connecting to a brand new wearable if they were to lose the old one. For this change, we focused on introducing a settings page, with very little in terms of added functionality, but made the necessary features available when necessary.
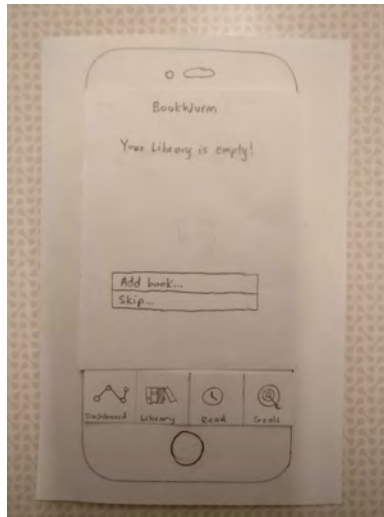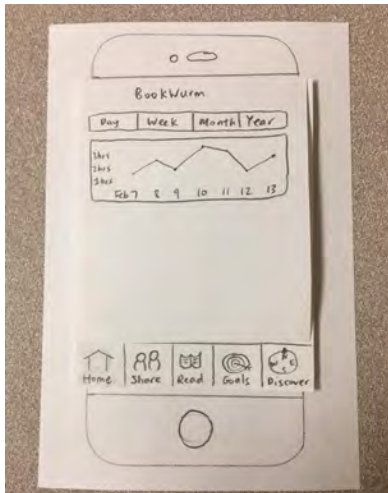
Getting Started (Severity 3)
Our participant identified that when the application first opened up, it was not immediately clear as to how they should get started. To remedy this, we opted to include a getting started page. This page opens on the option to sync a new device, followed by a prompt, asking the participant whether they would like to add a new book.
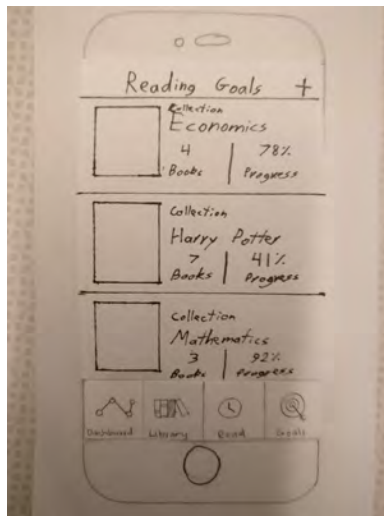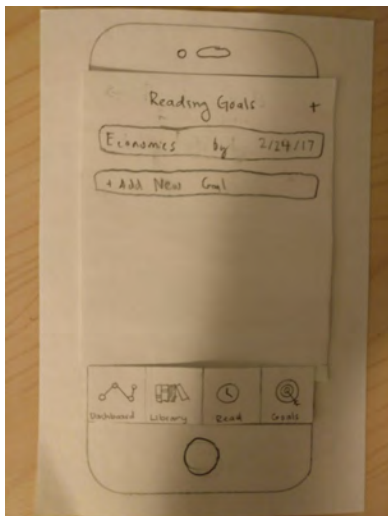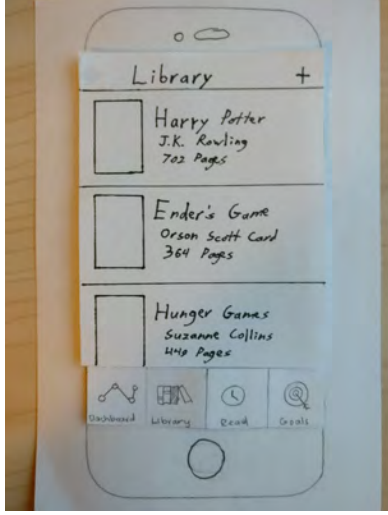

Categories Unclear (Severity 3)
During the course of the usability study, when the participant first saw the goal page they confused the goal category of "Economics" for a book. To this end, we thought it would be helpful to label each section clearly as a collection, as well as showing the total number of books for that goal, as well as the participant's overall progress.
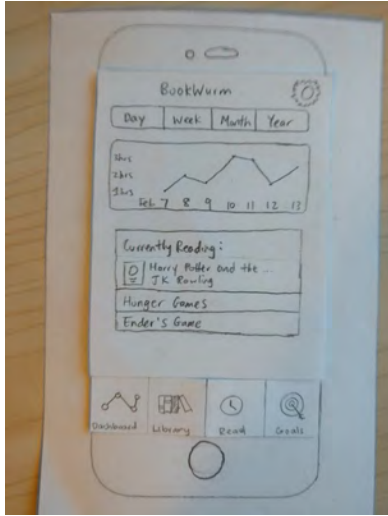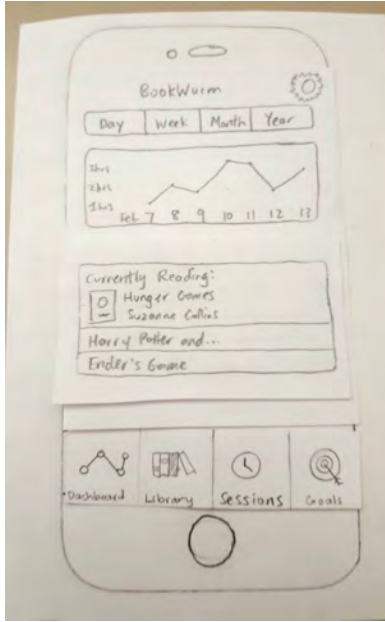
Issues identified from Usability Test 2:

| Before	After	Incident
		Difficulty in locating the add button (Severity 4) The participant had some difficulty in figuring out how to add a book, initially clicking read in order to add a book, and then when coming to the library screen, was not able to notice the plus in the upper left corner. This left the participant confused as to how to add a new book.
	(Removed)	**Unnecessary sync screen (Severity 3)** The initial presence of the sync screen did not seem to make that much sense to the participant at first, as the nature of the question implied that the bookmark itself needed to be used to progress forward from this screen. We removed the sync screen from the paper prototype to avoid further confusion.
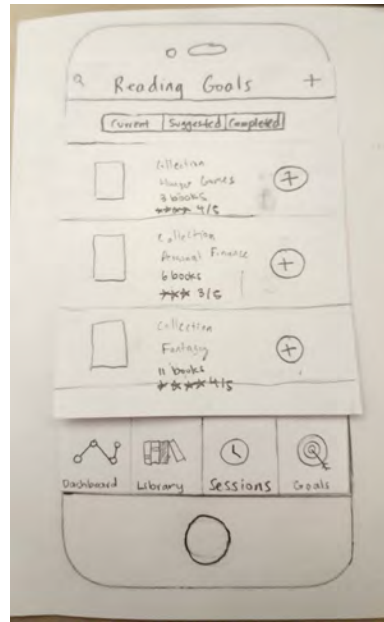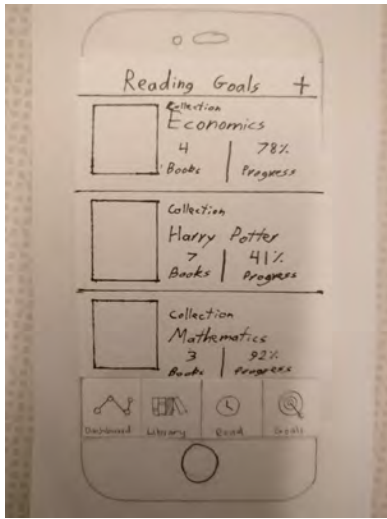
Idea of goals not compelling enough (Severity 3)

The concept of setting a goal did not immediately make sense to the participant, so in response to feedback we attempted to make the goal more compelling by adding a "Suggested" tab to the reading goals screen in order to suggest functionality that would allow the participant to figure out what to read based on what is popular online.
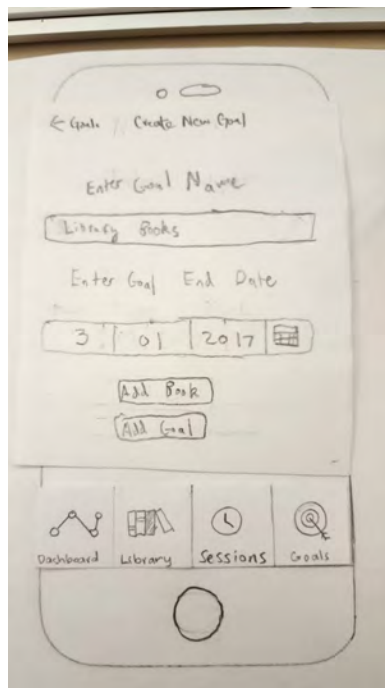
Issues Identified from Usability Test 3:

Before	After	Incident
		"Read" has too many interpretations (Severity 2) The participant expressed confusion over the fact that "Read" can be interpreted in both a past tense and a present tense, and was unsure of what would happen if he clicked on the "Read" button. In order to make the functionality of the button more clear, we changed the name of the button to "Sessions", as this implies that a participant can start and end a reading session on this tab.
		Connected book unclear from looking at bookmark (Severity 1) The participant expressed concern over not knowing the bookmark was paired to the correct book just by glancing at it, so we added the title of the book to the top of the bookmark in order to allow the reader to double check that the bookmark is paired with the correct book.
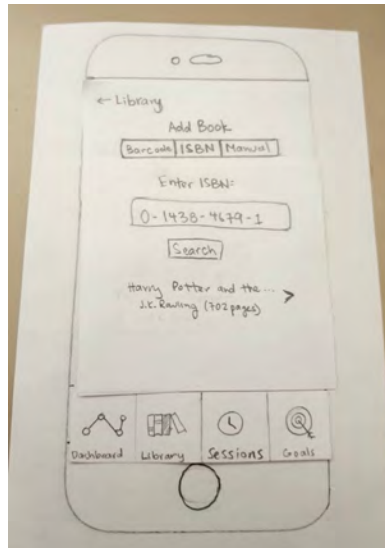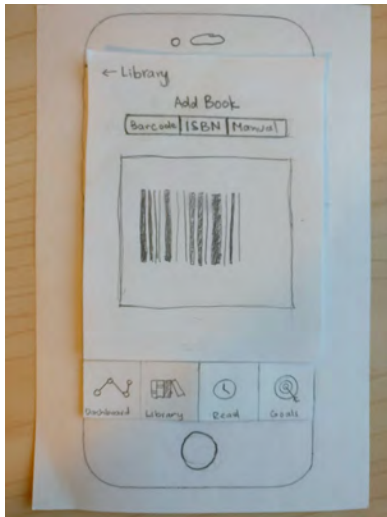
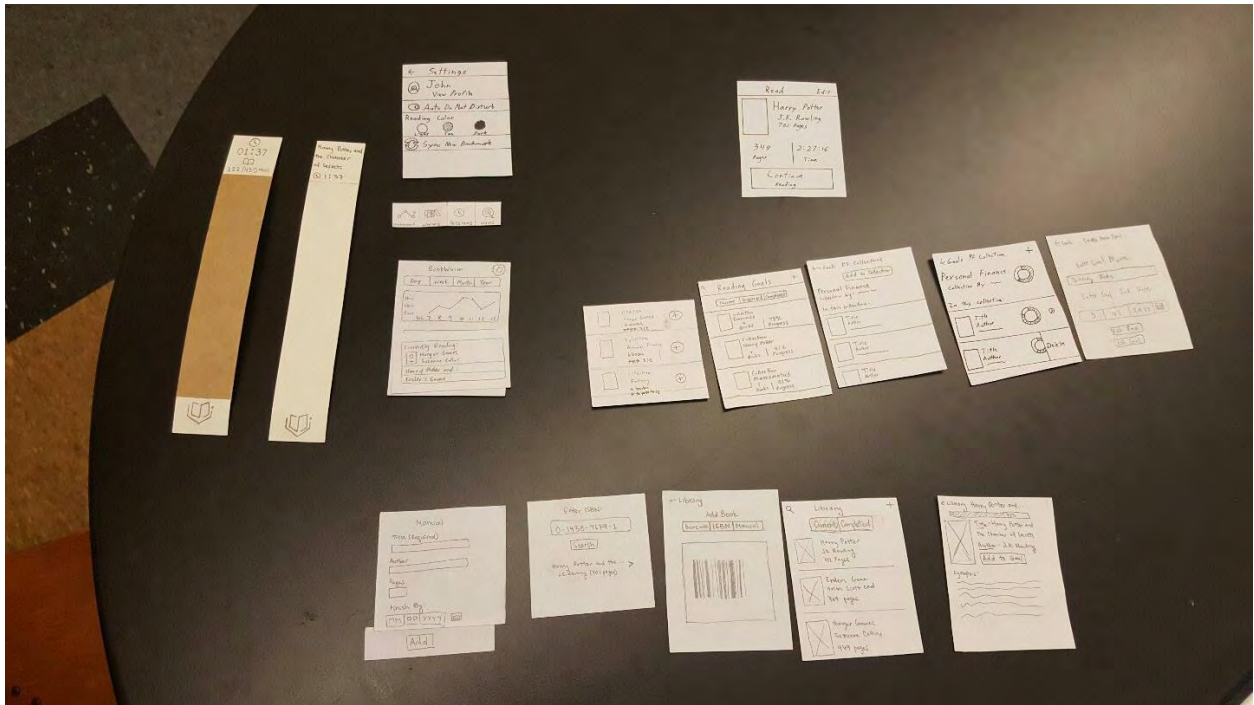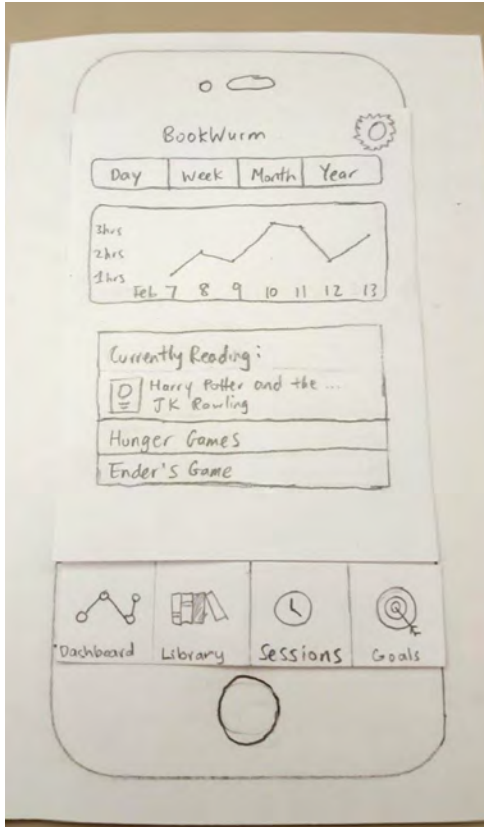|		
		Scanner should not be default screen when adding books (Severity 2) The participant brought up the point that the camera should only be brought up with the participant's explicit permission as there are privacy concerns related to use of the phone's camera. In response, we changed the default screen of the "Add book" screen to "Add by ISBN"
		Books should be addable upon goal creation (Severity 3) The participant expressed some annoyance over the idea of creating a goal and then going back and adding books to it after creation. In response, we added the option of adding books to a goal on its creation screen.

# Current Prototype

Task 1: Add a book and track progress

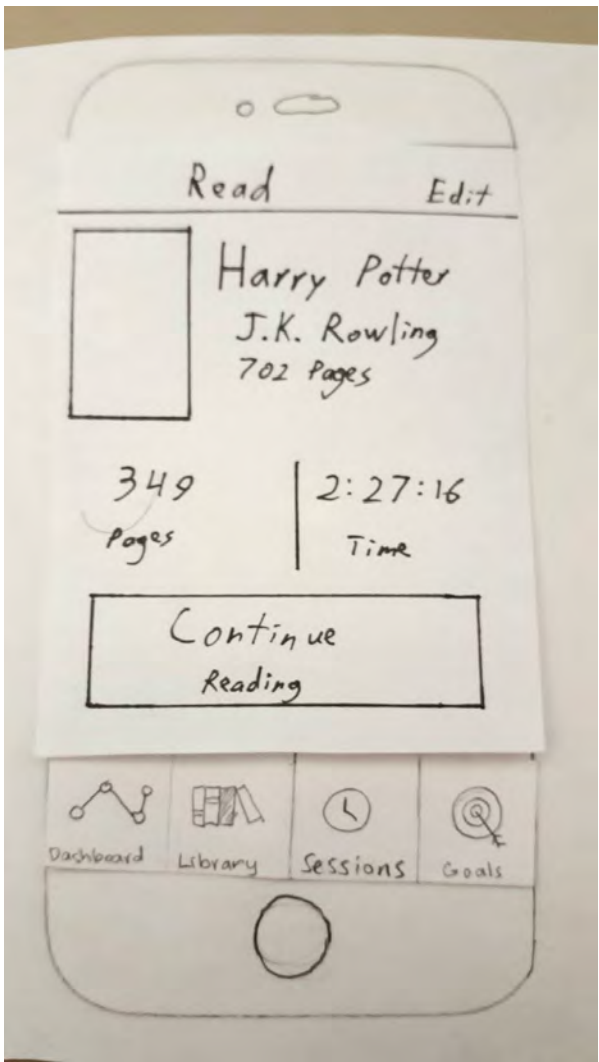| Screen	Step Description
	On the home screen, the participant can see their reading habits thus far as well as the books they are currently reading. The participant clicks "Library".
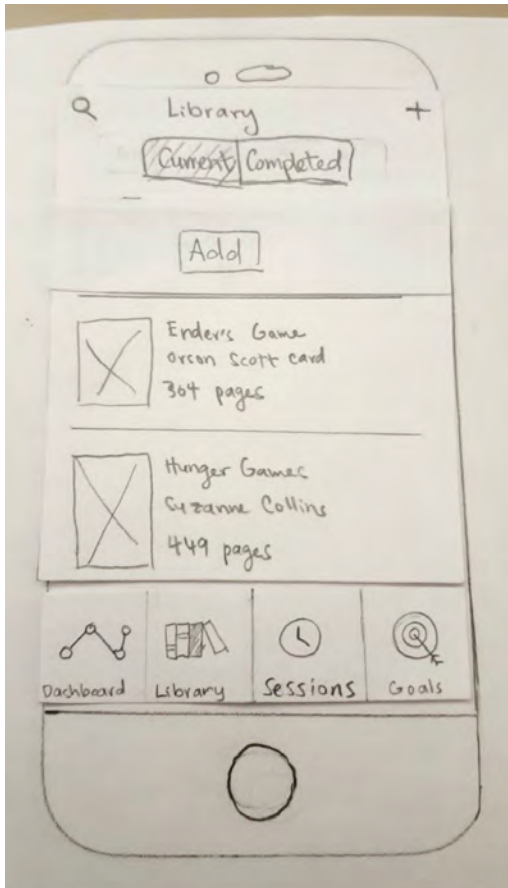
The participant is then taken to their library of books. The participant wishes to start a new book and would like to add a book to the library. The participant clicks the add button in the middle of the screen.
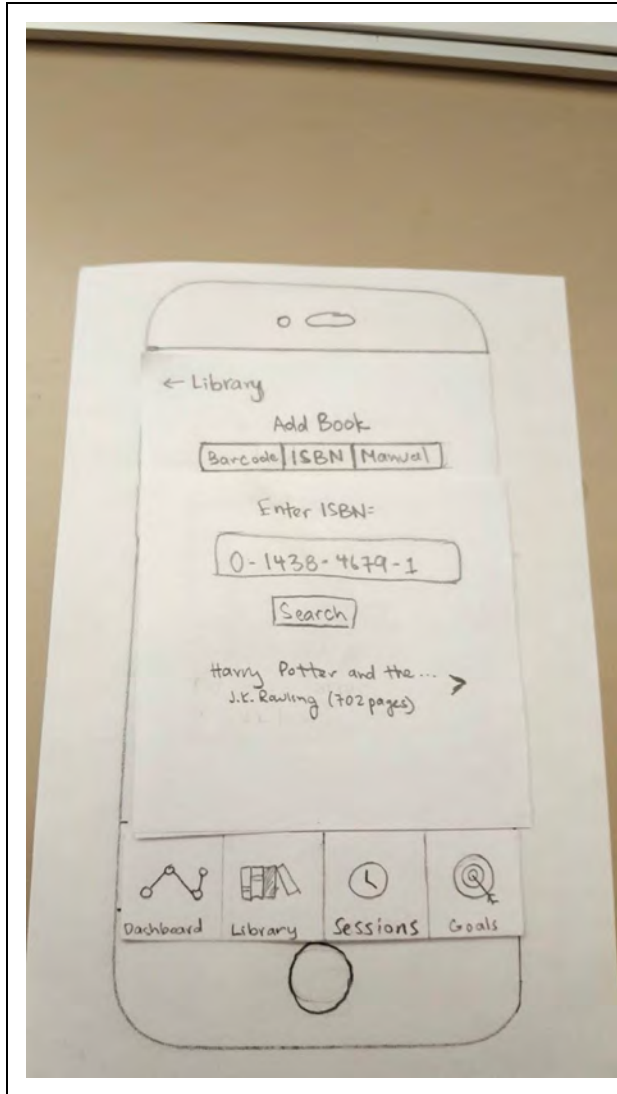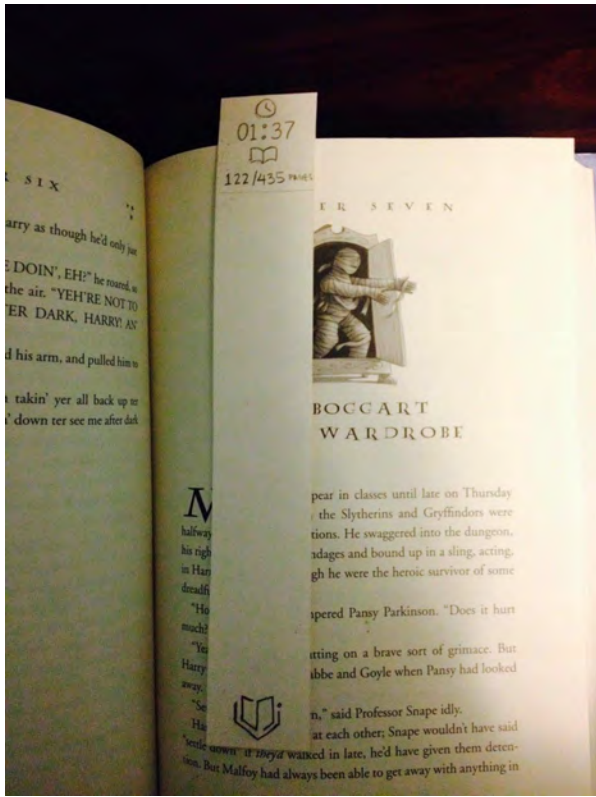
The participant adds the book they would like to read by entering its ISBN (there was also an option to enter by scanning or to enter the book information manually).
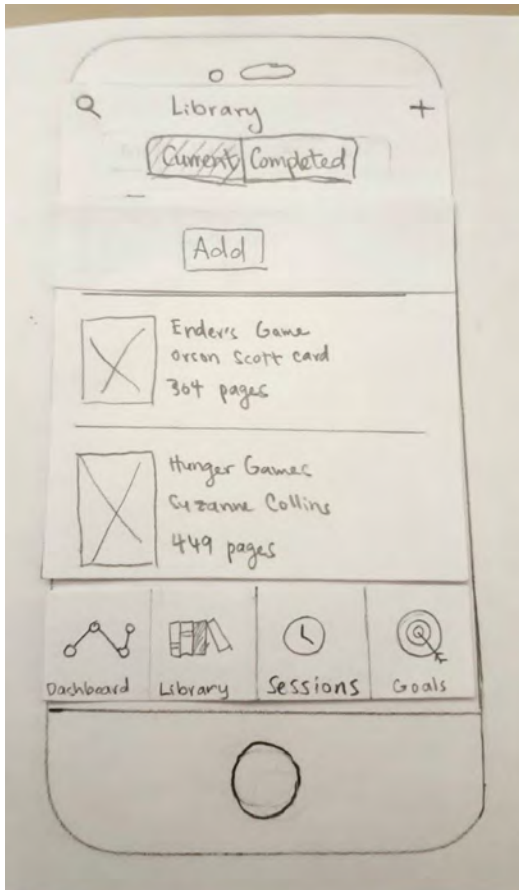
The participant is taken back to their library. The book they scanned is now visible in the library. The participant would like to read it while tracking progress with the smart bookmark. They click the row representing the newly added book.
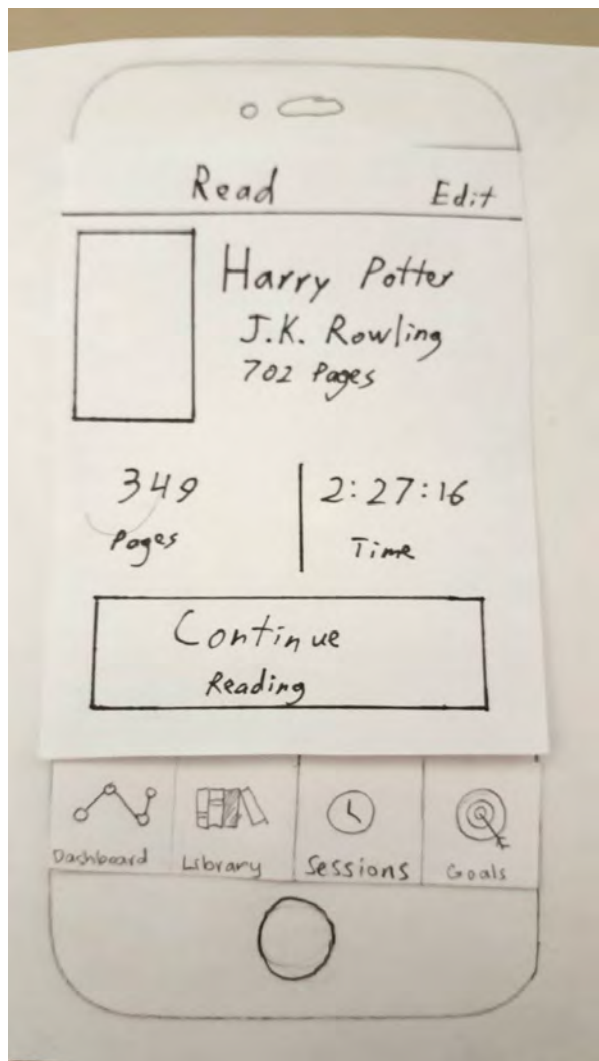
Read   Edit

Harry Potter
J.K. Rowling
702 Pages

349   2:27:16
Pages   Time

Continue
Reading

Dashboard   Library   Sessions   Goals

The participant clicks "Continue Reading".

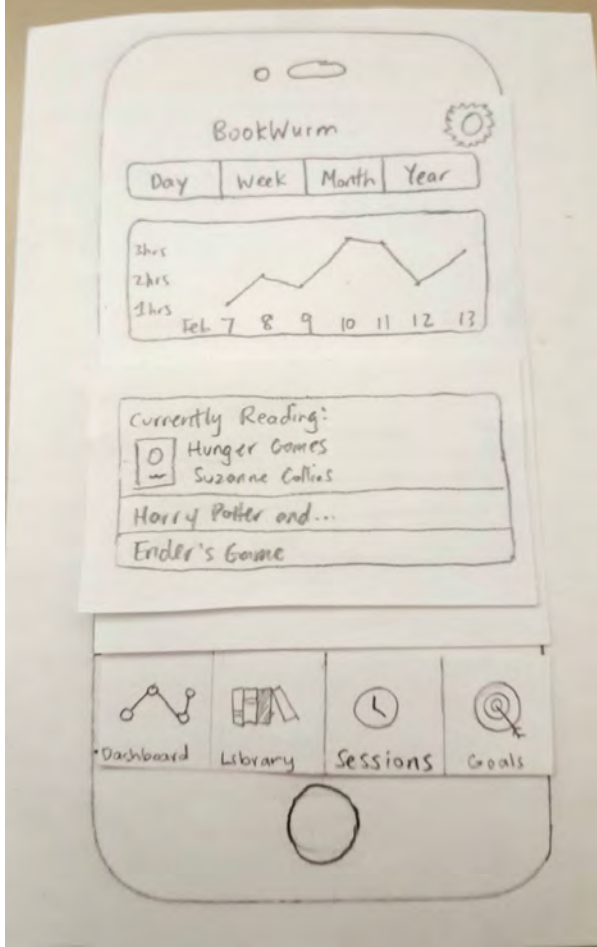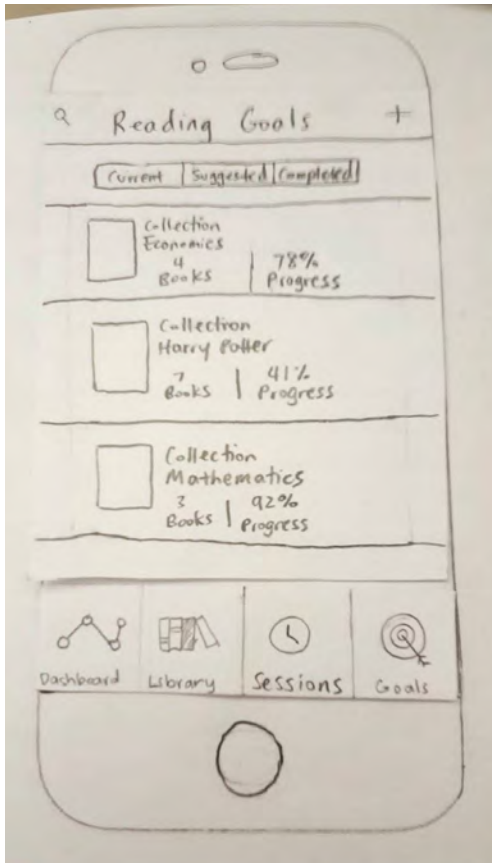|	
	The participant opens the book.
	The participant puts on the bookmark which begins timing and tracking the reading session. The participant then reads as normal.

At the end of the reading session, when the bookmark is taken off, the participant is taken back to the book page and shown stats about their reading session. The participants clicks the dashboard button to return to the home screen.
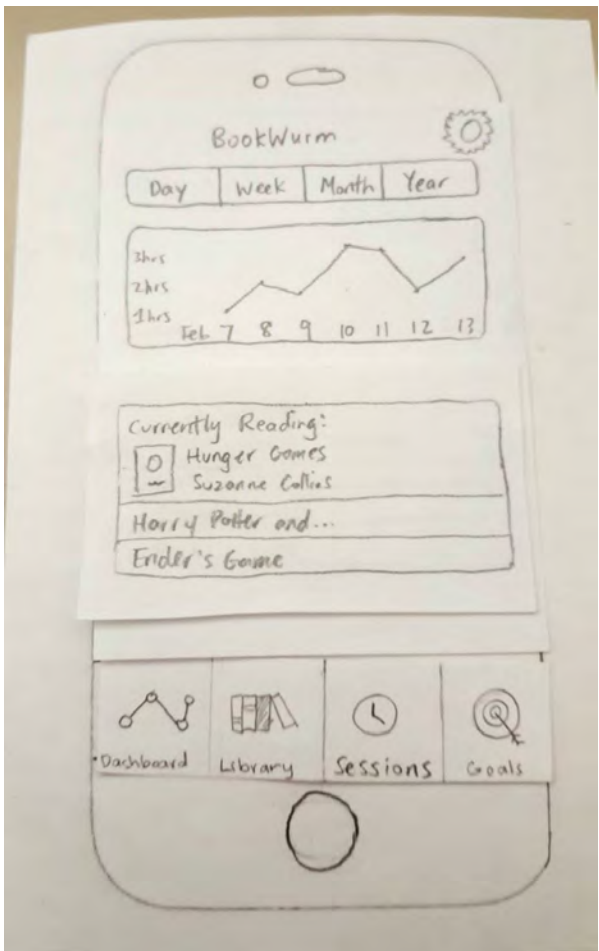
The participant has completed the task and finds that the graph displayed on the dashboard has been updated with information about their most current reading session.

Task 2: Add a new reading goal

Screen	Step Description
	On the dashboard of the home screen, the participant clicks "Goals".

On the "Reading Goals" screen, the participant clicks on the "Economics" goal to check their progress thus far. They can then click on the "Suggested" tab at the top to see suggested goals or the + symbol to add a new goal
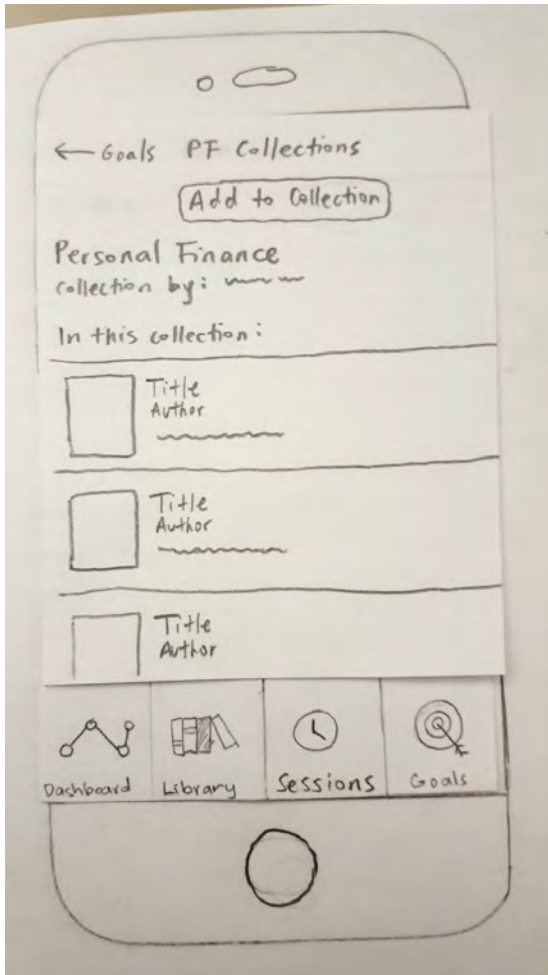
Upon reaching the suggested goals page, the participant can see and select a list of suggested collections. For this collection, "Personal Finance", the participant can use the button at the top to add it to his list of goals.

Most salient and important modifications

One of the first things that became immediately apparent during our testing was in the lack of a way for the participant to get started. In this sense, the participants of our usability study said that they found themselves thrown into the application, with little additional context for how they should get started. Combined with the feedback from our heuristic evaluations of needing a way to make sure that the bookmark was paired on start, the getting started guide become a way to fulfill this segment of the design.

The next focus of our modifications comes in the form of reading playlists. While the concept of reading goals made sense to participants when fully explained, however the concept itself was not easy to quickly understand. In this sense, we borrowed from music applications the concept of a playlist. These playlists allow the participant to define an overall goal of reading a collection of books, while making it easy to quickly grasp the overall concept. Additionally, we implemented an idea of suggested reading playlists (similar to playlists Spotify offers people on the main screen). This was a way for us to incorporate reading suggestions without the need of an additional tab or a completely separate portion of the application dedicated to discovering new books.

The last significant change of note in our design is in the form of a quick view on the dashboard. While not necessarily a massive change, this quick view allows for the person using it to quickly identify what book their bookmark is paired with, and to switch it if necessary. This made it significantly easier for them when it came time to perform actions such as switching between books, and drastically reduced the overall taps that were necessary to do so.