**Book Xchange**

iOS App

Project Backlog - Group 11

Aditi Patel, Elena Monroe, Harshini Manian, Pooja Mathi, Sam Delucia-Green

**Problem Statement:**

In this digital age, it can be hard to locate physical books without purchasing them. This is especially true on a college campus, where most libraries are dedicated to textbooks and reference material. Students still want to read for fun and for free – this is where the BookXchange app comes in. It allows users to find books they want to read in their geographic area and swap them with other users.

**Background Information:**

* **Problem:**

Aren’t books just so expensive? Book Exchange brings a modern take on the classic “Little Free Library” (<https://littlefreelibrary.org/>) located in small and large cities across the nation. This platform provides users with a way to exchange completed books/textbooks with other users for free.

* **Domain:**

This app centers around the exchange of books: being able to read new ones and allow others the chance to read books that you love.

* **Targeted Users:**

The intended audience for this app are book lovers who are looking to read new books without buying them. They should be comfortable with meeting up locally to exchange books. The app is meant to be streamlined enough that users can find new literary interests and expand their love of reading.

* **Similar Applications and Limitations:**

There’s one similar app called Swappy Books that allows users to swap books with other people in their area. However, it doesn’t have an algorithm that suggests books based on the user’s previous swipes, which is the main feature of the BookXchange app. The other app also shows users’ exact location regardless of whether they’ve indicated that they want to read the other user’s book, whereas BookXchange allows users to meet up in a general zone and never reveals users’ locations.

**Functional Requirements:**

**User account:**

1. As a user, I would like to be able to create an account on BookXchange with a unique email, unique phone number, and unique and appropriate username.
2. As a user, I would like to be able to create an account through a Google account.
3. As a user, I would like to be able to login and manage my BookXchange account.
4. As a user, I would like to be able to reset my password.
5. As a user, I would like a verification email sent to my email account after registering.
6. As a user, I would like a verification text sent to my phone number after registering.
7. As a user, I would like to be able to utilize two-factor authentication (if time allows).
8. As a user, I would like to be able to delete my account.

**User profile:**

1. As a user, I would like to be able to create a profile with my name and bio.
2. As a user, I would like to be able to change my profile’s name and bio.
3. As a user, I would like to be able to pick my preferred genres from the provided options when setting up my account.
4. As a user, I would like to be able to take a photo with my phone camera to use as my profile photo.
5. As a user, I would like to be able to upload a profile photo from my gallery.
6. As a developer, I would like to retain a database of users’ profiles.
7. As a developer, I would like to automatically log out a user who hasn’t been on the app for a while.
8. As a user, I would like to be able to invite someone to the app via phone number or email.
9. As a user, I would like to be able to share my profile on social media.

**User library:**

1. As a user, I would like to be able to easily navigate to the different parts of the app.
2. As a user, I would like to be able to manually upload a picture of my book to my library.
3. As a user, I would like to be able to manually enter the title, author, isbn, and genre of my book to my library.
4. As a user, I would like to be able to scan the UPC on my book and upload its information (if time allows) to my library.
5. As a user, I would like to be able to manually enter the ISBN number of my book and have the book information auto-populate.
6. As a user, I would like to be able to remove books from my library.
7. As a user, I would like to see a visual display of the books in my library.
8. As a user, I would like to be able to edit the information on the books in my library.

**Reporting/managing users:**

1. As a user, I would like to be able to report other users who are misusing the app.
2. As a moderator, I would like to be able to delete books posted by users.
3. As a moderator, I would like to be able to delete users.
4. As a user, I would like to be able to give other users a rating based on my interactions with them so that other users can see this rating when they match with that user.
5. As a user, I would like to be able to see other users’ community ratings.
6. As a user, I would like to be able to block other users so their books don’t appear on my swapping page.
7. As a user, I would like to be able to report an issue with the application to the administrators.

**Profile interaction features:**

1. As a user, I would like to see my most recent messages at the top of the page.
2. As a user, I would like to retain my chat history from people whose books I’ve matched with.
3. As a user, I would like to have a chat feature open up when I’ve matched with another user’s book.
4. As a user, I would like to be able to send and receive messages with users whose book I’ve matched with.
5. As a user, I would like to be able to unmatch with other users’ books.
6. As a developer, I would like to be able to suggest a nearby public location for users whose books have matched to meet up to swap.
7. As a user, I would like to receive a notification when I have matched with someone for a book, when a match has messaged me back, and when I have not been active on the app in a while.
8. As a user, I would like to disable push notifications.
9. As a user, I would like to ‘heart’ other peoples’ messages.
10. As a user, I would like to see the profiles of users whose books I’ve matched with.
11. As a user, I would like to see a visual display of all the books I’ve swapped with.

**Swiping feature:**

1. As a user, I would like to be able to swipe left (dislike book) and right (like book) on books on my personal feed.
2. As a developer, I would like another book to immediately pop up after the user has swiped on the previous book.
3. As a user, I would like the books on my bookshelf, books relating to my preferred genres and authors, and books whose users are in my general area to influence what types of books appear on my personal feed.
4. As a user, I would like to see an animation on the screen when I match with someone for a book (if time allows).
5. As a user, I would like to set a preferred radius of distance for other books’ locations for my personal feed.
6. As a user, I would like to be able to change my geographic location.
7. As a user, I would like to be able to reset my personal feed algorithm.

**Non-Functional Requirements:**

* **Response time:**

Since users will be potentially swiping through many book suggestions and reaching out to other users, it’s crucial that the response time be fast. Its server-side lag should be less than 300 ms so that users have accurate, up-to-date information about what books are available. Algorithm book recommendations and swiping should have a minimal amount of lag time to make the user experience as smooth as possible. The messaging feature should also have a very short time delay so that users can exchange information in real time.

* **Scalability:**

We plan to design the app in a way that allows seamless integration of new features further enhancing the user experience. This will occur without consequence on the functionality of other features or errors on the client-side.

* **Usability:**

The app will be user-friendly so users can easily navigate the interface and be able to easily manage their library, swipe books, message other users, and report concerns. The iOS app will be compatible on all iOS devices and have a seamless UI.

* **Security:**

Security is essential to the user experience on Book Exchange. The app will not be sharing locations of users and will make sure that users will have privacy in terms of their profile information. The user’s password will also be stored in a secure manner, utilizing Firebase.