Software Requirements Specification (SRS) Document

BookSwap Hub

05/08/2025

Final Documentation

Cincear Weaver & Saniyah Khan

Project Name: BookSwapHub

GitHub Repository: https://github.com/khan2225/bookswaphub

Project General Description

1. Project General Description

    a. BookSwap Hub is a community-driven app designed to facilitate book exchanges between users. The motivation behind this app is to promote reading, sustainability, and accessibility by enabling users to share books they no longer need and find books they want to read without purchasing new copies. The app aims to create a network of book lovers who can easily swap books, leave reviews, and connect with other readers.

2. Product Features

The BookSwap Hub application is designed to revolutionize the way users interact with entertainment content. Below are the key features and functions that define the essence of the application:

Content Preference Customization: Users can select their preferred genres, romance, horror, thriller, comedy, drama, and more.

Personalized Profile Creation: Enables users to create personalized profiles reflecting their unique tastes and preferences.

Book & Listing Search: Users can list books they own and search for books available for swap.

Swap Coordination: A user-friendly messaging system for arranging book swaps.

Review & Rating System: Users can leave feedback on books and swapping experiences.

Content Creation and Sharing: Provides a platform for content creators to publish and highlight their original content, reaching a targeted audience of users interested in similar content. This includes integration with social features, allowing users to share their discoveries and recommendations with friends and followers.

Functional Requirements

3. Functional Requirements

User (Customer):

- FR0: The app will allow all users to create a profile.

- FR1: The app will allow all users to modify their profile.

- FR2: The app will allow the users to browse available books for swapping.

- FR3: Users can request a swap by contacting the book owner through in-app messaging.

- FR4: The app will allow the user to view their saved content.

- FR5: Users can write reviews on swapped books and swapping experiences.

Provider (User Offering Books to Swap):

- FR10: The provider can sign up with a username, email, and password.

- FR11: The provider can add/edit details such as name, location, and a short description.

- FR12: The provider can delete their account, removing all their listings.

- FR13: The provider can upload book details (title, author, genre, condition, description, and images).

- FR14: The provider can mark a book as "Available" or "Swapped".

- FR15: The provider can edit or delete book listings.

- FR16: The provider can see how many users have viewed their book listings.

- FR17: The provider can track swap requests received.

- FR18: The provider can view reviews left by customers who swapped books with them.

- FR19: The provider can reply to reviews to address feedback or provide clarification.

Non-Functional Requirements

4. Non-Functional Requirements

- – NFR0: The platform must be available 99% of the time.

- – NFR1: Response time for search queries should be under 2 seconds.

- – NFR2: The system should allow a provider to list or modify a book entry within 3 seconds after submitting the form.

- – NF3: The interface for listing books should be intuitive and require no more than 5 steps to complete a book entry.

- – NFR4: A provider's personal information (email, password) should be encrypted and stored securely to prevent unauthorized access.

5. Scenarios

- Provider – *Cincear Weaver*

    o **Book Swap (Create/Modify/Withdraw Provider Profile)**

        ▪ **Initial Assumption:** The provider has access to the web app and is logged in.

        ▪ **Normal:** The provider navigates to the "Profile" section, where they can create, modify, or delete their profile.

            • If creating a profile, they enter details such as name, location, and contact information and click "Save."

            • If modifying, they update the necessary fields and click "Save Changes."

            • If withdrawing, they click "Delete Account," confirm their action, and the system removes their profile and book listings.

- **What Can Go Wrong:**

  - The provider may enter incomplete or invalid information, in which case an error message will prompt them to correct it.

  - The provider might delete their account by mistake. A confirmation prompt will require them to confirm their decision before proceeding

- **Other Activities:** The provider can navigate to other sections like "My Listings" or "Statistics" from the profile page.

- **System State on Completion:**

  - If the provider creates a profile, their account is set up and active. o If the provider modifies their profile, changes are reflected in the system.

  - If the provider withdraws, their account and book listings are removed permanently.

Username

tests

Full Name

test

Email

FullTest@gmail.com

Password

•••

Sign Up As

Provider

Provider Invite Code

PROVIDER2025

Sign Up

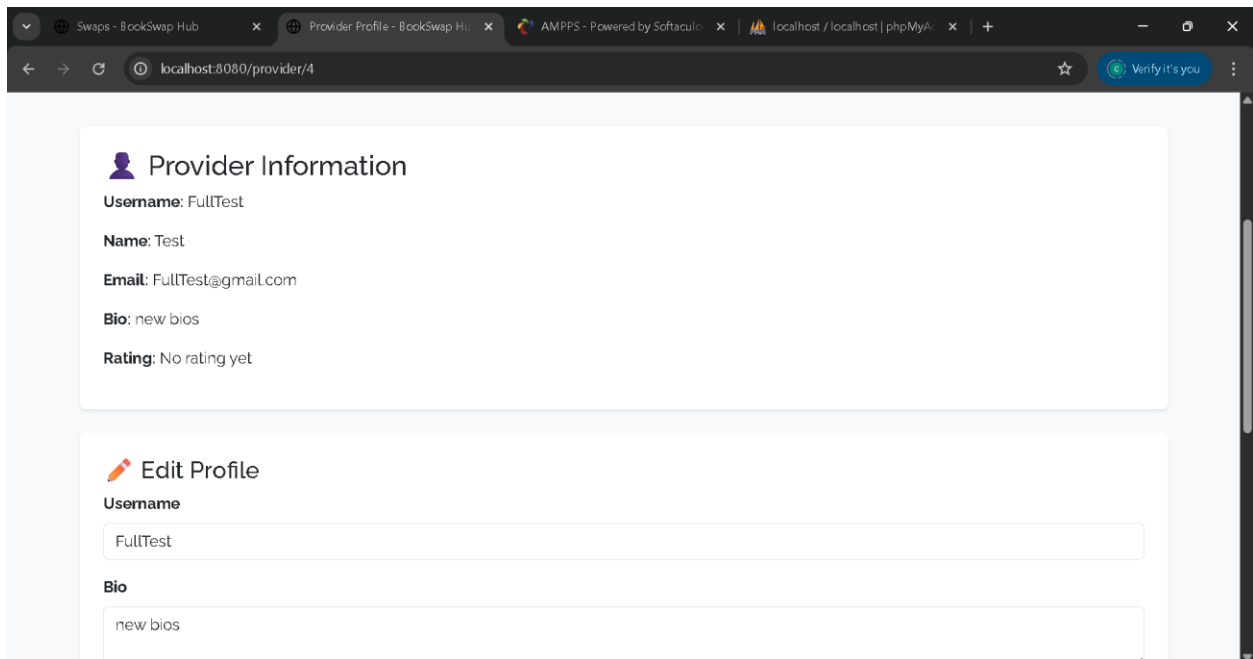BookSwap Hub

Login

Email

FullTest@gmail.com

••••••   Show

Login

Don't have an account? Sign up here

BOOKSWAP HUB
Provider Dashboard

HOME   MANAGE BOOKS   SWAP REQUESTS   PROFILE   LOGOUT

Manage Books
View and edit your book collection.

Go

Swap Requests
Check pending swap requests.

Go

Messages
View inbox

Go

Profile
Update your provider details.

Go

👤 Provider Information

Username: FullTest

Name: Test

Email: FullTest@gmail.com

Bio: new bios

Rating: No rating yet

✏️ Edit Profile

Username

FullTest

Bio

new bios

- **Provider – Cincear Weaver**
 - o **Book Swap (List Books for Swapping)**

- **Initial Assumption: The** provider is logged in and on the "My Listings" page.

- **Normal:** The provider clicks "Add New Book" and enters details such as title, author, genre, condition, description, and uploads images. They click "Submit," and the system adds the book to their listings.

- **What Can Go Wrong:** The provider may leave required fields blank, prompting an error message. The provider may upload an unsupported file format for images, triggering an error.

- **Other Activities:** The provider can edit or delete an existing listing from the "My Listings" page.

- **System State on Completion:** The book is successfully added to the provider's available swap listings, making it visible to customers.
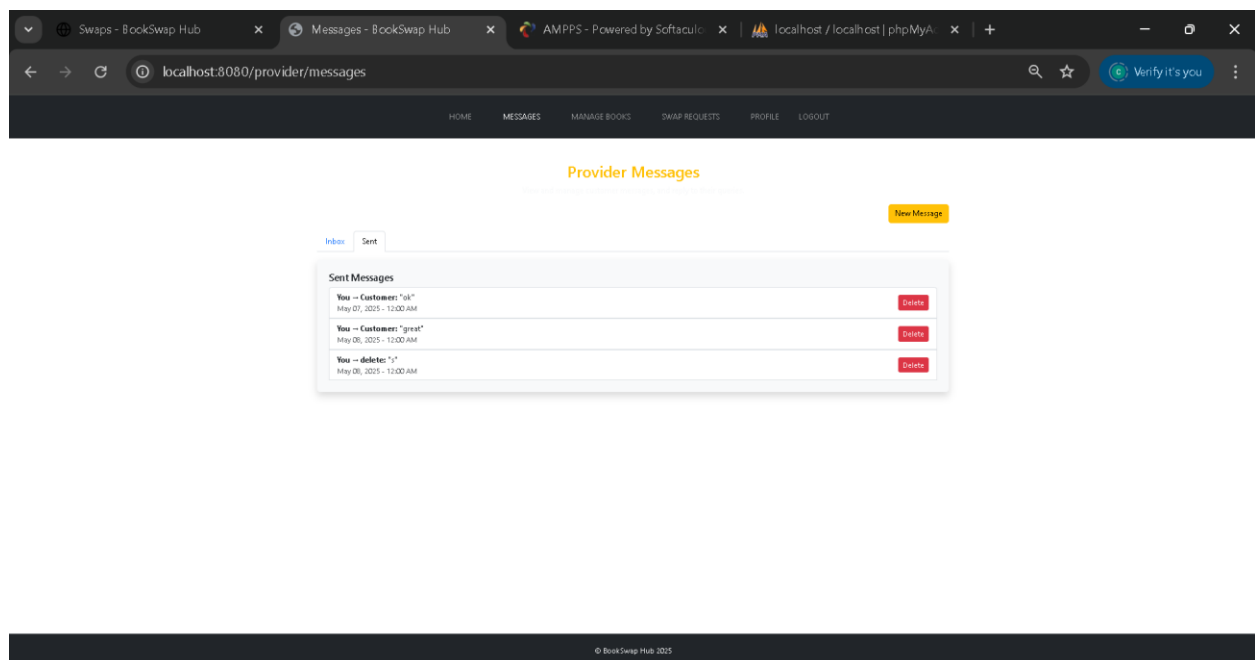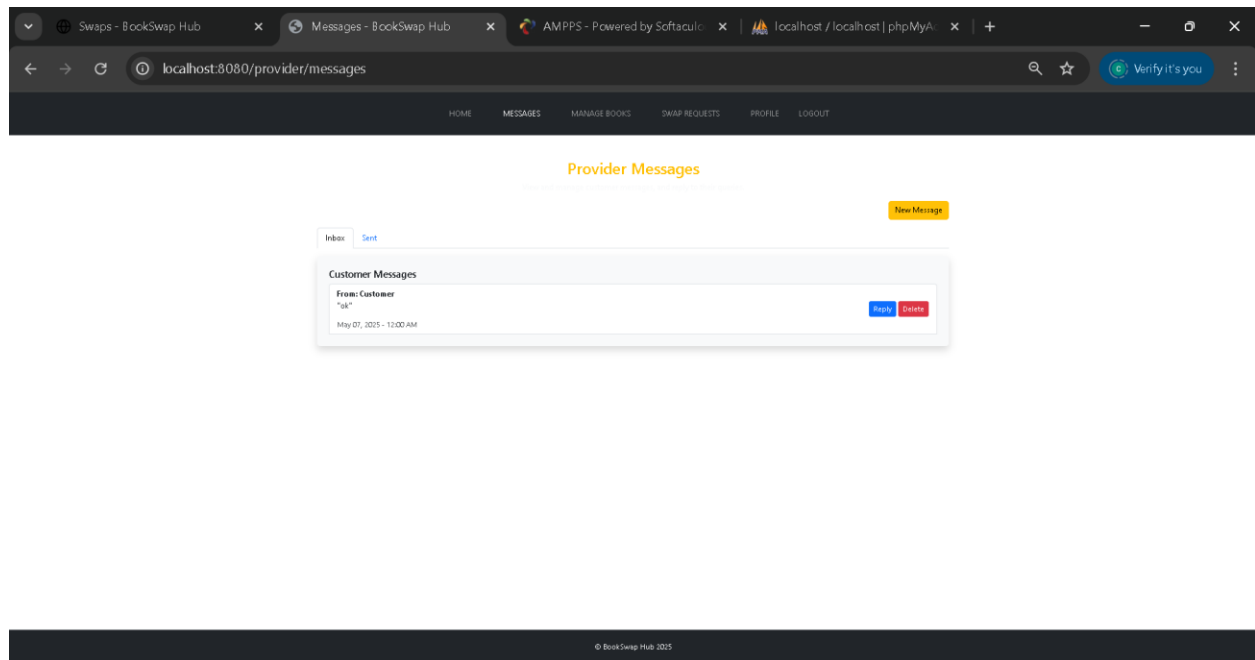
- **Provider – Cincear Weaver**

  o **Book Swap (View Customer Statistics)**

    ▪ **Initial Assumption:** The provider is logged in and on the "Statistics" page.

    ▪ **Normal:** The provider selects profile to view statistics. The system displays data such as the swap requests and completed swaps.

    ▪ **What Can Go Wrong:** If there is no data available yet, the system will display a message stating, "No statistics available.".

    ▪ **Other Activities:** The provider can use filters to sort statistics by date, book genre, or popularity.

- **System State on Completion:** The provider gains insights into book performance and customer engagement.
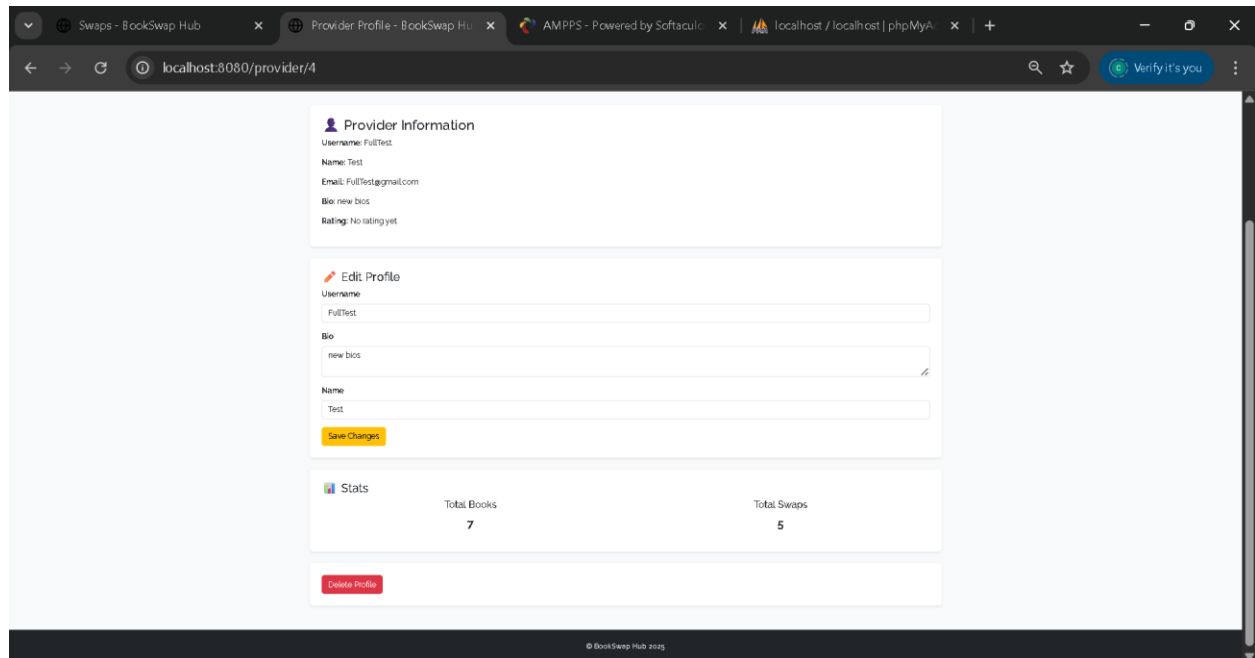
- **Provider – Cincear Weaver**
  - **Book Swap (Reply to Messages)**

- **Initial Assumption:** The provider is logged in and has received a message on one of their swaps.

- **Normal:** The provider navigates to "Messages," selects a message, and clicks "Reply."

  - They type a response and submit it, making the reply visible under the original message.

- **What Can Go Wrong:** The provider may submit an inappropriate response, in which case the system will allow the admin to moderate and remove it. The provider may lose their internet connection before submitting, causing them to retype the reply.

- **Other Activities:** The provider can browse other messages left by customers and report inappropriate feedback.

- **System State on Completion:** The provider's reply is successfully added under the messages and visible to future customers.

- **Provider – Cincear Weaver**

  o **Book Swap (Accept swaps)**

    ▪ **Initial Assumption:** The provider is logged in and has received a swap

       request.

- **Normal:** The provider navigates to "Swap Request," selects a swap, and clicks "Accept" or "Deny".

- They get a conformation that they have accepted or denied a swap.

- **What Can Go Wrong:** The provider may click accept or deny by accident. Resulting in the customer having to request another swap.

- **Other Activities:** The provider can browse other swap request left by customers and either accept or deny more request.

- **System State on Completion:** The provider's successfully accepted or denied a swap request.
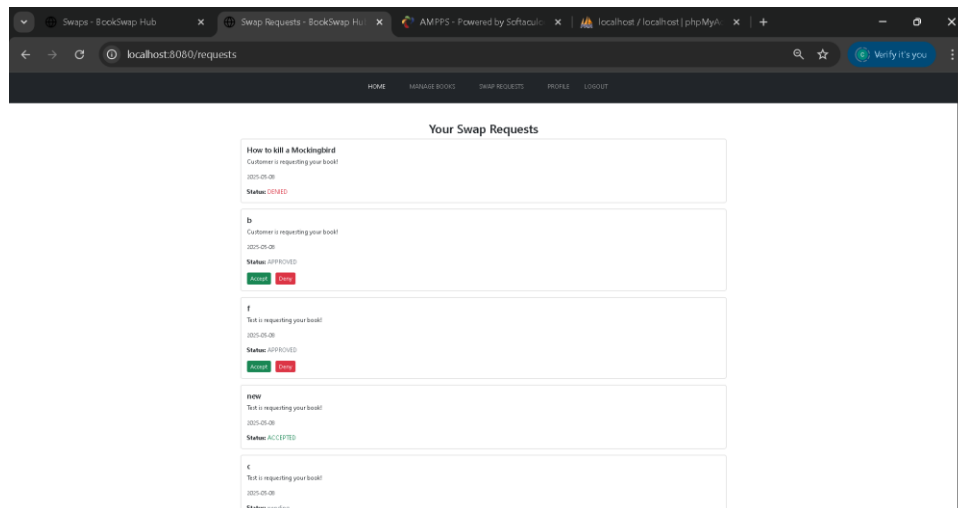
Customer SRS

- **Customer - Saniyah Khan**
  - **Book Swap (Create/Modify Profile)**
    - **Initial Assumption:** The customer is logged in.
    - **Normal:** The customer navigates to "Profile" to create or modify their profile.
    - **What Can Go Wrong:** Errors in incomplete or incorrect input. A confirmation prompt for account deletion.
    - **System State on Completion:** Profile is created or modified successfully.

- **Customer - Saniyah Khan**
  - **Book Swap (Browse Available Books)**
    - **Initial Assumption:** The customer is logged in and on the "Browse Books" page.

- **Normal:** The customer views available books and selects a book for swapping.

- **What Can Go Wrong:** No books available in the selected category/genre.

- **System State on Completion:** The customer finds books they are interested in swapping.

- **Customer - Saniyah Khan**
  - **Book Swap (Request a Swap)**
    - **Initial Assumption:** The customer has found a book they want to swap.

    - **Normal:** The customer sends a swap request via in-app messaging or clicking the request swap button.

- **What Can Go Wrong:** The book owner does not respond or declines the request.

- **System State on Completion:** The swap request is either accepted, declined, or remains pending.

- **Customer - Saniyah Khan**
  - **Book Swap (Write a Review)**
    - **Initial Assumption:** The customer has completed a book swap.
      - **Normal:** The customer navigates to "Reviews" to select the swapped book and writes feedback.

- **What Can Go Wrong:** The review submission fails due to network issues.

- **System State on Completion:** The review is successfully added to the book listing.

- **Customer - Saniyah Khan**
  - **Book Swap (Reply to messages)**
    - **Initial Assumption:** The customer has sent a message to the provider about the swap request.
      - **Normal:** The customer navigates to "messages" to send a message to the provider or check their inbox.

- **What Can Go Wrong:** The message fails to send.

- **System State on Completion:** The message is successfully delivered to the provider.
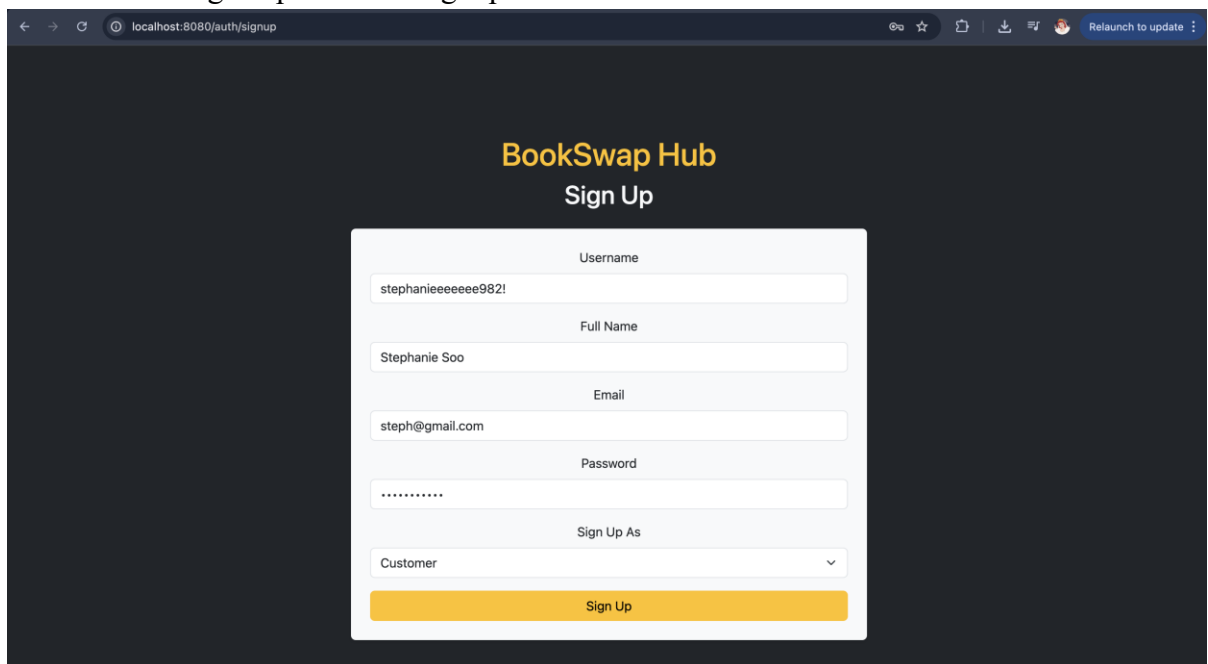
Scenarios With Screenshots

Provider: Create profile & list a book

- Provider **P1** visits /auth/signup and registers using the invite code PROVIDER2025.
- P1 creates their profile with name, email, and location.
- P1 adds a book (e.g., *To Kill a Mockingbird*, genre: Fiction).
- P1 logs out.

Customer: Create profile, browse library, and view reviews
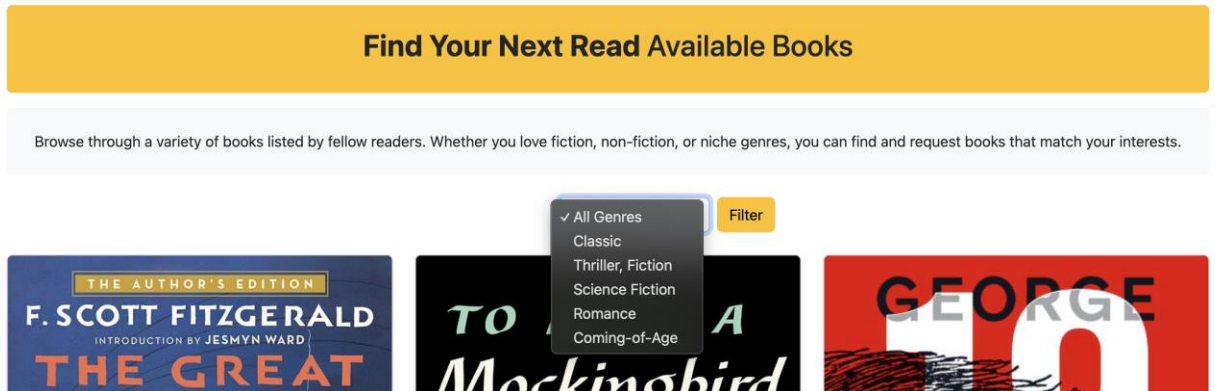
- Customer **C1** signs up via /auth/signup.

- C1 logs in and is redirected to /customer/dashboard.
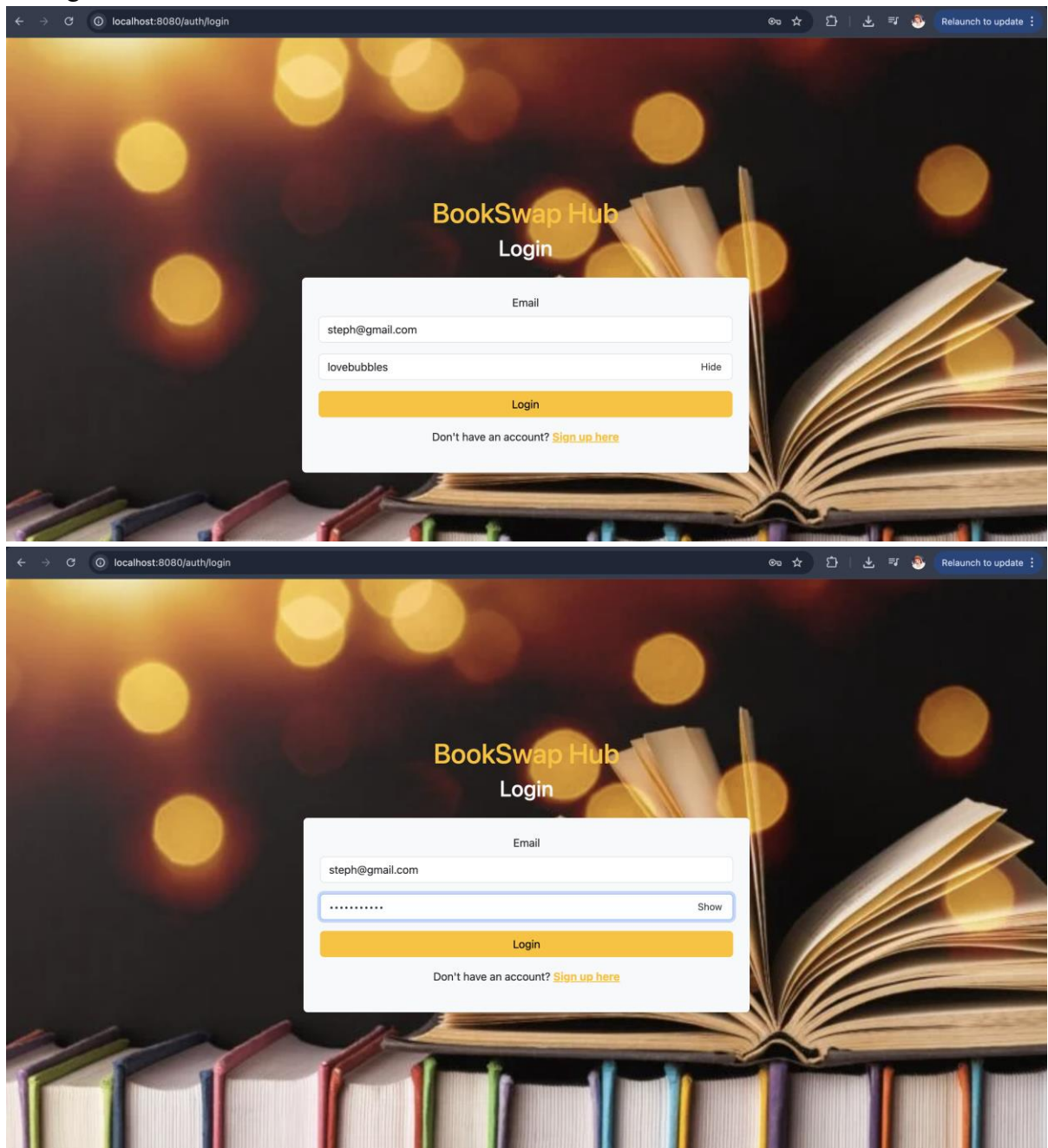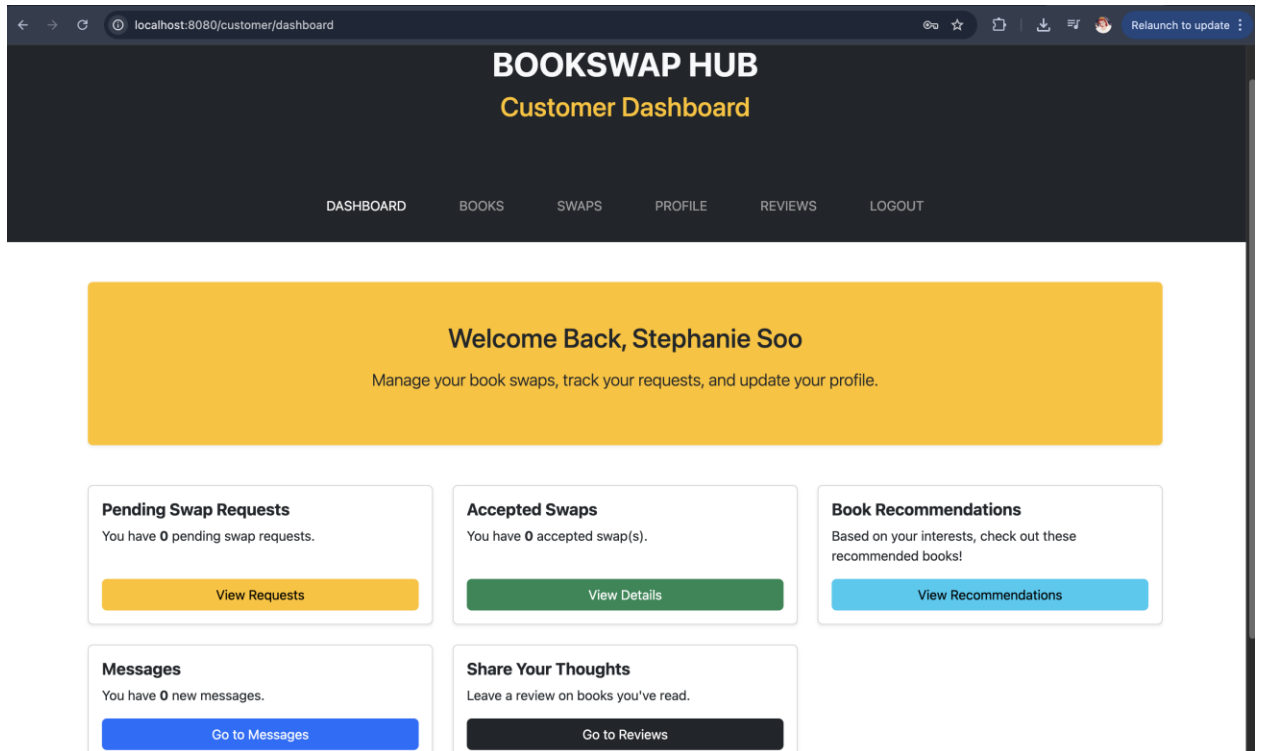
- C1 browses books via /library and selects a book from P1.

- C1 views book details and reviews.
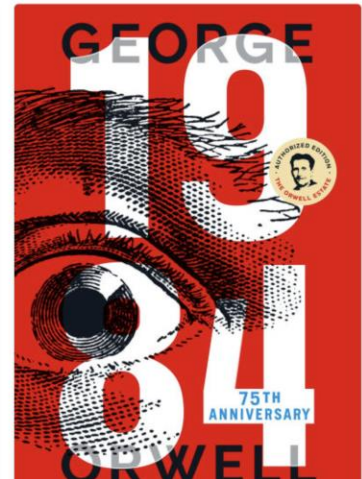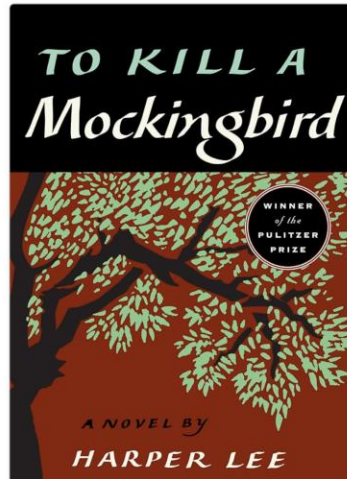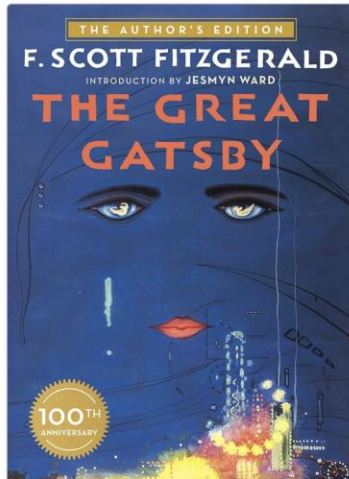
Reviews for *The Great Gatsby* by F. Scott Fitzgerald

Rating: ★★★★★
This book was incredible!
Reviewed by sah123 on 2025-04-03

Rating: ★★★★★
gergerv
Reviewed by saniyah123 on 2025-04-21

Rating: ★★★
verth4jn
Reviewed by sah123 on 2025-04-21

Rating: ★★
gerge regergv
Reviewed by sah123 on 2025-04-22

Rating: ★
really not as interesting book as everyone says.
Reviewed by saniyah123 on 2025-04-22

Rating: ★★★
okay read not thast interesting.
Reviewed by saniyah123 on 2025-04-22

Rating: ★★★★★
amazing read!
Reviewed by cutesy123 on 2025-05-03

Rating: ★
blah blah boring
Reviewed by cutesy123 on 2025-05-07

The Great Gatsby
by F. Scott Fitzgerald

Genre: Classic

A story about the American dream and the mysterious Jay Gatsby.

See Reviews
Leave a Review
Request Swap

To Kill A Mockingbird
by Harper Lee

Genre: Thriller, Fiction

To Kill a Mockingbird is a 1960 Southern Gothic novel by American author Harper Lee. It became instantly successful after its release; in the United States, it is widely read in high schools and middle schools

See Reviews
Leave a Review
Request Swap

1984
by George Orwell

Genre: Science Fiction

Nineteen Eighty-Four is a dystopian novel and cautionary tale by English writer George Orwell. It was published on 8 June 1949 by Secker & Warburg as Orwell's ninth and final completed book.

See Reviews
Leave a Review
Request Swap

Customer: Write reviews

- **C2** signs up, logs in, and requests a swap for a book.

BookSwap Hub

Sign Up

Username

zee

Full Name

zee

Email

z@ex.com

Password

•••

Sign Up As

Customer

Sign Up

BOOKSWAP HUB

Customer Dashboard

DASHBOARD   BOOKS   SWAPS   PROFILE   REVIEWS   LOGOUT

Welcome Back, zee

Manage your book swaps, track your requests, and update your profile.

Pending Swap Requests

You have **0** pending swap requests.

View Requests

Accepted Swaps

You have **0** accepted swap(s).

View Details

Book Recommendations

Based on your interests, check out these recommended books!

View Recommendations

Messages

You have **0** new messages.

Go to Messages

Share Your Thoughts

Leave a review on books you've read.

Go to Reviews
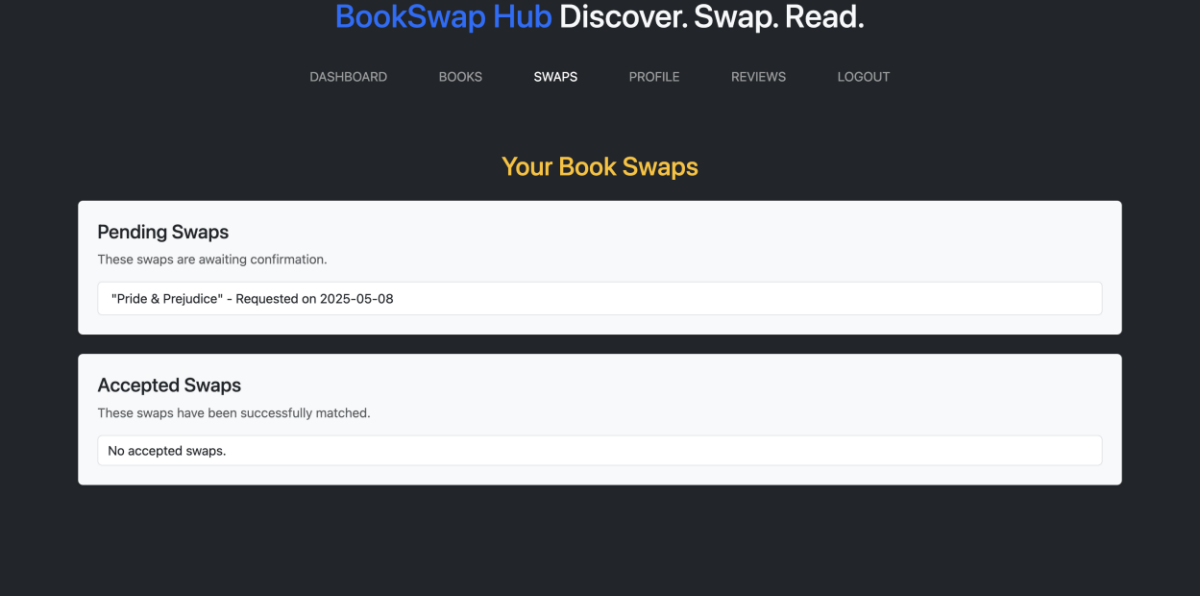
- After the swap is completed, C2 visits /reviews and writes a positive review.

-

BookSwap Hub Discover. Swap. Read.

DASHBOARD · BOOKS · **SWAPS** · PROFILE · REVIEWS · LOGOUT

Your Book Swaps

Pending Swaps

These swaps are awaiting confirmation.

No pending swaps.

Accepted Swaps

These swaps have been successfully matched.
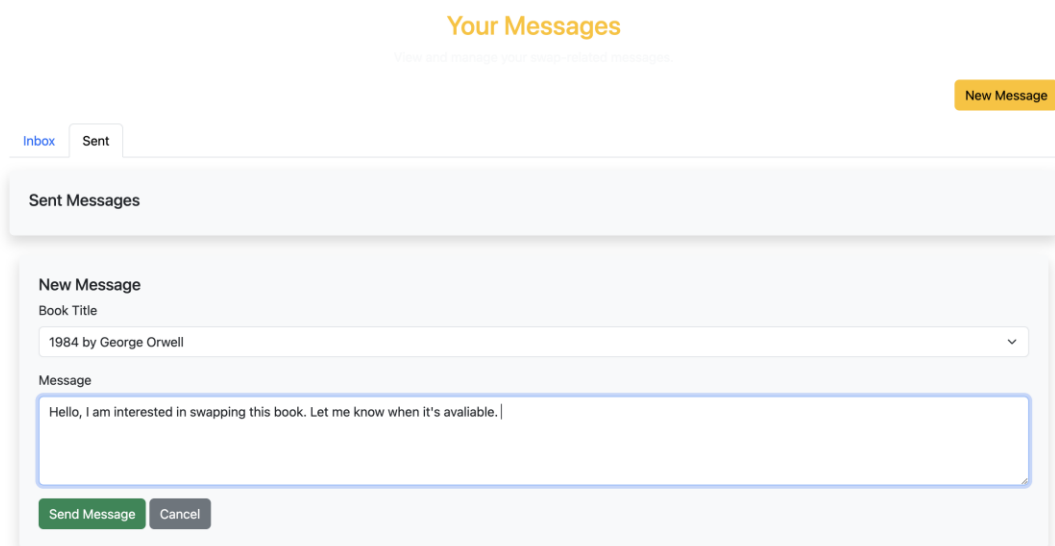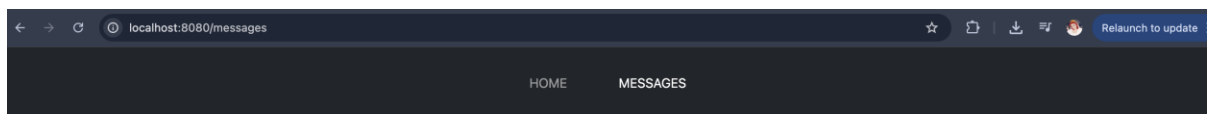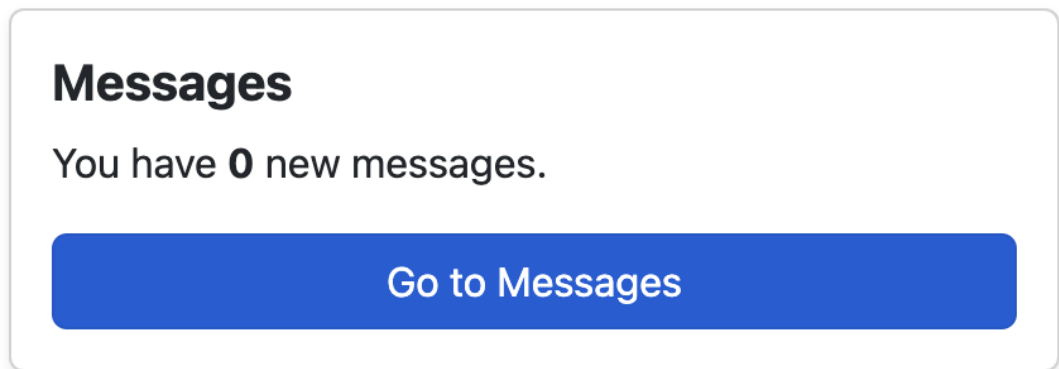
"Pride & Prejudice" - Accepted on 2025-05-08
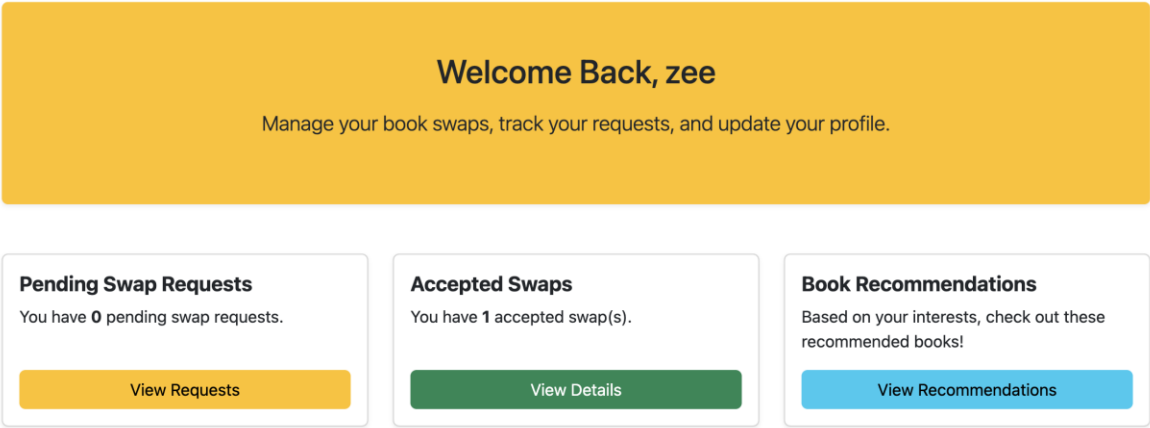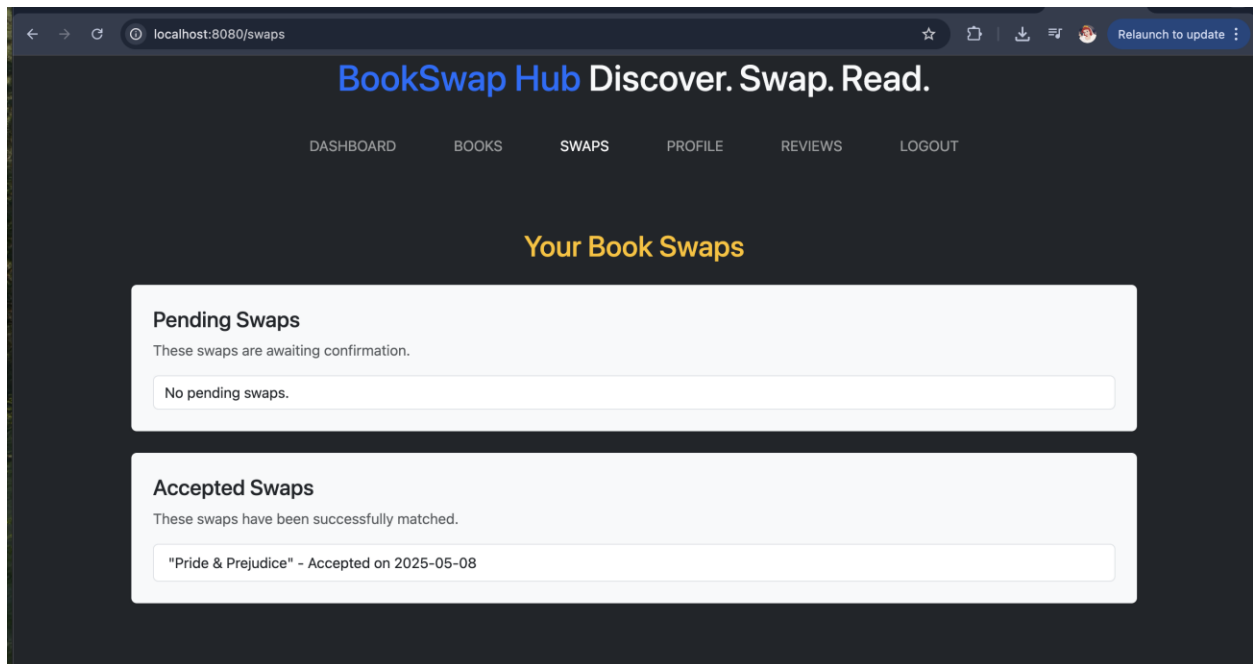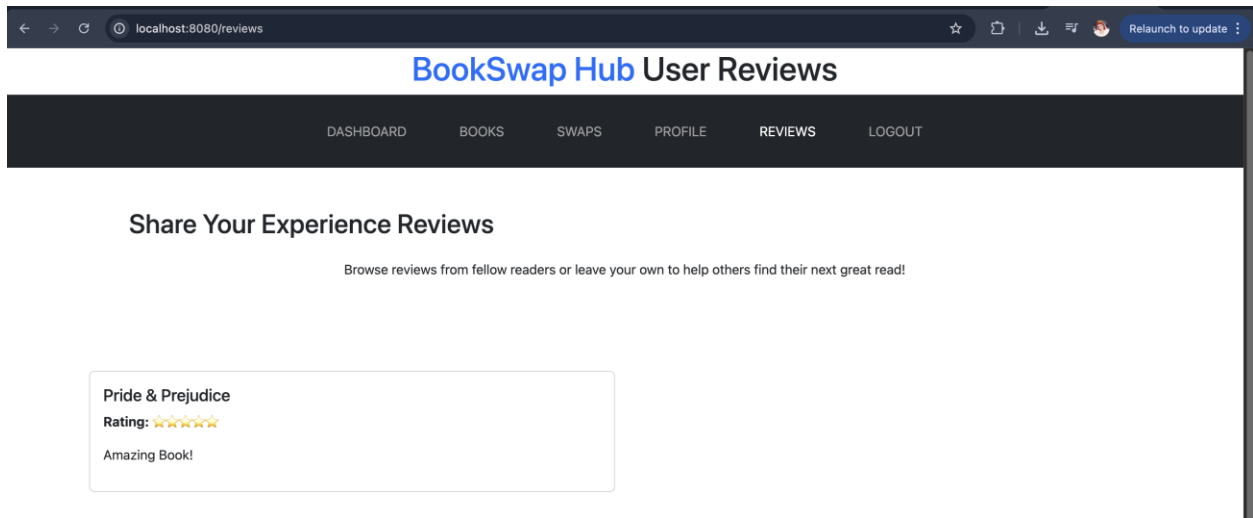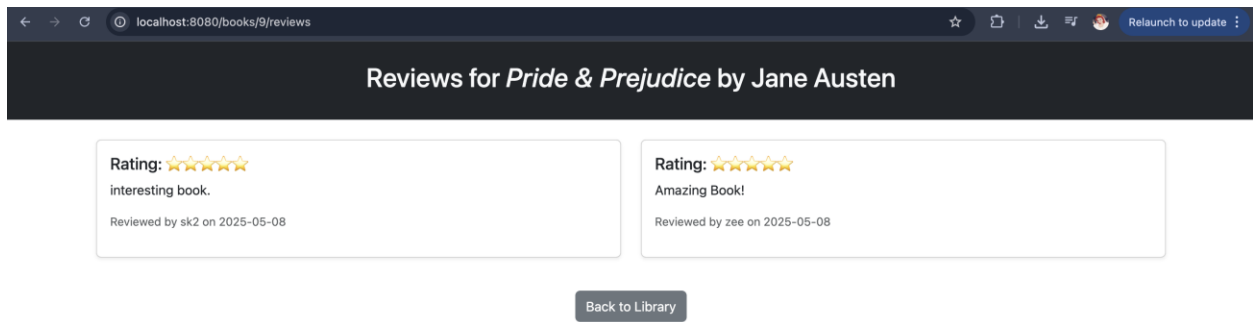
Provider: Respond to messages and update profile

- P1 logs in and visits /provider/{id} to read reviews.
- P1 replies to any messages from requesters.
- P1 views book swap statistics.
- P1 updates their profile bio or favorite genres and logs out.

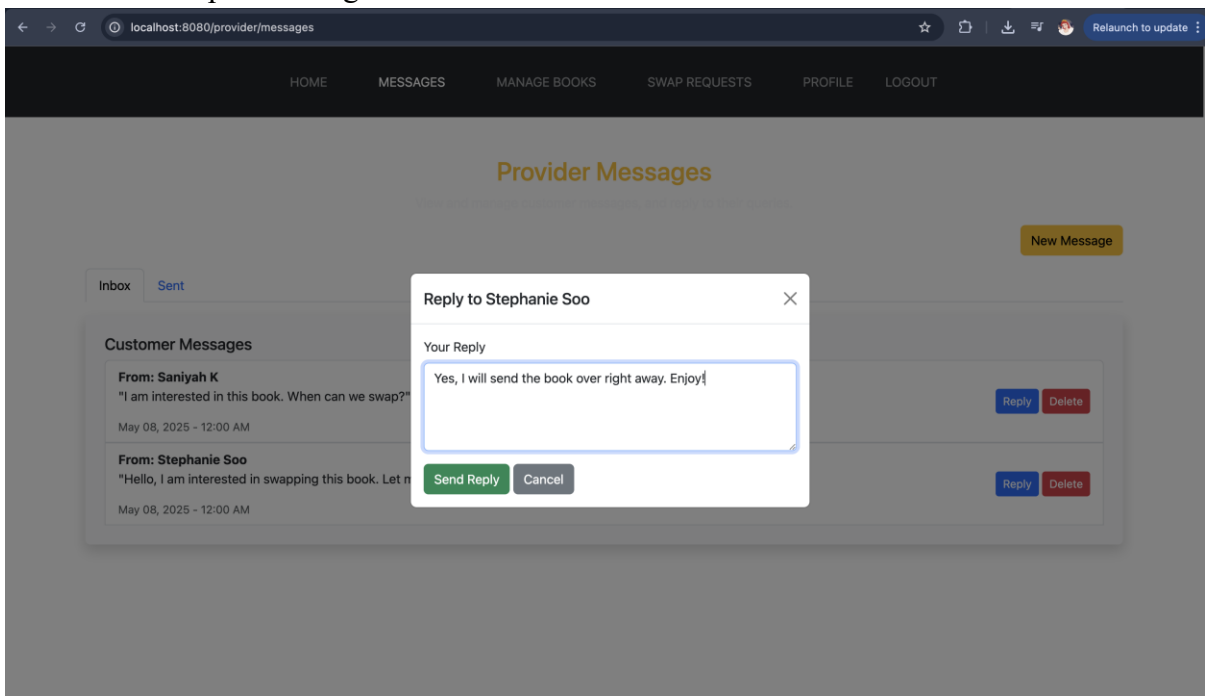## Customer: Send and manage messages
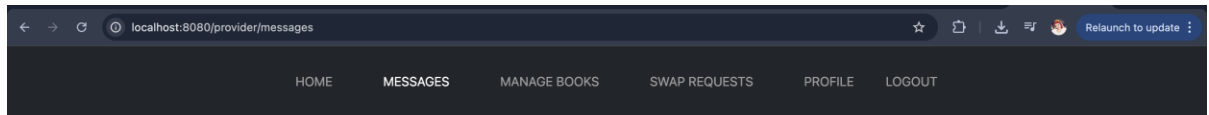
- C1 sends a message to P1 via /messages.

-

-
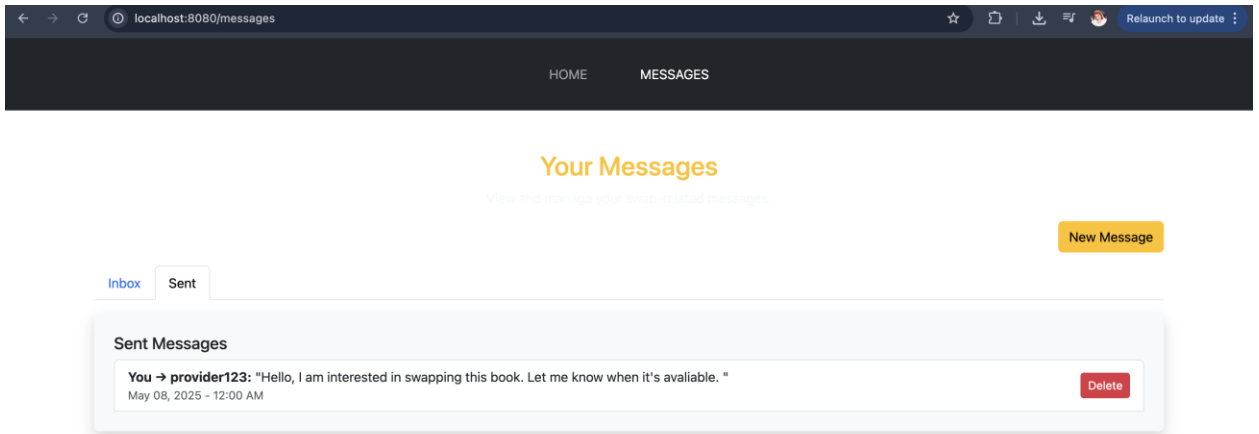
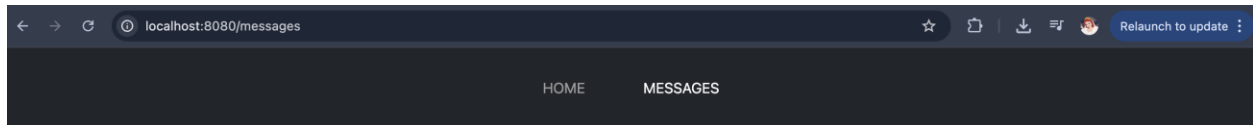• P1 views and replies through their own inbox.

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-

- C1 logs in again and deletes the message after reading.

HOME   MESSAGES

Your Messages

View and manage your swap-related messages.

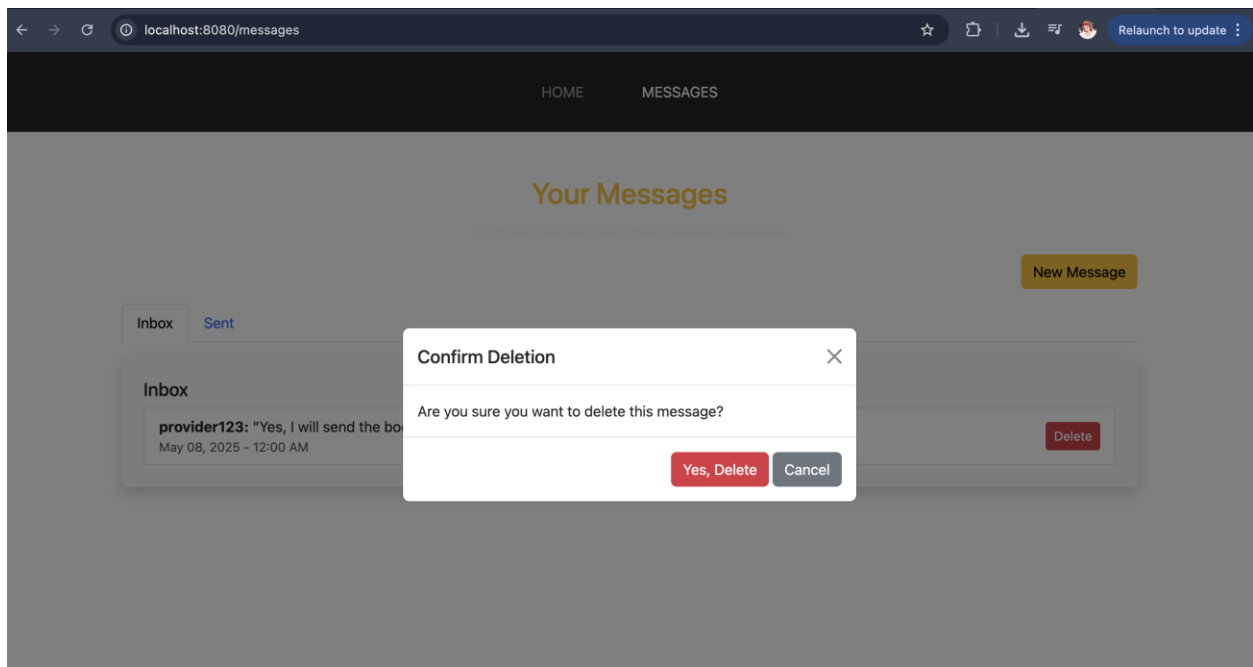New Message

Inbox   Sent

Inbox

provider123: "Yes, I will send the book right away. Enjoy!"
May 08, 2025 - 12:00 AM

Delete

HOME   MESSAGES

Your Messages

New Message

Inbox   Sent

Inbox

provider123: "Yes, I will send the bo...
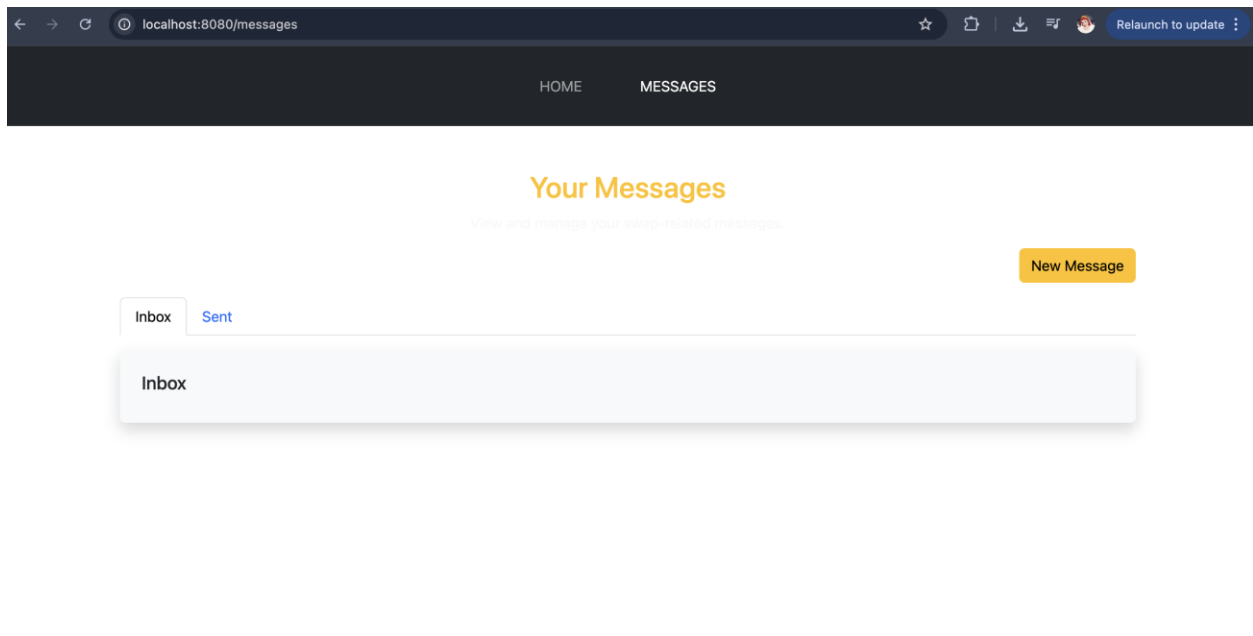May 08, 2025 - 12:00 AM

Delete

Confirm Deletion   ✕

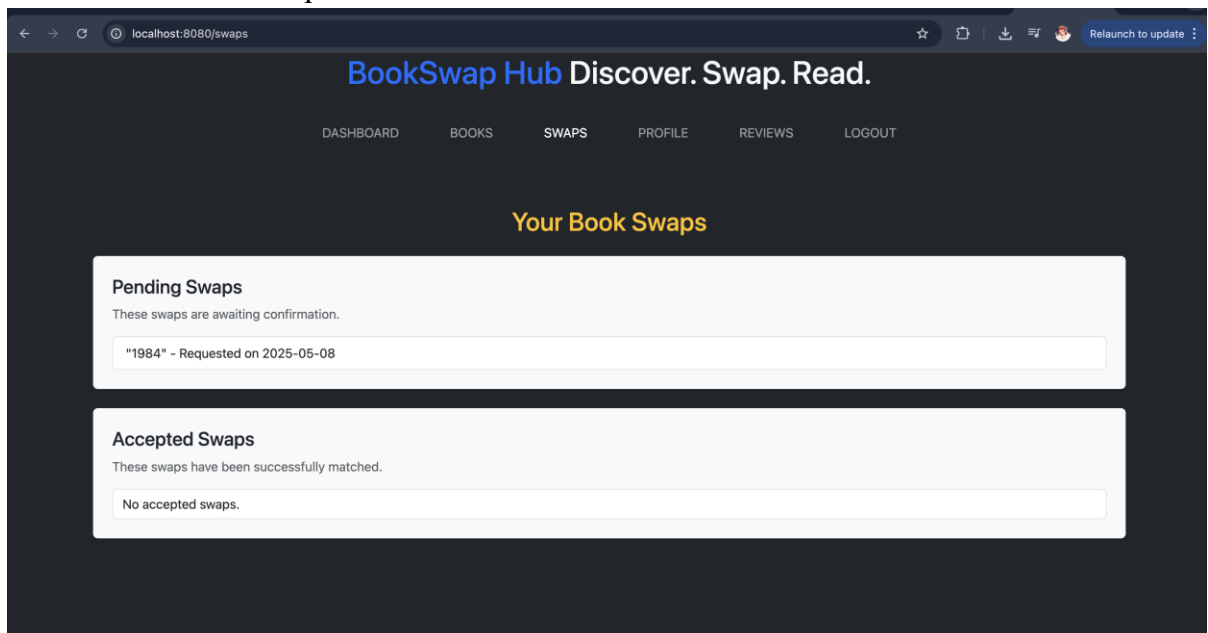Are you sure you want to delete this message?

Yes, Delete   Cancel

Customer: Request and track swaps

- C1 initiates a book swap.

- The swap is shown as **pending**.

- P1 logs in and marks the request as **accepted**.

-
- C1 later sees the accepted status under /swaps.
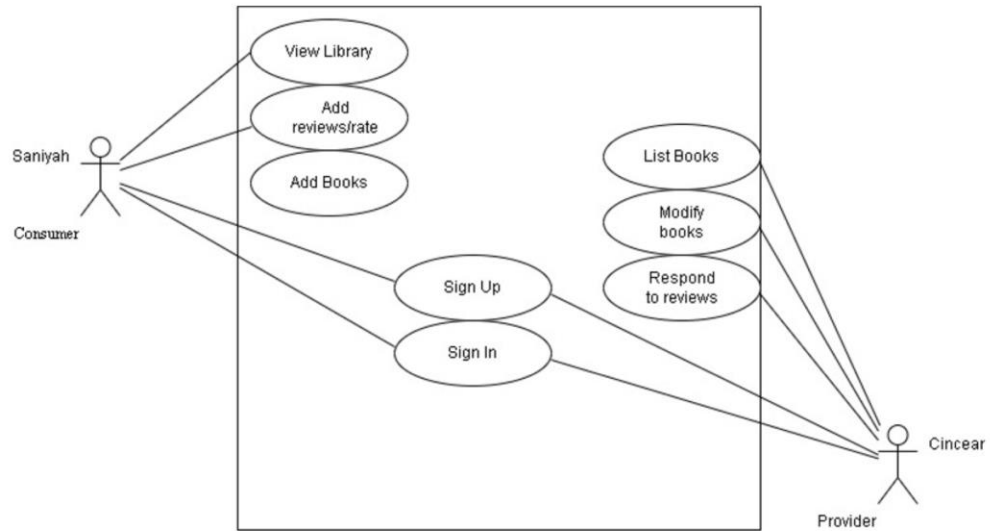

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Design Document

1. Use-Case Model

2. Database Schema

May need to zoom-in to see the schema clearly.

Diagram Key

Entity

Books

bookId(PK): Int
providerId(FK): Int
title: varchar(100)
author:varchar(100)
genre:varchar(30)
description: varchar(250)
ownerId(FK to Users): int

Reviews

reviewId(PK): Int
reviewerId(FK to users): int
bookId(FK): Int
createdAt: date
rating: int
comment: varchar(250)

Users

userId(PK): Int
name: varchar(255)
email: varchar(50)
username: varchar(70)
password: varchar(50)
role(Customer or Provider): varchar(10)
createdAt: date

Messages

messageId(PK): Int
senderId(FK to Users): int
receiverId(FK to Users): int
content: varchar(70)
createdAt: date
status: varchar(20)

Swaps

swapId(PK): Int
bookId(FK): Int
requesterId(FK to Users): int
status(pending/accepted): varchar(20)
requestedAt: date
updatedAt: date