

BookTrade - Milestone 3 Project Update

Team Members:

- Matthew Fuchs – Backend Development, User Authentication, API Integration
- Sunidhi Sharma – Frontend Design and UI/UX
- Connor Kingsmill – JavaScript, Frontend Interactivity

Implemented Features Overview

Core Functionality

The BookTrade platform enables users to register, log in, browse book listings, create borrow posts, engage in community discussions, and manage their profile. Unregistered users can browse content and search for books or discussions, while registered users gain full interaction capabilities.

User Authentication & Session Handling

- Users can register using a name, email, password, and profile picture.
- Secure login is enabled using PHP sessions.
- Navigation menus dynamically update depending on login status (e.g. login/signup vs profile/logout).

Profile Management

- Users can view and edit their profile, including uploading a profile picture. (Works locally, but has some issues on the server)
- Wishlist and personal book listings are displayed on the profile page. (Wishlist to be implemented)

Book Borrow Listings

- Logged-in users can post books they want to lend using Google Books API search.
- Each listing includes book metadata and a button for others to express interest.
- Users can remove their listings at any time.

Community Discussions

- Users can create and reply to discussion threads.
- Threads are stored in a MySQL database with asynchronous updates using AJAX.
- Nested replies are supported, and replies appear in real time without page refresh.

Admin Dashboard

- Admins can enable/disable accounts, and edit or delete posts.
- Admin tools are separated from general user functionality and only accessible to admins.

Technical Implementation Summary

Client-Side Security & Validation

- JavaScript is used for form validation (e.g., login, registration, posting).
- Users are prevented from submitting incomplete or malformed input.

Server-Side Security

- Prepared statements and validation are used to prevent SQL injection.
- Session management ensures that only authenticated users can access certain pages or actions.
- Admin routes are protected from standard users.

Hosting

- The site is currently hosted on <https://cosc360.ok.ubc.ca/mfuchs02/COSC360-BookSharing/app/index.php>.

Database

- MySQL is used for all data storage.
- The following tables are used: users, borrow_listings, discussions, and replies.
- Each user has a unique ID that connects their listings, profile, and discussions.

AJAX & Real-Time Updates

- AJAX is implemented for posting replies to discussions and fetching new replies without refreshing.
- This improves user experience and satisfies the asynchronous requirement.

Layout & Responsiveness

- The app uses a 2-column layout on most pages (e.g., profile, admin dashboard).
- All pages follow responsive design principles with media queries for different screen sizes.
- Navigation and menus adjust based on login status and user role.

How to Use the Application

As a Visitor:

- You can browse the homepage, search for books or discussions, and view public content.
- You won't be able to post or reply unless you register and log in.

As a Registered User:

- Register via the signup page, filling in name, email, password, and profile image.
- Once logged in, you can:
 - Access your profile and update details.
 - Create a borrow listing.
 - Comment and reply to community discussions.
 - View and manage your wishlist.

As an Admin:

- Login with admin credentials to access the admin dashboard.
- Use tools to:
 - Enable/disable user accounts.
 - Delete discussions.

You can log in as an admin using these credentials:

Username: adminuser

Password: admin123