

System Description

User Functionalities:

- **Registration:** New users can create an account by providing their name and email address. The system generates a unique customer ID and stores it along with the user's information.
- **Login:** Existing users can enter their email address and password to access the system.
- **Browsing and Searching:** Users can browse through the available books in various ways:
 - **Home page:** See featured books and best deals.
 - **Categories screen:** View books categorized by genre, author, or other criteria.
 - **Search screen:** Search for books by title or author keyword.
- **Book details:** Users can view details of a specific book, including title, author, publication year, price, description, and availability status. They can also:
 - **Add to cart:** Add the book to their shopping cart for purchase.
 - **Borrow (if available):** Registered users can borrow available books. The system records the transaction with the borrow date and sets a due date for return.
 - **Rate and review:** Leave a rating and review for the book, visible to other users.
- **Shopping cart:** Users can manage their shopping cart, including:
 - Viewing the list of added books, quantity, and total price.
 - Updating the quantity of each book.
 - Applying promo codes (if applicable).
 - Choosing a payment method (cash on delivery or credit card).
- **Order history:** Registered users can view their past orders, including the date, books purchased, and total amount paid.
- **Borrowing history:** Registered users can view their borrowing history, including the borrowed books, borrow and return dates, and any associated fines.

Admin Functionalities:

- **Book management:**
 - **Add new books:** Add new books to the system by providing details like title, author, publication year, price, and availability.
 - **Update book information:** Edit existing book details like price, availability, or description.
 - **Remove books:** Remove books from the system that are no longer available or needed.

- Borrower management:
 - Add new borrowers: Register new borrowers with their name and contact information.
 - Update borrower details: Edit existing borrower information like contact details or address.
 - Remove borrowers: Remove borrowers from the system who are no longer active or have violated policies.

Input and Output Scenarios:

User Functionalities:

1. Registration

Input:

- User enters their name and email address.
- User creates a password.

Output:

- System creates a new customer account with a unique ID.

2. Login

Input:

- User enters their email address and password.

Output:

- System verifies credentials.
- If successful, system displays the user's home page.
- If unsuccessful, system displays an error message.

3. Searching for a book

Input:

- User types a keyword (title or author) in the search bar.

Output:

- System displays a list of matching books with titles, authors.

4. Borrowing a book

Input:

- User clicks the "Borrow" button on a book's details page.

Output:

- System checks book availability.
- If available, system records the borrowing transaction with the borrow date and due date.
- System displays a confirmation message and sends a notification to the user.
- If not available, system displays a message indicating the book is unavailable and may offer options to reserve or be notified when it becomes available.

5. Adding a book to the shopping cart

Input:

- User clicks the "Add to Cart" button on a book's details page.
- User specifies quantity (if applicable).

Output:

- System adds the book to the user's shopping cart, updating the total price.

Admin Functionalities:

6. Adding a new book

Input:

- Admin enters book details: title, author, publication year, price, availability, and description.

Output:

- System creates a new book object and adds it to the catalog.

7. Updating book information

Input:

- Admin selects a book to update.
- Admin modifies desired fields (e.g., price, availability).

Output:

- System updates the book's information in the catalog.