Requirement Analysis Document

(RAD)

for

Library System Management

By

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1. Introduction

This document outlines the functional and non-functional requirements for the web-based library system. The purpose of the system is to provide a platform where users can register, borrow books, search the library catalog, chat with administrators and manage their borrowed items. The document will guide the development, design and testing phases of the project.

2. GUI Mockups

Here are some screenshots from our website when running the project:
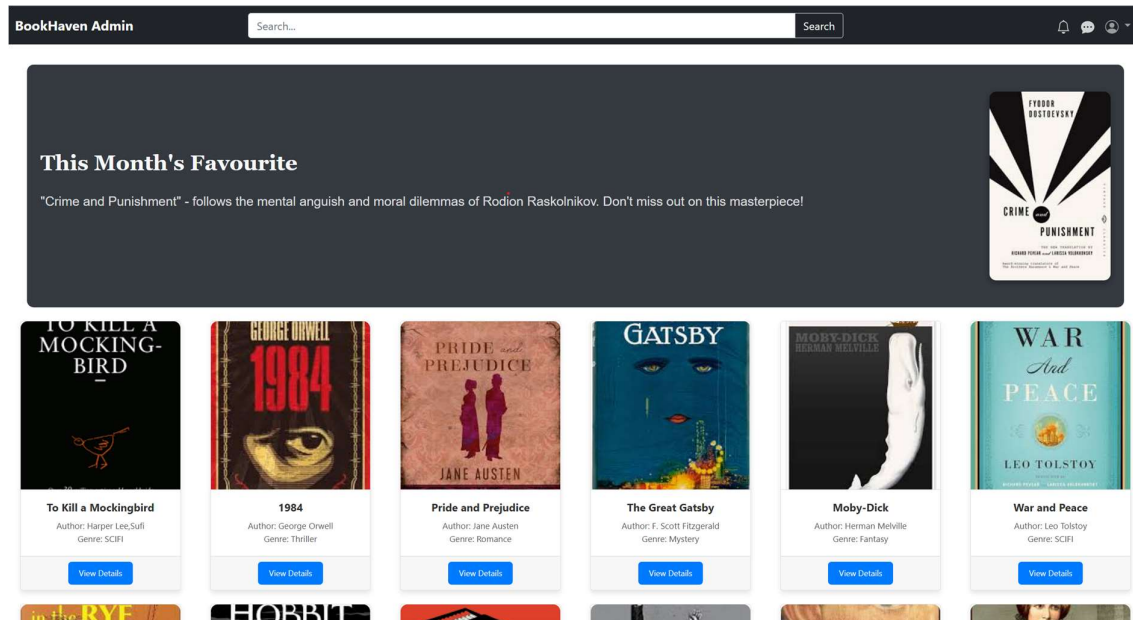
The Homepage when logged in as an admin. When you are logged in as a user it looks almost identical. On the main page you can see book cards and there you can view details for the books. If you are logged in as a user, this is where you can borrow the book.

The homepage is also the starting point to navigate anywhere else on the website.
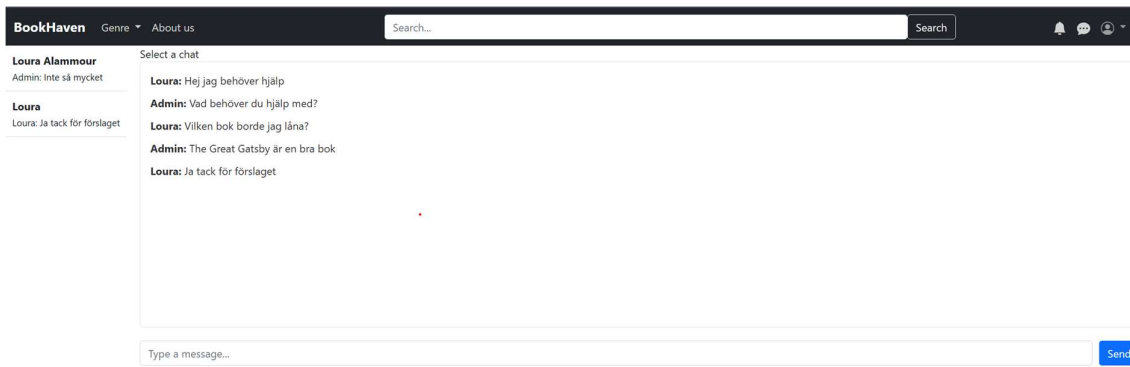
The chat system when logged in as an admin. Here the admins can select and chat with multiple different users. If you are logged in as a user instead you will only be able to chat with "admin". When chatting, the admins work as one, it doesn't matter what admin is logged in, they will see the same messages and will be able to respond as just "admin".
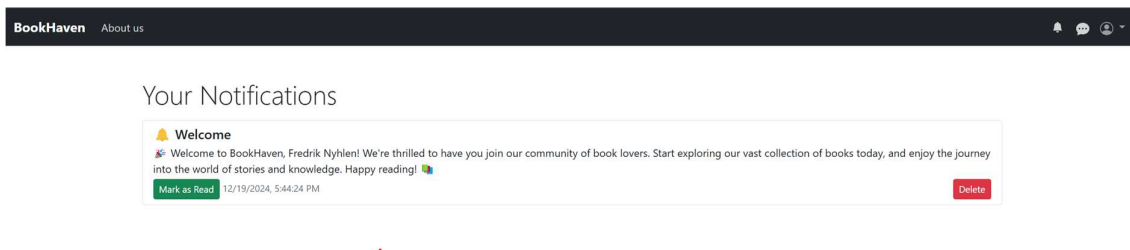
The notification page when logged in as a user. Here you will get notifications for things like, over due date for returning a book or a welcome message when registering.

Add a Book

Title:

Author 1:

Author 2:

.

ISBN:

Image URL :

Genre:

Fantasy

Add Book

The add book page that only the admins can reach. This is a page where admins can add books that users then are able to borrow. If you are logged in as a user you won't see the option to reach this page.

3. User Stories

EPIC Book Inventory Management

I want to be able to scroll theough the book inventory

I want to be able to search through the book inventory

I want to be able to search using book title

I want to be able to to search using an authors name

I want to be able to use the result of my search

As a user, I want to be able save books to favorite list

As an Admin , I want to be add books to the inventory

EPIC Account Management

As a user I want to be able to create an account and log in

EPIC Borrowing and Returning Books

As a user I want to be able to borrow books

As a user I want to be able to return books

As a user I want to be able to see the deadlines for borrowed books

As a user I want to be able to see my borrowing history

As a user, I want to be able to view fines for late-returned books

EPIC Notifications

As a user I want to get a reminder when the deadline for a borrowed book is approaching

As a user I want to be able to delete notification

As a user I want to be able to see the difference between the old and new notification

EPIC Chat

As a user I want the ability to communicate with administration and seek assistance

As an admin I want to be able to respond to client messages

As a user I want to be able to see past conversations

Implemented user stories

EPIC Book Inventory Management	As a user I want to reserve books that are currently unavailable	As a user i want to be able to filer book based on genere	As a user, I want to remove saved books from my favorites list	As a user, I want to pay fines for overdue books online	As a user I want to get recommendations based on my earlier borrowed books
	As an Admin I want to be add books to the inventory				
EPIC Account Management	As a user, I want to be able to update my personal information				
EPIC Book Recommendations	As a user I want to get recommendations based on my earlier borrowed books				
EPIC Notifications	As a user I want to get notifications on my mail as well	As a user, I want to receive a notification confirming a successful book return			
EPIC Chat	I want to be able to delete past conversations	As a user I want to receive notifications when I get a new message			

User stories not implemented

4. Domain Model

Library
The main website
Handles functions such as log in and search

User
Represented as an account
Can borrow and return books
Can read and delete notifications

Notification
Represents notifications received by the user
Can be read and deleted

Chat
Represents a chat between a user account
and an admin account

BookHistory
Represents books that the user has borrowed

Admin
Represented as an account
Can add and remove books

Inventory
Represents book inventory

Book
Has a title, ISBN, authors, and description
Can be borrowed and returned

Manages accounts

Receives notifications

Chats with admin

Borrowed books

Manages accounts

Manages inventory

Chats with users

Adds and removes books

Borrows

Is borrowed by

Contains books