BookInfoFinder — User Guide

Version: 1.0
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Purpose: This document guides end users on how to use the BookInfoFinder web application — searching for books, viewing details, favoriting, commenting, rating, and basic management.

I. Overview

1. User Requirements

 1.1 Actors

Actor Name	Role Description
User	Uses the system to search, view details, comment, rate, favorite books, use chatbot, and manage t
Administrator (Admin)	Manages the entire system: add/edit/delete books, manage authors, publishers, categories, users,
Chatbot	Automated agent that answers questions, assists users with book information, usage guidance, an
Email System	Sends confirmation emails, OTPs, and password reset notifications to users.
Notification System	Sends realtime notifications to users when relevant events occur (comments, replies, etc.).

1.2 Use Cases

ID	Feature	Use Case	Use Case Description
UC1	User Account	Login	Log in to the system using username and password.
UC2	User Account	Register	Register a new account with username, email, and password.
UC3	User Account	Forgot Password	Send OTP to email to reset password when forgotten.
UC4	User Account	Change Password	Change password when logged in.
UC5	User Account	Edit Profile	Edit personal information, update avatar.
UC6	Book Search	Search Book	Search for books by title, author, or category.

ID	Feature	Use Case	Use Case Description
UC7	Book Search	Filter Book	Filter book list by tag, rating, number of favorites, or trending.
UC8	Book Detail	View Book Detail	View detailed book information, including description, author, publisher, ra
UC9	Favorites	Add to Favorites	Add a book to the user's favorites list.
UC10	Favorites	Remove Favorite	Remove a book from the user's favorites list.
UC11	Comments/Rating	Add Comment and Rating	Comment and rate (star) a book (must select a rating when commenting).
UC12	Comments	Edit Comment	Edit the content of the user's own comment (cannot edit rating).
UC13	Comments/Rating	Delete Comment	Delete the user's own comment (and the associated rating).
UC14	Comments/Rating	View Comments	View the list of comments and ratings for a book.
UC15	Search History	View History	View the user's own search history.
UC16	Search History	Delete History	Delete one or all search history entries.
UC17	Notification	View Notification	Receive and view realtime notifications from the system.
UC18	Chatbot	Ask Chatbot	Ask the chatbot for book suggestions, usage guidance, or answers to ques
UC19	Admin - Books	Add Book	Admin adds a new book to the system.
UC20	Admin - Books	Edit Book	Admin edits book information.
UC21	Admin - Books	Delete Book	Admin deletes a book from the system.
UC22	Admin - Books	Export to Excel	Admin exports the book list to an Excel file.

ID	Feature	Use Case	Use Case Description

ID	Feature	Use Case	Use Case Description
UC23	Admin - Books	Export to PDF	Admin exports the book list or reports to a PDF file.
UC24	Admin - Authors	Add Author	Admin adds a new author.
UC25	Admin - Authors	Edit Author	Admin edits author information.
UC26	Admin - Authors	Delete Author	Admin deletes an author.
UC27	Admin - Publishers	Add Publisher	Admin adds a new publisher.
UC28	Admin - Publishers	Edit Publisher	Admin edits publisher information.
UC29	Admin - Publishers	Delete Publisher	Admin deletes a publisher.
UC30	Admin - Categories	Add Category	Admin adds a new category.
UC31	Admin - Categories	Edit Category	Admin edits category information.
UC32	Admin - Categories	Delete Category	Admin deletes a category.
UC33	Admin - Tags	Add Tag	Admin adds a new tag.
UC34	Admin - Tags	Edit Tag	Admin edits a tag.
UC35	Admin - Tags	Delete Tag	Admin deletes a tag.
UC36	Admin - Users	View Users	Admin views the list of users.
UC37	Admin - Users	Edit User	Admin edits user information.
UC38	Admin - Users	Disable User	Admin disables a user account.
UC39	Admin - Reports	View Reports	Admin views reports, statistics, and system logs.

ID	Feature	Use Case	Use Case Description

ID	Feature	Use Case	Use Case Description
UC40	Admin - Dashboard	View All Logs	Admin views all system activity logs by time.
UC41	Admin - Dashboard	View Logs by Date	Admin filters and views activity logs by date.

2. System High Level Design

2.1 Database Design

a. Database Schema

b. Table Descriptions

No	Table	Description
1	Users	Stores user account info. Primary key: UserId. Foreign key: RoleId (references Roles).
2	Roles	Stores user roles (User, Admin). Primary key: RoleId.
3	Books	Stores book info. Primary key: BookId. Foreign keys: AuthorId (Authors), PublisherId (Pul
4	Authors	Stores author info. Primary key: AuthorId.
5	Publishers	Stores publisher info. Primary key: PublisherId.
6	Categories	Stores book categories. Primary key: CategoryId.
7	BookComments	Stores book comments. Primary key: CommentId. Foreign keys: BookId (Books), UserId
8	Ratings	Stores book ratings. Primary key: RatingId. Foreign keys: BookId (Books), UserId (Users
9	Favorites	Stores user favorite books. Primary key: FavoriteId. Foreign keys: BookId (Books), UserI
10	Tags	Stores tags for books. Primary key: TagId.
11	BookTags	Links books and tags. Primary key: BookTagId. Foreign keys: BookId (Books), TagId (Tag
12	SearchHistories	Stores user search history. Primary key: SearchHistoryId. Foreign key: UserId (Users).
13	Notifications	Stores notifications for users. Primary key: NotificationId. Foreign key: UserId (Users).
14	ChatMessages	Stores chat history with chatbot. Primary key: ChatMessageId. Foreign key: UserId (User

II. Requirement Specifications

Field	Description
UC ID and Name	UC_1: Login
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	None
Trigger	User submits login credentials via the login interface.
Description	Allows the user to log in to the system using username and password. The system checks the credentials, and if valid, creates a session and redirects to the main page.
Preconditions	PRE-1: User has a valid account. PRE-2: The system is operational.
Postconditions	POST-1: User is successfully logged in and a session is created. POST-2: If credentials are incorrect, an error is displayed and login is not performed.
Normal Flow	1. User accesses the login page. 2. Enters username and password. 3. System searches for user by username. 4. Compares password (plain text). 5. If correct, creates session

Field	Description
	and redirects to main page.
Alternative Flows	1.1 (Incorrect username or password): - System displays error message. - User retries or selects forgot password.
Exceptions	1.2 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Many times per day
Business Rules	- Only active users can log in. - Password is stored in plain text (per code).

Field	Description
UC ID and Name	UC_2: Register
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	None
Trigger	User submits registration form with username, email, and password.
Description	Allows a new user to register an account with username, email, and

Field	Description
	password. The system validates the information and creates a new account if valid.
Preconditions	PRE-1: User is not logged in. PRE-2: The system is operational.
Postconditions	POST-1: New user account is created. POST-2: If registration fails, an error message is displayed.
Normal Flow	1. User accesses the registration page. 2. Enters username, email, and password. 3. System validates input. 4. If valid, creates new account and redirects to login page.
Alternative Flows	3.1 (Username or email already exists): - System displays error message. - User enters different information. 3.2 (Validation fails): - System displays error message.
Exceptions	4.1 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Occasionally, when new users register

Field	Description
Business Rules	- Username and email must be unique. - Required fields must not be empty.

Field	Description
UC ID and Name	UC_3: Forgot Password
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	Email System
Trigger	User requests password reset via the forgot password interface.
Description	Allows the user to reset their password by sending an OTP to their registered email. The user enters the OTP and new password to complete the reset.
Preconditions	PRE-1: User has a registered email. PRE-2: The system and email service are operational.
Postconditions	POST-1: User's password is updated. POST-2: If OTP or email is invalid, an error is displayed.
Normal Flow	1. User accesses forgot password page. 2. Enters registered

Field	Description
	email. 3. System sends OTP to email. 4. User enters OTP and new password. 5. System validates and updates password.
Alternative Flows	3.1 (Email not found): - System displays error message. 4.1 (OTP invalid or expired): - System displays error message.
Exceptions	5.1 (System/email error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Occasionally, when users forget passwords
Business Rules	- OTP is required for password reset. - OTP expires after a set time.

Field	Description
UC ID and Name	UC_4: Change Password
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	None

Field	Description
Trigger	User submits current and new password via the change password interface.
Description	Allows the user to change their password when logged in. The system validates the current password and updates it if valid.
Preconditions	PRE-1: User is authenticated. PRE-2: The system is operational.
Postconditions	POST-1: User's password is updated. POST-2: If validation fails, an error is displayed and password is not changed.
Normal Flow	1. User accesses change password page. 2. Enters current and new password. 3. System validates current password. 4. If valid, updates password and confirms success.
Alternative Flows	3.1 (Current password incorrect): - System displays error message. 3.2 (New password invalid): - System displays error message.
Exceptions	4.1 (System/database error): - System displays a system error message.

Field	Description
Priority	High, Must Have
Frequency of Use	Occasionally, when users want to change passwords
Business Rules	- Only authenticated users can change their password. - Password is stored in plain text (per code).

Field	Description
UC ID and Name	UC_5: Edit Profile
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	None
Trigger	User submits updated profile information via the edit profile interface.
Description	Allows the user to edit personal information and update their avatar. The system validates and saves the changes.
Preconditions	PRE-1: User is authenticated. PRE-2: The system is operational.
Postconditions	POST-1: User's profile is updated. POST-2: If validation fails, an error is displayed and changes are not saved.

Field	Description
Normal Flow	1. User accesses edit profile page. 2. Updates information and/or avatar. 3. System validates input. 4. If valid, saves changes and confirms success.
Alternative Flows	3.1 (Validation fails): - System displays error message. - User corrects input and resubmits.
Exceptions	4.1 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Occasionally, when users update their profile
Business Rules	- Email must be unique. - Only the authenticated user can edit their own profile.

Field	Description
UC ID and Name	UC_6: Search Book
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	None

Field	Description
Trigger	User enters search criteria and submits via the search interface.
Description	Allows the user to search for books by title, author, or category. The system returns matching books.
Preconditions	PRE-1: The system is operational.
Postconditions	POST-1: Search results are displayed. POST-2: If no results, a message is shown.
Normal Flow	1. User accesses search page. 2. Enters search criteria. 3. System searches for matching books. 4. Displays results.
Alternative Flows	4.1 (No results found): - System displays "No books found."
Exceptions	3.1 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Many times per day
Business Rules	- Search is case-insensitive. - Partial matches are supported.

Field	Description
UC ID and Name	UC_7: Filter Book
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	None
Trigger	User selects filter options and submits via the filter interface.
Description	Allows the user to filter the book list by tag, rating, number of favorites, or trending. The system displays the filtered list.
Preconditions	PRE-1: The system is operational.
Postconditions	POST-1: Filtered book list is displayed. POST-2: If no results, a message is shown.
Normal Flow	1. User accesses filter options. 2. Selects filter criteria. 3. System applies filters and displays results.
Alternative Flows	3.1 (No results found): - System displays "No books found."
Exceptions	3.2 (System/database error): - System displays a system error message.

Field	Description
Priority	High, Must Have
Frequency of Use	Many times per day
Business Rules	- Multiple filters can be combined.

Field	Description
UC ID and Name	UC_8: View Book Detail
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	None
Trigger	User selects a book from the list to view details.
Description	Allows the user to view detailed information about a book, including description, author, publisher, ratings, and comments.
Preconditions	PRE-1: The system is operational.
Postconditions	POST-1: Book details are displayed. POST-2: If book not found, an error is shown.
Normal Flow	1. User selects a book. 2. System retrieves and displays book details.

Field	Description
Alternative Flows	2.1 (Book not found): - System displays error message.
Exceptions	2.2 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Many times per day
Business Rules	- All related information (author, publisher, ratings, comments) is shown.

Field	Description
UC ID and Name	UC_9: Add to Favorites
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	None
Trigger	User clicks "Add to Favorites" on a book.
Description	Allows the user to add a book to their favorites list. The system adds the book if not already in favorites.
Preconditions	PRE-1: User is authenticated. PRE-2: The system is operational.

Field	Description
Postconditions	POST-1: Book is in user's favorites list. POST-2: If already in favorites, a message is shown.
Normal Flow	1. User clicks "Add to Favorites". 2. System checks if book is already in favorites. 3. If not, adds book and confirms success.
Alternative Flows	2.1 (Book already in favorites): - System displays message.
Exceptions	3.1 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Many times per day
Business Rules	- Each book can only be added once per user.

Field	Description
UC ID and Name	UC_10: Remove Favorite
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	None

Field	Description
Trigger	User clicks "Remove from Favorites" on a book.
Description	Allows the user to remove a book from their favorites list. The system removes the book if it exists in favorites.
Preconditions	PRE-1: User is authenticated. PRE-2: The system is operational.
Postconditions	POST-1: Book is removed from user's favorites list. POST-2: If book not in favorites, a message is shown.
Normal Flow	1. User clicks "Remove from Favorites". 2. System checks if book is in favorites. 3. If yes, removes book and confirms success.
Alternative Flows	2.1 (Book not in favorites): - System displays message.
Exceptions	3.1 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Many times per day
Business Rules	- Only the user can remove books from their own favorites.

Field	Description
UC ID and Name	UC_11: Add Comment and Rating
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	None
Trigger	User submits a comment and rating for a book via the book detail interface.
Description	Allows the user to comment on and rate a book. The user must select a rating when commenting. The system saves both the comment and the rating.
Preconditions	PRE-1: User is authenticated. PRE-2: The system is operational. PRE-3: The user has not already commented on this book.
Postconditions	POST-1: Comment and rating are saved and displayed. POST-2: If validation fails, an error is shown and nothing is saved.
Normal Flow	1. User accesses book detail page. 2. Enters comment and selects rating. 3. Submits form. 4. System validates input. 5. If

Field	Description
	valid, saves comment and rating.
Alternative Flows	4.1 (Validation fails): - System displays error message. - User corrects input and resubmits. 4.2 (User already commented): - System prevents duplicate comment.
Exceptions	5.1 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Many times per day
Business Rules	- User must select a rating when commenting. - Each user can comment only once per book. - Comment and rating are linked and saved together.

Field	Description
UC ID and Name	UC_12: Edit Comment
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	None

Field	Description
Trigger	User selects to edit their own comment via the book detail interface.
Description	Allows the user to edit the content of their own comment on a book. The rating cannot be edited.
Preconditions	PRE-1: User is authenticated. PRE-2: The system is operational. PRE-3: The user has previously commented on the book.
Postconditions	POST-1: Comment content is updated. POST-2: If validation fails, an error is shown and changes are not saved.
Normal Flow	1. User accesses their comment on a book. 2. Selects edit option. 3. Updates comment content. 4. Submits changes. 5. System validates and saves the new content.
Alternative Flows	5.1 (Validation fails): - System displays error message. - User corrects input and resubmits.
Exceptions	5.2 (System/database error): - System displays a system error message.
Priority	Medium, Should Have

Field	Description
Frequency of Use	Occasionally, when users want to update their comments
Business Rules	- Only the comment content can be edited. - Rating cannot be changed after initial submission. - Only the comment owner can edit their comment.

Field	Description
UC ID and Name	UC_13: Delete Comment
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	None
Trigger	User selects to delete their own comment via the book detail interface.
Description	Allows the user to delete their own comment on a book. The associated rating is also deleted.
Preconditions	PRE-1: User is authenticated. PRE-2: The system is operational. PRE-3: The user has previously commented on the book.
Postconditions	POST-1: Comment and associated rating are deleted. POST-2: If deletion fails, an error is

Field	Description
	shown and nothing is deleted.
Normal Flow	1. User accesses their comment on a book. 2. Selects delete option. 3. System confirms deletion. 4. If confirmed, deletes comment and rating.
Alternative Flows	3.1 (User cancels deletion): - No action is taken. 4.1 (Comment not found): - System displays error message.
Exceptions	4.2 (System/database error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, when users want to remove their comments
Business Rules	- Deleting a comment also deletes the associated rating. - Only the comment owner can delete their comment.

Field	Description
UC ID and Name	UC_14: View Comments
Created By	Vo Van Hai
Date Created	19/11/2025

Field	Description
Primary Actor	User
Secondary Actors	None
Trigger	User views the comments section on a book detail page.
Description	Allows the user to view the list of comments and ratings for a book.
Preconditions	PRE-1: The system is operational. PRE-2: The book exists in the system.
Postconditions	POST-1: List of comments and ratings is displayed. POST-2: If no comments, a message is shown.
Normal Flow	1. User accesses book detail page. 2. System retrieves and displays all comments and ratings for the book.
Alternative Flows	2.1 (No comments found): - System displays "No comments yet."
Exceptions	2.2 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Many times per day
Business Rules	- Comments and ratings are displayed in

Field	Description
	chronological order. - All users can view comments and ratings.

Field	Description
UC ID and Name	UC_15: View History
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	None
Trigger	User accesses the search history page.
Description	Allows the user to view their own search history.
Preconditions	PRE-1: User is authenticated. PRE-2: The system is operational.
Postconditions	POST-1: User's search history is displayed. POST-2: If no history, a message is shown.
Normal Flow	1. User accesses search history page. 2. System retrieves and displays user's search history.
Alternative Flows	2.1 (No history found): - System displays "No search history."

Field	Description
Exceptions	2.2 (System/database error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, when users want to review their searches
Business Rules	- Only the authenticated user can view their own search history.

Field	Description
UC ID and Name	UC_16: Delete History
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	None
Trigger	User selects to delete one or all search history entries.
Description	Allows the user to delete one or all entries from their search history.
Preconditions	PRE-1: User is authenticated. PRE-2: The system is operational. PRE-3: User has search history.
Postconditions	POST-1: Selected search history entries are deleted. POST-2: If

Field	Description
	deletion fails, an error is shown and nothing is deleted.
Normal Flow	1. User accesses search history page. 2. Selects entries to delete or "delete all". 3. System confirms deletion. 4. If confirmed, deletes selected entries.
Alternative Flows	3.1 (User cancels deletion): - No action is taken. 4.1 (No entries selected): - System displays message.
Exceptions	4.2 (System/database error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, when users want to clear their search history
Business Rules	- Only the authenticated user can delete their own search history.

Field	Description
UC ID and Name	UC_17: View Notification
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User

Field	Description
Secondary Actors	Notification System
Trigger	System sends a notification or user accesses the notification page.
Description	Allows the user to receive and view real-time notifications from the system.
Preconditions	PRE-1: User is authenticated. PRE-2: The system and notification service are operational.
Postconditions	POST-1: Notifications are displayed to the user. POST-2: If no notifications, a message is shown.
Normal Flow	1. System sends notification to user. 2. User accesses notification page or receives popup. 3. System displays notifications.
Alternative Flows	3.1 (No notifications): - System displays "No notifications."
Exceptions	3.2 (System/notification error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Many times per day

Field	Description
Business Rules	- Only authenticated users receive notifications. - Notifications are delivered in real time.

Field	Description
UC ID and Name	UC_18: Ask Chatbot
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	User
Secondary Actors	Chatbot
Trigger	User submits a question or request to the chatbot via the chat interface.
Description	Allows the user to ask the chatbot for book suggestions, usage guidance, or answers to questions. The chatbot responds in real time.
Preconditions	PRE-1: The system and chatbot service are operational.
Postconditions	POST-1: Chatbot response is displayed to the user. POST-2: If chatbot cannot answer, a message is shown.
Normal Flow	1. User accesses chat interface. 2. Enters question or request. 3. System sends input to

Field	Description
	chatbot. 4. Chatbot processes and returns response. 5. System displays response.
Alternative Flows	4.1 (Chatbot cannot answer): - System displays "Sorry, I don't have an answer."
Exceptions	4.2 (System/chatbot error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, when users need help or suggestions
Business Rules	- Chatbot responses are generated in real time. - User input is logged for quality improvement.

Field	Description
UC ID and Name	UC_19: Add Book
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin submits new book information via the add book interface.

Field	Description
Description	Allows the admin to add a new book to the system. The system validates and saves the book information.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational.
Postconditions	POST-1: New book is added to the system. POST-2: If validation fails, an error is shown and book is not added.
Normal Flow	1. Admin accesses add book page. 2. Enters book information. 3. System validates input. 4. If valid, saves book and confirms success.
Alternative Flows	3.1 (Validation fails): - System displays error message. - Admin corrects input and resubmits.
Exceptions	4.1 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Occasionally, when new books are added
Business Rules	- Only admins can add books. - Book title must be unique.

Field	Description
UC ID and Name	UC_20: Edit Book
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin selects a book and submits updated information via the edit book interface.
Description	Allows the admin to edit information for an existing book. The system validates and updates the book information.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: The book exists in the system.
Postconditions	POST-1: Book information is updated. POST-2: If validation fails, an error is shown and changes are not saved.
Normal Flow	1. Admin accesses edit book page. 2. Updates book information. 3. System validates input. 4. If valid, updates book and confirms success.

Field	Description
Alternative Flows	3.1 (Validation fails): - System displays error message. - Admin corrects input and resubmits. 4.1 (Book not found): - System displays error message.
Exceptions	4.2 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Occasionally, when book information needs updating
Business Rules	- Only admins can edit books. - Book title must remain unique.

Field	Description
UC ID and Name	UC_21: Delete Book
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin selects a book and chooses to delete it via the book management interface.
Description	Allows the admin to delete a book from the system. The system

Field	Description
	removes the book and all related data (e.g., comments, ratings, favorites).
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: The book exists in the system.
Postconditions	POST-1: Book and related data are deleted. POST-2: If deletion fails, an error is shown and nothing is deleted.
Normal Flow	1. Admin accesses book management page. 2. Selects a book to delete. 3. System confirms deletion. 4. If confirmed, deletes book and related data.
Alternative Flows	3.1 (Admin cancels deletion): - No action is taken. 4.1 (Book not found): - System displays error message.
Exceptions	4.2 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Occasionally, when books need to be removed
Business Rules	- Only admins can delete books. - Deleting a

Field	Description
	book removes all related comments, ratings, and favorites.

Field	Description
UC ID and Name	UC_22: Export to Excel
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin selects the option to export the book list to Excel via the export interface.
Description	Allows the admin to export the book list to an Excel file. The system generates and provides the file for download.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: There are books in the system.
Postconditions	POST-1: Excel file is generated and available for download. POST-2: If export fails, an error is shown and no file is generated.
Normal Flow	1. Admin accesses export interface. 2. Selects "Export to

Field	Description
	Excel". 3. System generates Excel file. 4. File is provided for download.
Alternative Flows	3.1 (No books to export): - System displays message. 4.1 (Admin cancels export): - No action is taken.
Exceptions	4.2 (System/export error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, for reporting or backup
Business Rules	- Only admins can export data. - Exported file must follow Excel format standards.

Field	Description
UC ID and Name	UC_23: Export to PDF
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin selects the option to export the book list or reports to PDF via the export interface.

Field	Description
Description	Allows the admin to export the book list or reports to a PDF file. The system generates and provides the file for download.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: There is data to export.
Postconditions	POST-1: PDF file is generated and available for download. POST-2: If export fails, an error is shown and no file is generated.
Normal Flow	1. Admin accesses export interface. 2. Selects "Export to PDF". 3. System generates PDF file. 4. File is provided for download.
Alternative Flows	3.1 (No data to export): - System displays message. 4.1 (Admin cancels export): - No action is taken.
Exceptions	4.2 (System/export error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, for reporting or backup

Field	Description
Business Rules	- Only admins can export data. - Exported file must follow PDF format standards.

Field	Description
UC ID and Name	UC_24: Add Author
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin submits new author information via the add author interface.
Description	Allows the admin to add a new author to the system. The system validates and saves the author information.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational.
Postconditions	POST-1: New author is added to the system. POST-2: If validation fails, an error is shown and author is not added.
Normal Flow	1. Admin accesses add author page. 2. Enters author information. 3. System validates

Field	Description
	input. 4. If valid, saves author and confirms success.
Alternative Flows	3.1 (Validation fails): - System displays error message. - Admin corrects input and resubmits.
Exceptions	4.1 (System/database error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, when new authors are added
Business Rules	- Only admins can add authors. - Author name must be unique.

Field	Description
UC ID and Name	UC_25: Edit Author
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin selects an author and submits updated information via the edit author interface.
Description	Allows the admin to edit information for an

Field	Description
	existing author. The system validates and updates the author information.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: The author exists in the system.
Postconditions	POST-1: Author information is updated. POST-2: If validation fails, an error is shown and changes are not saved.
Normal Flow	1. Admin accesses edit author page. 2. Updates author information. 3. System validates input. 4. If valid, updates author and confirms success.
Alternative Flows	3.1 (Validation fails): - System displays error message. - Admin corrects input and resubmits. 4.1 (Author not found): - System displays error message.
Exceptions	4.2 (System/database error): - System displays a system error message.
Priority	Medium, Should Have

Field	Description
Frequency of Use	Occasionally, when author information needs updating
Business Rules	- Only admins can edit authors. - Author name must remain unique.

Field	Description
UC ID and Name	UC_26: Delete Author
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin selects an author and chooses to delete via the author management interface.
Description	Allows the admin to delete an author from the system. The system removes the author and all related data (e.g., books, references).
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: The author exists in the system.
Postconditions	POST-1: Author and related data are deleted. POST-2: If deletion fails, an error is

Field	Description
	shown and nothing is deleted.
Normal Flow	1. Admin accesses author management page. 2. Selects an author to delete. 3. System confirms deletion. 4. If confirmed, deletes author and related data.
Alternative Flows	3.1 (Admin cancels deletion): - No action is taken. 4.1 (Author not found): - System displays error message.
Exceptions	4.2 (System/database error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, when authors need to be removed
Business Rules	- Only admins can delete authors. - Deleting an author removes all related references.

Field	Description
UC ID and Name	UC_27: Add Publisher
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin

Field	Description
Secondary Actors	None
Trigger	Admin submits new publisher information via the add publisher interface.
Description	Allows the admin to add a new publisher to the system. The system validates and saves the publisher information.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational.
Postconditions	POST-1: New publisher is added to the system. POST-2: If validation fails, an error is shown and publisher is not added.
Normal Flow	1. Admin accesses add publisher page. 2. Enters publisher information. 3. System validates input. 4. If valid, saves publisher and confirms success.
Alternative Flows	3.1 (Validation fails): - System displays error message. - Admin corrects input and resubmits.
Exceptions	4.1 (System/database error): - System displays a system error message.

Field	Description
Priority	Medium, Should Have
Frequency of Use	Occasionally, when new publishers are added
Business Rules	- Only admins can add publishers. - Publisher name must be unique.

Field	Description
UC ID and Name	UC_28: Edit Publisher
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin selects a publisher and submits updated information via the edit publisher interface.
Description	Allows the admin to edit information for an existing publisher. The system validates and updates the publisher information.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: The publisher exists in the system.
Postconditions	POST-1: Publisher information is

Field	Description
	updated. POST-2: If validation fails, an error is shown and changes are not saved.
Normal Flow	1. Admin accesses edit publisher page. 2. Updates publisher information. 3. System validates input. 4. If valid, updates publisher and confirms success.
Alternative Flows	3.1 (Validation fails): - System displays error message. - Admin corrects input and resubmits. 4.1 (Publisher not found): - System displays error message.
Exceptions	4.2 (System/database error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, when publisher information needs updating
Business Rules	- Only admins can edit publishers. - Publisher name must remain unique.

Field	Description
UC ID and Name	UC_29: Delete Publisher

Field	Description
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin selects a publisher and chooses to delete via the publisher management interface.
Description	Allows the admin to delete a publisher from the system. The system removes the publisher and all related data (e.g., books, references).
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: The publisher exists in the system.
Postconditions	POST-1: Publisher and related data are deleted. POST-2: If deletion fails, an error is shown and nothing is deleted.
Normal Flow	1. Admin accesses publisher management page. 2. Selects a publisher to delete. 3. System confirms deletion. 4. If confirmed, deletes publisher and related data.
Alternative Flows	3.1 (Admin cancels deletion): - No action

Field	Description
	is taken. 4.1 (Publisher not found): - System displays error message.
Exceptions	4.2 (System/database error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, when publishers need to be removed
Business Rules	- Only admins can delete publishers. - Deleting a publisher removes all related references.

Field	Description
UC ID and Name	UC_30: Add Category
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin submits new category information via the add category interface.
Description	Allows the admin to add a new category to the system. The system validates and saves the category information.

Field	Description
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational.
Postconditions	POST-1: New category is added to the system. POST-2: If validation fails, an error is shown and category is not added.
Normal Flow	1. Admin accesses add category page. 2. Enters category information. 3. System validates input. 4. If valid, saves category and confirms success.
Alternative Flows	3.1 (Validation fails): - System displays error message. - Admin corrects input and resubmits.
Exceptions	4.1 (System/database error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, when new categories are added
Business Rules	- Only admins can add categories. - Category name must be unique.

Field	Description
UC ID and Name	UC_31: Edit Category
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin selects a category and submits updated information via the edit category interface.
Description	Allows the admin to edit information for an existing category. The system validates and updates the category information.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: The category exists in the system.
Postconditions	POST-1: Category information is updated. POST-2: If validation fails, an error is shown and changes are not saved.
Normal Flow	1. Admin accesses edit category page. 2. Updates category information. 3. System validates input. 4. If valid, updates category and confirms success.

Field	Description
Alternative Flows	3.1 (Validation fails): - System displays error message. - Admin corrects input and resubmits. 4.1 (Category not found): - System displays error message.
Exceptions	4.2 (System/database error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, when category information needs updating
Business Rules	- Only admins can edit categories. - Category name must remain unique.

Field	Description
UC ID and Name	UC_32: Delete Category
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin selects a category and chooses to delete via the category management interface.

Field	Description
Description	Allows the admin to delete a category from the system. The system removes the category and all related data (e.g., books, references).
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: The category exists in the system.
Postconditions	POST-1: Category and related data are deleted. POST-2: If deletion fails, an error is shown and nothing is deleted.
Normal Flow	1. Admin accesses category management page. 2. Selects a category to delete. 3. System confirms deletion. 4. If confirmed, deletes category and related data.
Alternative Flows	3.1 (Admin cancels deletion): - No action is taken. 4.1 (Category not found): - System displays error message.
Exceptions	4.2 (System/database error): - System displays a system error message.
Priority	Medium, Should Have

Field	Description
Frequency of Use	Occasionally, when categories need to be removed
Business Rules	- Only admins can delete categories. - Deleting a category removes all related references.

Field	Description
UC ID and Name	UC_33: Add Tag
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin submits new tag information via the add tag interface.
Description	Allows the admin to add a new tag to the system. The system validates and saves the tag information.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational.
Postconditions	POST-1: New tag is added to the system. POST-2: If validation fails, an error is shown and tag is not added.

Field	Description
Normal Flow	1. Admin accesses add tag page. 2. Enters tag information. 3. System validates input. 4. If valid, saves tag and confirms success.
Alternative Flows	3.1 (Validation fails): - System displays error message. - Admin corrects input and resubmits.
Exceptions	4.1 (System/database error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, when new tags are added
Business Rules	- Only admins can add tags. - Tag name must be unique.

Field	Description
UC ID and Name	UC_34: Edit Tag
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin selects a tag and submits updated

Field	Description
	information via the edit tag interface.
Description	Allows the admin to edit information for an existing tag. The system validates and updates the tag information.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: The tag exists in the system.
Postconditions	POST-1: Tag information is updated. POST-2: If validation fails, an error is shown and changes are not saved.
Normal Flow	1. Admin accesses edit tag page. 2. Updates tag information. 3. System validates input. 4. If valid, updates tag and confirms success.
Alternative Flows	3.1 (Validation fails): - System displays error message. - Admin corrects input and resubmits. 4.1 (Tag not found): - System displays error message.
Exceptions	4.2 (System/database error): - System displays a system error message.
Priority	Medium, Should Have

Field	Description
Frequency of Use	Occasionally, when tag information needs updating
Business Rules	- Only admins can edit tags. - Tag name must remain unique.

Field	Description
UC ID and Name	UC_35: Delete Tag
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin selects a tag and chooses to delete via the tag management interface.
Description	Allows the admin to delete a tag from the system. The system removes the tag and all related data (e.g., book-tag associations).
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: The tag exists in the system.
Postconditions	POST-1: Tag and related data are deleted. POST-2: If deletion fails, an error is

Field	Description
	shown and nothing is deleted.
Normal Flow	1. Admin accesses tag management page. 2. Selects a tag to delete. 3. System confirms deletion. 4. If confirmed, deletes tag and related data.
Alternative Flows	3.1 (Admin cancels deletion): - No action is taken. 4.1 (Tag not found): - System displays error message.
Exceptions	4.2 (System/database error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, when tags need to be removed
Business Rules	- Only admins can delete tags. - Deleting a tag removes all related associations.

Field	Description
UC ID and Name	UC_36: View Users
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None

Field	Description
Trigger	Admin accesses the user management page.
Description	Allows the admin to view the list of users in the system. The system displays user information with options for further management.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational.
Postconditions	POST-1: List of users is displayed. POST-2: If no users, a message is shown.
Normal Flow	1. Admin accesses user management page. 2. System retrieves and displays list of users.
Alternative Flows	2.1 (No users found): - System displays "No users found."
Exceptions	2.2 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Occasionally, for user management
Business Rules	- Only admins can view the user list. - User information is displayed with management options.

Field	Description
UC ID and Name	UC_37: Edit User
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin selects a user and submits updated information via the edit user interface.
Description	Allows the admin to edit information for an existing user. The system validates and updates the user information.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: The user exists in the system.
Postconditions	POST-1: User information is updated. POST-2: If validation fails, an error is shown and changes are not saved.
Normal Flow	1. Admin accesses edit user page. 2. Updates user information. 3. System validates input. 4. If valid, updates user and confirms success.

Field	Description
Alternative Flows	3.1 (Validation fails): - System displays error message. - Admin corrects input and resubmits. 4.1 (User not found): - System displays error message.
Exceptions	4.2 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Occasionally, when user information needs updating
Business Rules	- Only admins can edit users. - Email and username must remain unique.

Field	Description
UC ID and Name	UC_38: Disable User
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin selects a user and chooses to disable the account via the user management interface.
Description	Allows the admin to disable a user account,

Field	Description
	preventing the user from logging in. The system updates the user's status to inactive.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: The user exists in the system.
Postconditions	POST-1: User account is disabled. POST-2: If operation fails, an error is shown and status is not changed.
Normal Flow	1. Admin accesses user management page. 2. Selects a user to disable. 3. System confirms action. 4. If confirmed, disables user account.
Alternative Flows	3.1 (Admin cancels action): - No action is taken. 4.1 (User not found): - System displays error message.
Exceptions	4.2 (System/database error): - System displays a system error message.
Priority	High, Must Have
Frequency of Use	Occasionally, for user management
Business Rules	- Only admins can disable users. - Disabled users cannot log in.

Field	Description
UC ID and Name	UC_39: View Reports
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin accesses the reports or statistics page.
Description	Allows the admin to view reports, statistics, and system logs. The system displays relevant data and analytics.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational.
Postconditions	POST-1: Reports and statistics are displayed. POST-2: If no data, a message is shown.
Normal Flow	1. Admin accesses reports/statistics page. 2. System retrieves and displays reports, statistics, and logs.
Alternative Flows	2.1 (No data found): - System displays "No data available."
Exceptions	2.2 (System/database error): - System

Field	Description
	displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, for system monitoring and analysis
Business Rules	- Only admins can view reports and statistics. - Data is displayed in a readable format.

Field	Description
UC ID and Name	UC_40: View All Logs
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin accesses the system logs page.
Description	Allows the admin to view all system activity logs by time. The system displays logs in chronological order.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational.
Postconditions	POST-1: System logs are displayed. POST-2: If no logs, a message is shown.

Field	Description
Normal Flow	1. Admin accesses system logs page. 2. System retrieves and displays all logs in chronological order.
Alternative Flows	2.1 (No logs found): - System displays "No logs available."
Exceptions	2.2 (System/database error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, for system monitoring and troubleshooting
Business Rules	- Only admins can view system logs. - Logs are displayed in chronological order.

Field	Description
UC ID and Name	UC_41: View Logs by Date
Created By	Vo Van Hai
Date Created	19/11/2025
Primary Actor	Admin
Secondary Actors	None
Trigger	Admin filters and views activity logs by date via the logs interface.
Description	Allows the admin to filter and view system activity

Field	Description
	logs by date. The system displays logs for the selected date range.
Preconditions	PRE-1: Admin is authenticated. PRE-2: The system is operational. PRE-3: Logs exist for the selected date range.
Postconditions	POST-1: Logs for the selected date range are displayed. POST-2: If no logs, a message is shown.
Normal Flow	1. Admin accesses logs page. 2. Selects date range filter. 3. System retrieves and displays logs for the selected date range.
Alternative Flows	3.1 (No logs found for date range): - System displays "No logs available for selected date."
Exceptions	3.2 (System/database error): - System displays a system error message.
Priority	Medium, Should Have
Frequency of Use	Occasionally, for system monitoring and troubleshooting
Business Rules	- Only admins can filter and view logs by date. - Logs are displayed in

Field	Description
	chronological order for the selected range.

Future Extension Directions
Add a Price Field for Books

- Each book will have an additional "price" field in its detailed information.
- Support for displaying prices, promotional programs, or discounts.

Expand the Role System

- Add an "Author" role alongside User and Admin.
- Authors have the right to manage the books they have posted and view statistics for their own books.

Author Role Registration Process

- Users who want to become authors must submit an application form with verification information.
- The application will be reviewed and approved by an admin. Only after approval will the account be upgraded to the Author role.

Author Rights and Processes

- Authors can create, edit, and delete (CRUD) the books they have posted.
- When an author posts a new book or edits a book, the content will be in a "pending approval" state.
- Admins will review and approve the book content before it is published on the system.
- If rejected, the admin must select or enter a reason (e.g., copyright violation, inappropriate content, duplication, missing information, etc.) and notify the author for revision.

Approval History Management and Notifications

- Maintain a history of approvals, reasons for rejection, time, and the person who performed the action.
- The system sends real-time notifications to the author when a book is approved, rejected, or receives feedback from the admin.

Expand the Author Dashboard

- Authors can view statistics about their books: number of views, purchases, ratings, and approval status.