

1. Stakeholder Analysis

Stakeholder	Role	Needs/Expectations
Librarian (Admin)	Manages books, users, and transactions	Add/edit books, manage user accounts, track borrowed books, generate reports
Students/Users	Borrow and return books	Search for books, check availability, borrow and return books
Library Staff	Assist in operations	Monitor book conditions, update records, assist users
System Developers	Maintain the system	Ensure smooth functionality, fix issues, implement updates

2. User Stories & Use Cases

User Stories

- 1. As a student, I want to search for books by title, author, or category so that I can find the books I need.*
- 2. As a librarian, I want to manage book inventory so that I can add, edit, and remove books.*
- 3. As a user, I want to receive notifications when my borrowed books are due so that I can return them on time.*
- 4. As an admin, I want to generate reports about borrowed books and user activity to track library usage.*

Use Case Example: Borrowing a Book

Steps:

1. The student logs into the system.
2. The student searches for a book.
3. The system displays book details and availability.
4. The student requests to borrow the book.
5. The system checks the student's borrowing limit.
6. If eligible, the system updates the book status as "borrowed."
7. The student receives a confirmation message.

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3. Functional Requirements

Feature	Description
User Registration & Login	Users (students, librarians) can create accounts and log in securely.
Book Management	Librarians can add, edit, or remove books from the system.
Search & Filter	Users can search books by title, author, category, or availability.
Borrow & Return Books	Users can borrow books if available and return them before the due date.
Reporting & Analytics	Librarians can generate reports on book availability, borrowed books, and overdue books.
User Management	Librarians can view user borrowing history and manage permissions.

4. Non-functional Requirements

Category	Requirement
Performance	The system should process book searches within 2 seconds.
Security	User data and transactions must be encrypted. Only authorized users can manage book inventory.
Usability	The interface should be intuitive for users of all technical backgrounds.
Reliability	The system should have an uptime of at least 99.5%.
Scalability	The system should support a growing number of books and users without performance issues.