

Library Management Software Requirements

1. User Management

- **User Registration:** Allow users to register as members with necessary details (name, contact info, address, etc.).
- **User Roles:** Differentiate between user roles (e.g., admin, librarian, member).
- **Authentication:** Secure login/logout functionality with password recovery options.
- **Profile Management:** Allow users to update their profiles and view borrowing history.

2. Catalog Management

- **Book Entry:** Ability to add new books with details (title, author, ISBN, genre, publication date, and availability status).
- **Book Search:** Search functionality for users to find books by title, author, genre, or ISBN.
- **Catalog Browsing:** Enable users to browse the catalog by categories or genres.
- **Inventory Management:** Track the number of copies available, borrowed, and reserved.

3. Borrowing and Returning

- **Check-Out Process:** Allow users to borrow books with an automated checkout process, capturing user ID and book ID.
- **Return Process:** Simplified return process that updates the book's status and inventory.
- **Due Dates and Notifications:** Automatically assign due dates and send reminders for overdue items via email or app notifications.
- **Renewals:** Allow users to renew borrowed books if no reservations exist.

4. Reservation System

- **Book Reservation:** Allow users to reserve books that are currently checked out.
- **Notification for Availability:** Notify users via email/app when a reserved book becomes available.

5. Reporting and Analytics

- **User Activity Reports:** Generate reports on user borrowing history, overdue items, and active memberships.
- **Inventory Reports:** Provide insights on the most borrowed books, low-stock items, and overall library usage.
- **Financial Reports:** Track fees collected from overdue books and other transactions.

6. Administration and Settings

- **User Management:** Admins should be able to manage users (add, edit, delete).
- **Book Management:** Admins can edit book details and manage categories.

- **Settings:** Configure library settings, such as borrowing limits, fine rates, and notification preferences.

7. Integrations

- **Payment Gateway:** Integration for online payment of fines and fees.
- **External Databases:** Integration with external book databases (e.g., ISBN databases) for automatic book information retrieval.

8. Security and Compliance

- **Data Protection:** Ensure user data is stored securely and complies with data protection regulations.
- **Access Control:** Restrict access to sensitive functions based on user roles.

9. User Interface

- **Responsive Design:** Ensure the application is accessible on various devices (desktop, tablet, mobile).
- **Intuitive Navigation:** User-friendly interface with clear menus and search functionalities.
- **Help and Support:** Provide help sections or chat support for users.

10. Backup and Recovery

- **Regular Backups:** Implement automated backups of all data to prevent loss.
- **Data Recovery Plan:** Have a clear procedure for data recovery in case of failures.

Optional Features

- **Mobile App:** Develop a mobile app for easier access and management of library services.
- **Social Features:** Allow users to rate and review books, and share recommendations.