

Functional Requirements

Admin Features:

1. **Admin Login:**
 - Admins can access the system through a unique private link that does not require login credentials.
 2. **Members Tab:**
 - View a list of all subscribed members and their details.
 3. **Employee Management:**
 - Add new employees and assign login credentials (ID and password).
 - Remove existing employees.
 4. **Books Management:**
 - View all books in the library with details such as:
 - Book name
 - Quantity
 - Publisher
 - Genre
 5. **Genre Management:**
 - Add or remove genres.
 - Changes affect employees' ability to assign genres to books (e.g., if a genre is removed, employees cannot assign it).
 6. **Book-Genre Mapping:**
 - View a list of all book IDs and their associated genre IDs.
 7. **Borrow Tab:**
 - View borrowing transactions, including:
 - Book ID
 - Borrow date
 - Due date
 - Borrower details
 8. **Vendors Tab:**
 - View a list of all vendors and their contact information.
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Employee Features:

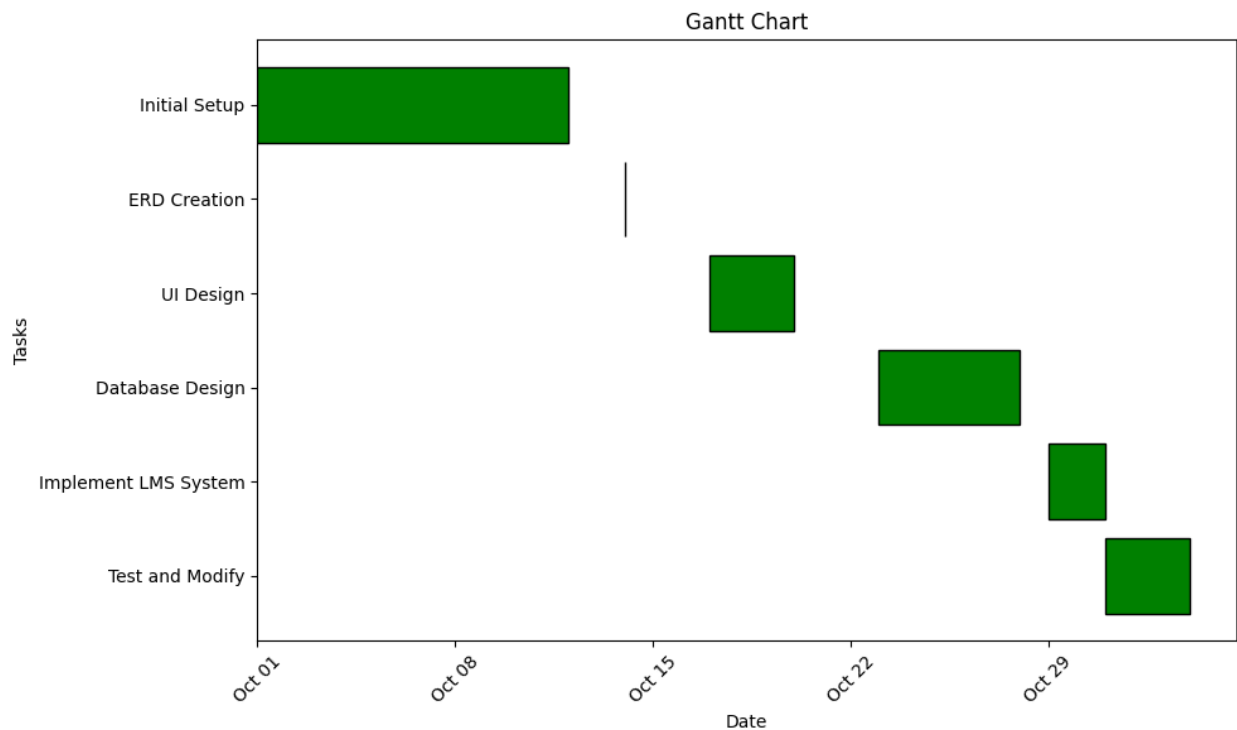
1. **Login Page:**
 - Employees can access their portal by logging in with a valid ID and password.
 2. **Reader Management:**
 - Add new readers with details (name, contact, address, reader ID).
 - Remove readers.
 - Create or renew memberships for readers.
 3. **Books Tab:**
 - **Book Management:**
 - Add new books with details (name, quantity, genre, vendor).
 - **Genre Option:**
 - Add a genre only if it already exists in the admin-defined genres.
 - **Vendor Option:**
 - Add new vendor details or reference an existing vendor by ID.
 4. **Borrowing Management:**
 - Record new borrowing actions by filling in:
 - Book ID
 - Member ID
 - Employee ID
 - Borrow date
 - Due date
 5. **Logout:**
 - Employees can securely log out of their account.
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Non-Functional Requirements

1. **Security:**
 - Admins' access link must be private and secured.
 - Employee login must use credentials for authentication.
2. **Scalability:**
 - The system can handle a large number of books, genres, employees, and members without performance degradation.
3. **Usability:**
 - The system have an intuitive and user-friendly interface for both admins and employees.
4. **Data Integrity:**
 - Ensure data consistency for book-genre mapping, borrowing records, and membership details.
5. **Performance:**
 - The system load pages within 2 seconds for both admin and employee portals.
6. **Availability:**

- The system is accessible 24/7, with minimal downtime for maintenance.
- 7. **Maintainability:**
 - The system allow easy updates or feature additions in the future.
- 8. **Logging and Auditing:**
 - Keep logs of all admin and employee actions for future auditing.
- 9. **Data Backup:**
 - Regular backups of all system data, including books, employees, readers, and borrowing records, to prevent data loss.

Gantt chart



Database design

