**Our project library management system**

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**Features and functionalities:**

1. **User Authentication and Authorization:**
   * Ensure users can sign up and log in securely, with designated roles for administrators, librarians, and members.
   * User registration and login for members, librarians, and administrators.
2. **Book Management:**
   * Allow librarians to add, edit, and delete books while enabling users to easily search and filter through the collection.
   * Add, edit, and delete books.
3. **Member Management:**
   * Provide functionality for administrators to add, edit, and delete member profiles, and allow users to view their details and borrowing history.
   * Add, edit, and delete member profiles.
4. **Borrowing and Returning:**
   * Enable members to check out and return books with due dates, implementing a notification system for overdue items.
5. **Reporting and Analytics:**
   * Implement a reporting system for administrators to generate insights into book availability, member activity, and analytics on popular books and genres.

**Technical constraints and considerations:**

1. **Database Integration:**
   * Consider using a database (e.g., SQLite, MySQL) to store book and member information.
   * Ensure proper data relationships between books and members.
2. **Security:**
   * Implement secure password storage for user authentication.
   * Protect against common web vulnerabilities, such as SQL injection and cross-site scripting.
3. **Responsive Design:**
   * Ensure the website is responsive, adapting to

various screen sizes (desktop, tablet, mobile) for a better user experience.

**User stories:**

1. **User Authentication:**
   * As a new user, I want to register for a library account, providing my basic information.
   * As a registered user, I want to log in securely to access my personalized library services.
2. **Book Management:**
   * As a librarian, I want to add a new book to the system by entering its title, author, and genre.
   * As a librarian, I want to edit existing book details, such as author or genre.
   * As a librarian, I want to delete a book that is no longer part of the library collection.
   * As a member, I want to search for books by title, author, or genre to find what I'm looking for easily.
3. **Member Management:**
   * As an administrator, I want to add a new member to the system, providing their personal details.
   * As an administrator, I want to edit a member's information, such as contact details.
   * As an administrator, I want to delete a member from the system if necessary.
   * As a member, I want to view my profile details and borrowing history.
4. **Borrowing and Returning:**
   * As a member, I want to borrow a book from the library by checking it out.
   * As a member, I want to return a book to the library when I am finished with it.
   * As a librarian, I want to check in a returned book and update its availability status.
   * As a member, I want to receive a notification if I have overdue books.
5. **Reporting and Analytics:**
   * As an administrator, I want to generate a report on the most borrowed books in the last month.
   * As an administrator, I want to view analytics on popular book genres in the library.