

# Library Management Project Report

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## Introduction

The Library Management Project is designed for the management of a library's operations, including user management, book cataloguing, book rental, and book reviewing. This report provides a comprehensive overview of the project, covering its uses, functionality, database schema, and implementation details.

## Project Components

### 1. User Management

- The project includes functionalities for user sign-up (registration) and login.
- Users can register for an account by providing a username and password using the SignInForm.
- Existing users can log in using their credentials via the LogInForm.

### 2. Book Cataloguing

- Books are catalogued in the database using the books table.
- Each book entry includes details such as name, author, description, price, content, section, date issued, and return date.
- Sections represent categories or genres of books and are stored in the section table.
- The BookForm is utilized for adding new books to the catalogue.

### 3. Book Rental

- Users can rent books from the library, with rental information stored in the book\_rented table.
- Rental transactions establish a many-to-many relationship between users and books.
- The book\_rented table contains entries for rented books, including the associated user and book IDs.

### 4. Book Reviewing

- Users can write reviews for books in the library's collection.
- Book reviews are stored in the book\_review table, linked to the corresponding book via the book\_id foreign key.
- Each review includes the username of the reviewer and a description of their feedback.

### 5. Search Functionality

- The project incorporates a search feature enabling users to search for books based on keywords or criteria.
- Search functionality is implemented using the SearchForm, allowing users to submit search queries.

## Database Schema

The project's database schema comprises several tables to store user information, book details, rental transactions, book reviews, and section information. Below is a summary of the database schema:

- users: Stores user credentials with unique usernames.
- section: Contains information about book sections or genres.
- books: Catalogues book details, including name, author, description, price, content, section, and dates.
- book\_rented: Records rental transactions, establishing relationships between users and rented books.
- book\_review: Stores reviews written by users for specific books.

## Conclusion

The Library Management Project provides a comprehensive solution for managing library operations efficiently. By leveraging Flask for the web framework and SQLite for database management, the project offers user-friendly interfaces for users to interact with the library's catalogue, rent books, and contribute reviews. With user management and extensive cataloguing capabilities, the project enhances the overall library experience for both administrators and users.

Project Video Link :

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