

# Library Management system Report

## Author:

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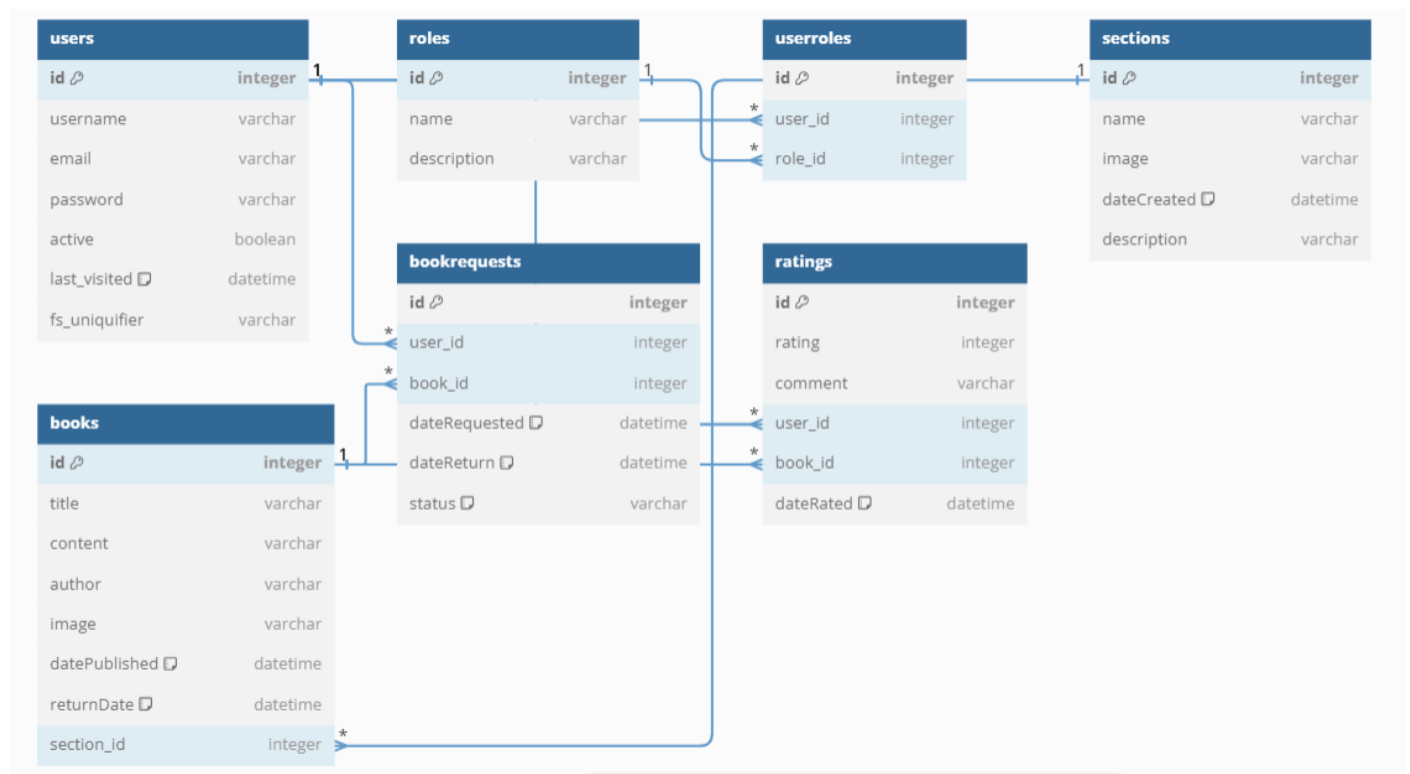
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About Me: My self Abhinav Tiwari , i am from Sultanput, Utter Pradesh(U.P.).I am perusing BS Degree as a full time student.

## Description:

Discover a comprehensive Library Management System (LMS) designed to enhance your reading journey! Dive into a diverse collection of books, spanning from beloved classics to the latest releases, accessible through our user-friendly platform. Admins enjoy seamless event creation and personalized reading experiences for all users. Welcome to BookScope LMS, the intersection of efficient book management and the joy of exploring new narratives!

## DataBase Schema Design:



## Technologies used:

- ❖ **Flask:** Backend API development.
- ❖ **SQLite:** Database management.
- ❖ **Redis:** Caching system for improved performance.
- ❖ **Celery:** Task queue for managing background jobs.
- ❖ **VueJS:** Frontend UI development.
- ❖ **Jinja2 Templates:** For dynamic content rendering (if required).
- ❖ **Bootstrap:** UI styling and responsiveness.
- ❖ **JWT (JSON Web Tokens):** Secure authentication and authorization.

## API Design:

Our system utilizes a unified table structure to support smooth CRUD operations via dedicated API endpoints. This framework allows for easy data management using common HTTP methods like GET, POST, PUT, and DELETE. By promoting a consistent method of data interaction, the API ensures that the database aligns seamlessly with the application's needs. This approach simplifies application maintenance and updates while enhancing scalability and flexibility for future development.

## Architecture and Features:

Our project follows the MVC (Model-View-Controller) architecture, where user requests are managed by controllers within "controller.py," and templates housed in the "component" folder provide an intuitive user interface. The models handle data operations and interactions with the database. Key features include secure login functionality, advanced filtering options, and streamlined booking management. We've also integrated user ratings, show reviews, and revenue reports to enhance user engagement and provide administrators with valuable insights. Our focus on efficiency and security ensures a smooth and protected platform for users to discover, review, and book shows.

**LMS project Video:** [video link](#)