Author

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An enthusiastic individual eager to absorb new skills and techniques that will pave the way for my academic and professional growth

Description

The Library Management System project is a web application featuring multiple sections with numerous books for users to explore and borrow. With the app, librarians can seamlessly perform CRUD operations on sections and books whilst also managing transactions and access.

Technologies used

- **Flask** for building the application
- **Flask-SQLAlchemy** for working with SQLite database in my application
- **Flask-Login** for managing member login in my application
- **Flask-Migrate** for handling SQLAlchemy database migrations
- **APScheduler** for running jobs at specified intervals
- **Werkzeug Security** for hashing passwords and checking hashed passwords
- **Jinja2** for generating dynamic HTML pages for my application
- **Bootstrap** for styling my application and making it responsive
- **datetime** for working with dates and times
- **requests** for making HTTP requests
- **Chart.js** for creating visual, interactive charts

DB Schema Design
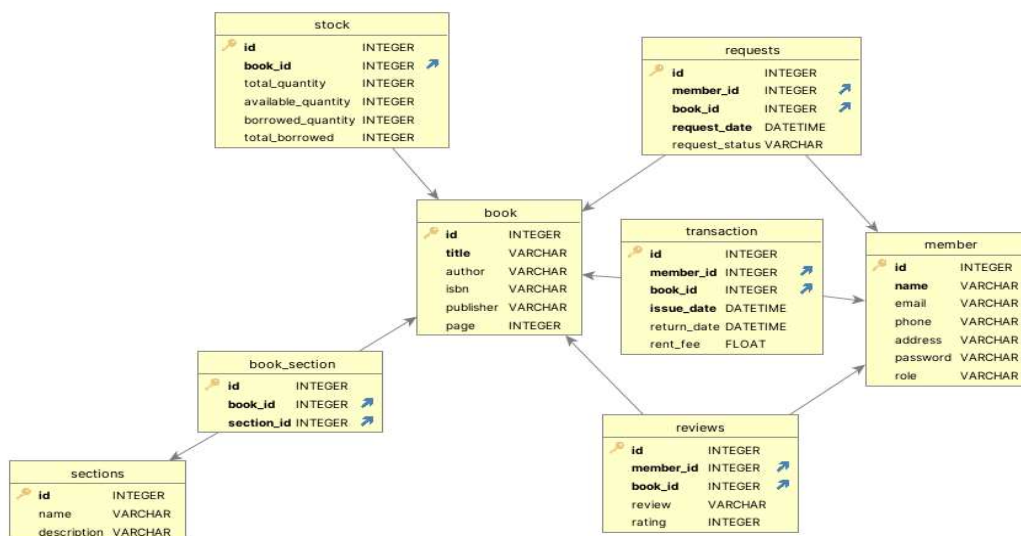
Architecture and Features

app.py contains the Flask application setup, creates the database connection and also contains the main controller logic. It defines the endpoints and does the request handling, and interacts with the database through models.

models.py defines database models for the application using Flask-SQLAlchemy. It defines fields and relationships between tables.

templates directory contains all jinja2 templates

static directory contains css, images and js files

Core Features (Common)	User-Specific Features	Librarian-Specific Features
Login, Register	View Sections/Books	CRUD Operation - Books
Password Authentication	Book Request	CRUD Operation - Sections
Role Segregation	Book-Specific Feedback	Librarian Dashboard
	Auto-Revoke Access	Book Access Provide/Revoke
	User Dashboard	Monitor Transactions
		Accept/Reject Requests