

# Library management app

## Documentation

Welcome to library management application, your go-to web-based application for managing a library! This application is designed to streamline the process of managing book sections, requests, approvals, and returns, all in one convenient platform. Whether you're an admin (librarian) or a user, library management application has got you covered.

### Introduction

Library management application is built using a combination of Vue.js for the front-end and Python-Flask for the back-end. This powerful duo ensures a smooth and responsive user experience while maintaining robust server-side functionality. Let's dive into the key features and technologies used in library management application.

### Technologies Used

**Python:** Powers the controllers and serves as the host programming language.

**Vue.js:** Drives the front-end of the application, making it dynamic and interactive.

**HTML & CSS:** Responsible for developing components, templates, and styling.

**Bootstrap:** Enhances the front-end with appealing design and easy navigation.

**SQLite:** Acts as the database for storing crucial application data.

**Flask:** Provides the web framework for handling HTTP requests and responses.

**Flask-Restful:** Enables the development of a RESTful API for seamless communication.

**Flask-SQLAlchemy:** Facilitates access and modification of the SQLite database.

**Flask-Celery & Redis:** Handle asynchronous background tasks and caching for improved performance.

**CORS & flask\_jwt\_extended:** Ensures security by managing authentication tokens and handling cross-origin resource sharing.

## Architecture and Features

Library management application follows a client-server architecture, with Vue.js handling the presentation layer and Python-Flask managing the server-side logic. Here's what you can expect from Library management application:

**Admin Capabilities:** Admins can add sections and books, approve or decline book requests, and revoke approvals. They can also view distribution data via pie and bar charts.

**User Functionality:** Users can request up to 5 books, remove requests, and return books. They can also view their statistics on a per-book and per-section basis.

**API Design:** The RESTful API adheres to OpenAPI Specifications, providing CRUD operations for database tables and token-based authentication for secure requests.

## Getting Started

To start using library management application, simply navigate to the provided URL and sign in with your credentials. Once logged in, admins and users will have access to their respective functionalities, including adding books, making requests, and viewing statistics.

**Video Link: -**

**<https://1drv.ms/v/c/1280b43aa247309e/ETSBGyUei5ZLmdWpThocdcgBCUXIcHobRawXrhAFMYYYULA>**