

Modern Application Development II Project

Library Management System - V2

Objective:

To develop a multi-user Library Management System app that is used to issue, grant/revoke and maintain e-books across various sections like an online library and mange many more operations

Frameworks Used:

Backend: Flask, Flask_Restful, Flask_SQLAlchemy, Flask_Cors

Frontend: Vue, JavaScript,

Security: Flask-Bcrypt, Flask-JWT-Extended

Database: SQLite

Batch Jobs (Backend Jobs): Redis, Celery

Database Model

Table Name	Attributes	Description
User	id	Integer, autoincrement, primary key
	name	Text, not null
	email	Text, not null, unique
	password	Text, not null
	role	Text, not null, by default="user"

Table Name	Attributes	Description
Section	id	Integer, autoincrement, primary key
	name	Text, not null, unique
	content	Text, not null
	create_id	Integer, not null
	create time	Datetime, not null
	update_id	Integer, not null
	update time	Datetime, not null

Table Name	Attributes	Description
Book	id	Integer, autoincrement, primary key
	name	Text, not null
	content	Text, not null
	authors	Text, not null
	book_link	Text, not null
	section_id	Integer, Foreign Key("section.id"), not null

Table Name	Attributes	Description
UserBook	id	Integer, primary_key, autoincrement
	request	DateTime, not null
	issue	DateTime
	due	DateTime
	return_date	DateTime
	revoke_date	DateTime
	status	Text
	user_id	Integer, ForeignKey("user.id"), not null
	book_id	Integer, ForeignKey("book.id"), not null

Flask API:

/	homepage	PUT
/start_export	Intialization of UserBook in csv	PUT
/start_export/<task_id>	Download of the UserBook in the server	PUT
/register	User register	POST
/login	User/Librarian login	POST
/logout	User/Librarian Logout	POST
/userinfo	User info for storage and login	GET
/section	Create Section	POST
/section	Read all sections	GET
/section/<int:section_id>	Select section by ID	GET
/section/<int:section_id>	Update section by ID	PUT
/section/<int:section_id>	Delete section by ID	DELETE
/book/<int:section_id>	Create New Books	POST
/book/section/<int:id>	Read all books in a section	GET
/book/<int:id>	Select of a particular book	GET
/book	Select all books	GET
/book/<int:book_id>	Update Book info	PUT
/book/<int:book_id>	Delete book	DELETE
/bookrequest/<int:user_id>/<int:book_id>	Book Request	POST
/bookrequest/status	Read Books Request by status (request, approve, overdue, return, revoke)	GET
/bookapprove/status	Get all approved books	GET

/bookrequest/user	Read Books Request by user (request, approve, overdue, return, revoke)	GET
/bookrequest/status/<int:id>	Update User book status (approve, reject, return, revoke, renew)	PUT

Video Link

https://drive.google.com/file/d/1bN4EZM5tdqbk_T1wo-zM7KRshrdzA6Z6/view?usp=drivesdk