Library Management System

(AppDev2- Project)

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Description:

Library Management System is a multi-user web app used for reading Ebooks online.

Features Implemented:

• **User Login/Register**

   Token Based Login Mechanism Implemented using Flask-Security, Flask-Login packages

• **Dashboard**

   User and Librarian dashboard implemented with Relative time and accessible CRUD Actions to perform

• **Ebook & Section Management (CRUD)**

   Librarian can perform CRUD operations on Ebooks and Sections.

• **Ebook Stats**

   Implemented statistics for librarian using ChatJs cdn.

• **Backend Jobs and Caching**

   Used Redis and Celery for Optimizing the performance by handling export jobs asynchronously

• **Export Data**

   exporting Ebook files in csv format by librarian triggered Jobs using Celer.

• **Daily Alerts**

   Daily Alerts Triggered using Celery beat if the user hasn't visited the website.

Technologies Used:

- Vue.js - for client side/ frontend part of the app.
- Flask - for the server side/ backend part of the app.
- Redis and Celery are used for scheduled jobs/daily reminders via MailHog.
- Flask restful for managing the api calls.
- Flask security for token based authentication.
- Flask-SQLAlchemy - Used as Backend to store and retrieve data
- Bootstrap - for css and styling.
- Jinja2 - Template for daily reminder & Monthly activity reports at backend Database.

SQLite Models:

- `User, Role, RoleUsers` Table has been used as these are mandatory for Flask-Security default Login Mechanism, fs_uniquifier in User table used for Token based Authentication.
- `Section Table` to store different sections an ebook belongs to.
- `Ebook` Table stores all the ebooks.

    Relationships:

    `ratings` (One-to-many relationship with `Rating`)

    `granted_books` (One-to-many relationship with `GrantedBook`)

- `UserEbook` and `GrantedBook` Table stores all the requests made by users and the book granted to them by the librarian.

    Relationships:

    `user` (Relationship with `User`)

    `ebook` (Relationship with `Ebook`)

- `Rating` contains rating and review given by the user to a particular ebook.

DemoLink : 🎞 project demo.mp4 or

https://drive.google.com/file/d/1c59y4x8abNHZCAXz9snppPUtAQw3kE5Y/view?usp=drive_link