Library Management Systems
(AppDev1- Project)

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Description:

This app is a multi-user web app for borrowing and reading books.
To create this app, I followed the app wireframe and the guidelines provided by appdev1 instructors and the following steps:-

- Creating the database schema of the app and tables using flask-sqlalchemy.
- Creating the flask app instance and html pages using css and bootstrap
- Creating all the required routes to link the app to the database.
- css styling to the web pages.

Frameworks Used:

- Flask - this web application is built on flask.
- Jinja2 Templates - the web pages use jinja2 syntax to generate dynamic content.
- Bootstrap - for templates of the web pages.
- SQLite3 - to create the database structure for the app.
- Flask-SQLAlchemy - to create and manage the relational database for the app.
- Database models for the app are created using flask-sqlalchemy.
- There are 4 Tables used in the database: User,Book,Section, IssueBook
- Book and Section have many to one relationship.
  IssueBook and Book have one to one relationship

System Design:

- This web app follows
- Templates Folder - stores all the html pages of the app.
- App.py -
    the code for creating the instance of the flask app
    the code for creating the pre saved data of the app.
    the code for creating database tables.
    the code for all the routes and helper functions of the app.

Features Implemented:

● Sign Up form with option to choose role = “Admin”, same login form for users and librarian,
● Based on the role choose during SignUp, user will be redirected to either Librarian Dashboard or Reader Dashboard
● Librarian dashboard with app books, section, book_request, search options
● Librarian can manage books, section and give access to book and revoke the access from users.
● Librarian can create ,update and delete books as well as sections.
● Librarian can revoke access of books anytime.
● Users can search books based on title, section, authors.
● User can request books, return books, read content of approved books.
● User can also rate issued books.
● Users can also pay price of book and download the e-book.
● Users can at maximum at any point of time can request 5 books

To run the app

- Run the run.py file.

Presentation Video Link:
https://drive.google.com/file/d/1ffX9-hsL0QNTeN56pgBwyi4mV1gsAGK-/view?usp=sharing