

Library Management System

Website structure

- The main page is located at localhost:port/library/
- Admin panel is located at localhost:port/admin/
- All other pages should be easily accessible through the library home page via the UI.

User registration system

- One superuser admin is already created with username 'admin' and password 'admin'.
- All users (customers and librarians) have to use the registration system on the website itself which asks for username, email, and password. (Checks are there to avoid repeated emails and username)
- The database contains a user Group called 'Librarian' which has access to books and requests (more on models explained below).
- Librarian can modify, create and remove Book model objects.
- Admin can grant librarian access to users by putting them under the 'Librarian' group and giving is_staff access to enable them to log in the admin panel.

Models and database

- Database contains 2 models - Book and Request.
- Book model has fields as primary_key, title, publisher, genre, summary, ISBN, location, available(boolean), cover (Image file)
- Request model has fields as book(ForeignKey), start_date, end_date, user(ForeignKey), status
- Request model has functions as:
 - is_ongoing() => Returns True if current date is between start and end date of Request object

- `number_of_days()` => Returns number of days before request will end.
- `is_deadline_close()` => Returns True if end_date is 2 or less days away.
- The status field of the Request model can only contain 0, 1, 2 (Uses MaxValueValidator). 0 implies unverified, 1 implies accepted, 2 implies rejected.

How it works

- Users can log in their account and click the book on the home page they like. If it's available, they will see a request link below the details and they can request book for x number of days
- The request view makes sure that 1. User is authenticated 2. User is not a librarian (as librarians aren't allowed to request books) 3. Book is available 4. User doesn't have a request with status 0 or 1 that is ongoing (Yet to be verified OR accepted)
- Request model object gets created with status 0 which implies unverified. Librarian can then see this request in the admin panel and change the status to 1 OR 2 to accept or reject the request
- User can view the status on the user_profile page. Link will be available on the UI navigation bar once the user is logged in.
- If the request is accepted and the deadline to return is 2 or less days away, the user can also see a renew link next to the request in the user profile.
- Renew allows him to extend the end date by x number of days. Status resets to 0 (Yet to be verified) so that librarian can filter this and accept or reject it again.

Additional features

- The home page has a search bar that can filter books based on title, genre, author and ISBN code of the book.

- The UI navigation bar remains fixed on all pages and the top right shows Login/Register OR Logout/User_Profile based on whether user is logged in or not

Dummy Data

- 5 users have been created. User i has username 'useri' and password 'passi'. User 5 ('user5','user5') has librarian access.
- 4 books have been added (2 are available).
- Some requests have been made by user1 ,user2 and user3. User3 has his request ending on 27th April, so the renew option can be checked via his account if the assignment is reviewed on or before 27th April. If not, then to check the renew option, just initiate a request with 2 or less days to discover this option in the user profile.