



**BOOKNEST**

Where Imagination takes flight and Minds Ignite

# *BookNest*

## **Description:**

**BookNest** is a is an online library management system application that allows users to browse books available in the library, borrow them if they are available, and return them when they are done reading. The project aims to provide an intuitive and user-friendly platform for users to explore and borrow books from the comfort of their homes.

## **Features:**

### **1. Book Catalog**

- Display a comprehensive list of books available in the library, providing essential details such as title, author, and a brief description.
- Show the number of total copies and available copies for each book, allowing users to know the availability before borrowing.

### **2. Book Details**

- Provide a detailed view of each book, including the book's cover image, title, author, description, and the number of available copies.
- Users can click on a book to access its detailed information.

### **3. User Authentication**

- Allow users to sign up for new accounts using a unique username, valid email, and secure password.
- Enable existing users to log in securely using their email and password.

### **4. Borrowing Books**

- Authenticated users can borrow books from the library if there are available copies.
- When a user borrows a book, the system updates the number of available copies and records the user's borrow date.

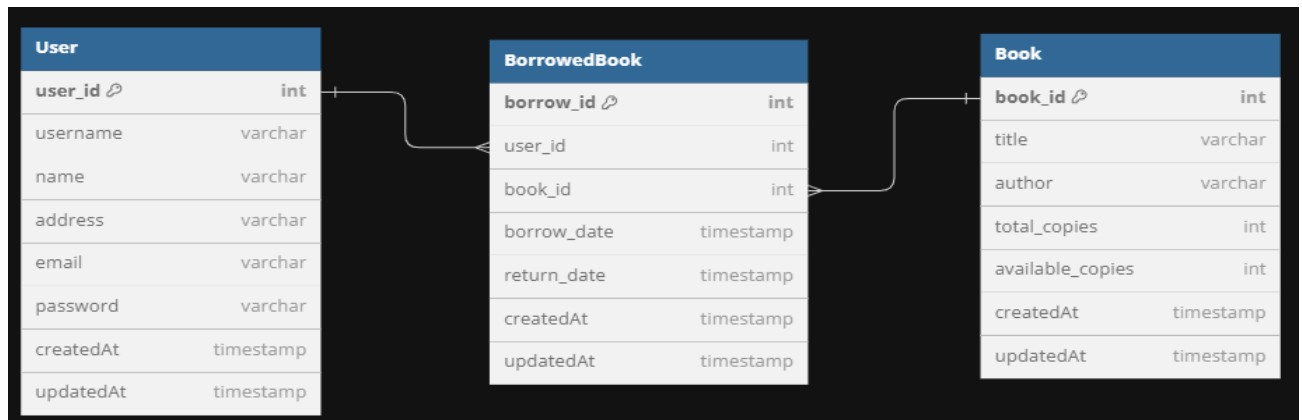
### **5. Returning Books**

- Authenticated users can return books they have borrowed.
- The system records the return date and updates the book's availability status.

## 6. Search and Sorting

- Provide a search functionality to help users find books by their titles or authors.
- Implement sorting options to organize the book catalog based on title, author, or availability.

## Data Structure



## Endpoint:

- **Homepage: GET (“/”)**
  - Homepage of the sites.
  - Shows most of the books available in the library.
- **User Endpoints:**
  - **Register Page: POST (“/register”)**
    - Creates a new user account.
    - Payload: username, name, address, email, password.
  - **Login Page: POST (“/login”)**
    - Log in an existing user.
    - Payload: email, password.
- **Book Endpoints:**
  - **Book List: GET (“/books”)**
    - Fetches all books available in the library.
  - **Book’s Detail: GET (“/books/:bookId”)**
    - Fetches detailed information about a specific book.

- **Add Book (Admin only): POST (“/books/add”)**
  - Adds a new book to the library (restricted to admin only).
- **Update Book (Admin only): POST (“/books/update/:bookId”)**
  - Updates information about a specific book (restricted to admin only).
- **Remove Book (Admin only): GET (“/books/delete/:bookId”)**
  - Removes a book from the library (restricted to admin only).

➤ **BorrowBooks Endpoints:**

- **Borrow Book: POST (“/borrow/:bookId”)**
  - Allows an authenticated user to borrow a book if available.
- **Return Book: GET (“/borrow/return/:bookId”)**
  - Allows an authenticated user to return a borrowed book.