UNIVERSITI KUALA LUMPUR KAMPUS KOTA

MALAYSIAN INSTITUTE OF INFORMATION TECHNOLOGY

Name of Course	**REUSE AND COMPONENT BASED DEVELOPMENT**	Course Code	**ISB37804**
Lecturer	**AZIZAH RAHMAT**	Semester / Year	**October2024**

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Programme	**BSE**
Submission and Presentation Date	**Week 14 (20-24 January 2024)** *Both presentation and submission should be at the same day. Submission: 1. Project report 2. The source code (Zip the project) Presentation: 3. Presentation of system during the presentation day (no need power point slide)

Assessment	PROJECT (20%)

TABLE OF CONTENT

1.0 INTRODUCTION

1.1 Background of the System

With the rise of digital platforms, the way in which people discover books has drastically changed. Most readers today avoid visiting physical bookstores and instead prefer to browse through an online catalogue of books, as it is very convenient to look through all the titles with ease. This shift in behavior is largely driven by the convenience and accessibility of digital platforms, allowing book lovers to explore new genres, authors, and topics from anywhere at any time.

The proposed system for an online bookstore provides user with the easiest and most convenient interface in terms of filtering and viewing the books. It will present a collection of carefully selected books, making sure that users can easily get titles that interest them, depending on their genre and author

This will be a digital platform that showcases the collection of the bookstore, offering a consistent and premium browsing experience. The system will enable users to filter and view detailed information on each book to satisfy the needs of readers seeking an easy way to explore new reads without committing to a purchase.

Even though the system is not transactional, it will be beneficial for users in that the readers will be able to locate books with ease, navigate through genres, and find books they are interested in. This approach is also a way for the bookstore to establish an online presence with engagement with the audience, while retaining tradition in reading.

1.2 Problem Statement

1. **Limited Digital Presence:**
   With no online presence, the bookshop cannot showcase its collection to potential readers beyond what is available to them locally, this greatly diminishes its online visibility.
2. **Inability to Display Book Catalogue:**
   The absence of a dedicated online system makes it difficult for the bookstore to showcase its range of books effectively, preventing potential readers from discovering available titles.
3. **Limited Reach to Audiences**
   Without a digital platform, the reach of the bookstore remains confined to the local customers, failing to attract a more diverse audience from other regions.

4. **Dependency on Physical Stores**

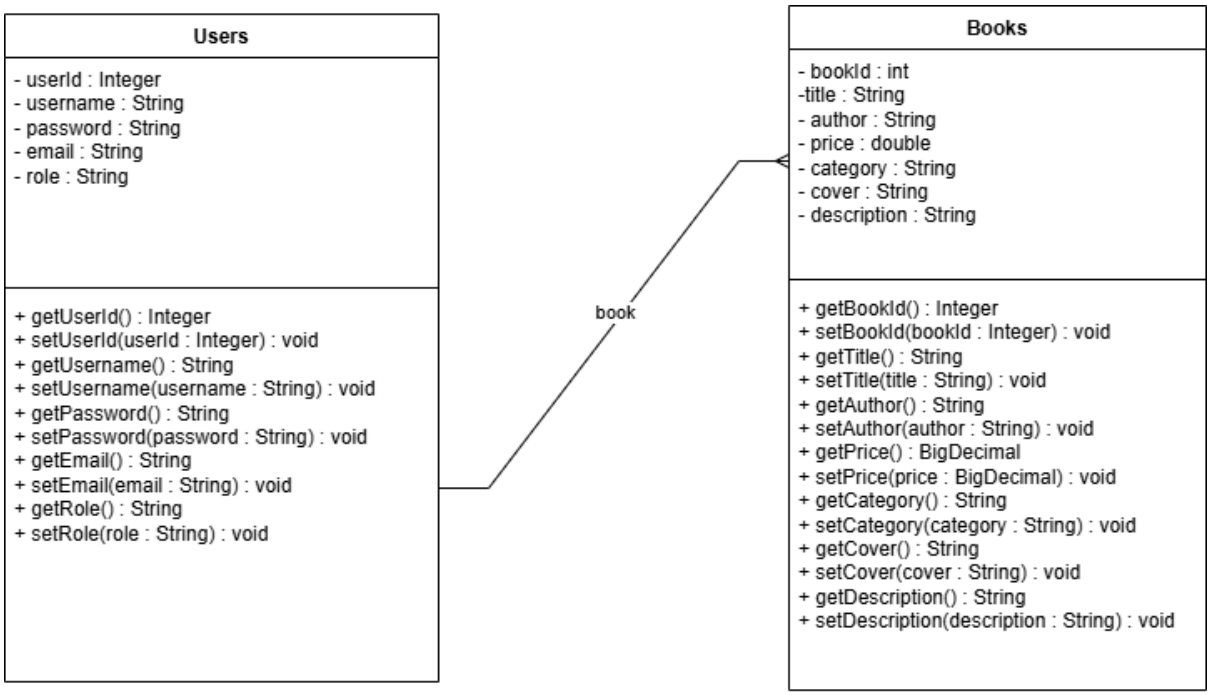
   Without an online system, the bookstore relies on physical stores to interact with the customers. This reduces accessibility and prevents efficient engagement with modern readers accustomed to digital browsing.

2.0 DESIGNING THE APPLICATION

2.1 Gathering User Requirements

2.1.1 Use Case Diagram

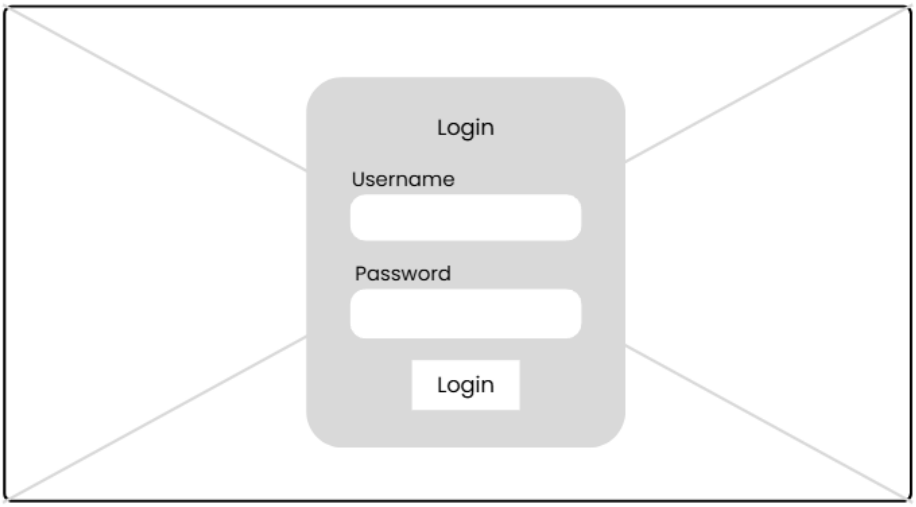
2.1.2 Class Diagram



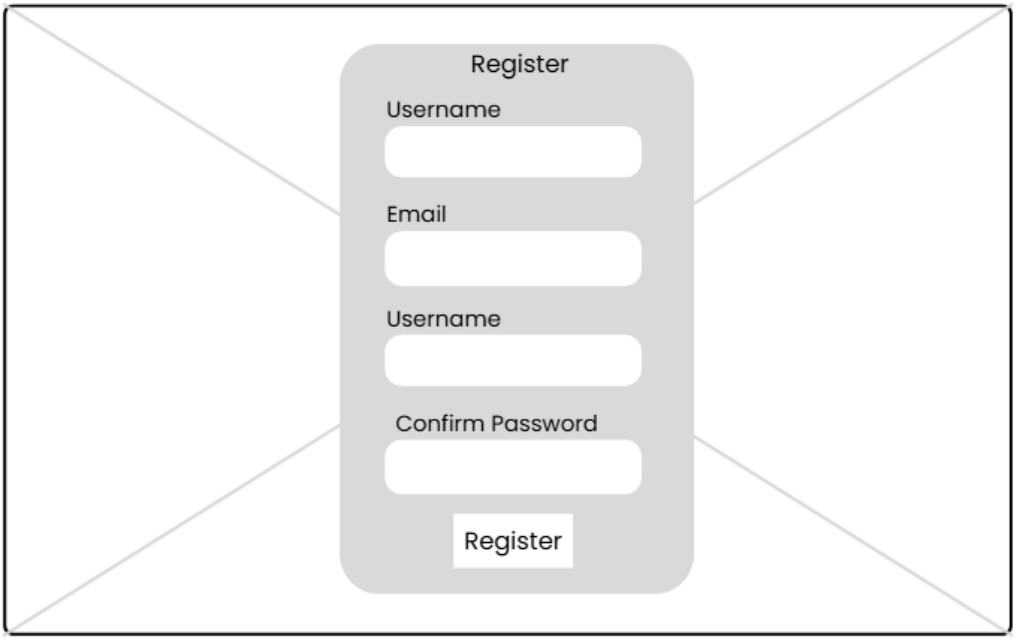
2.2 Preparing Mockup

Login Admin/User

Login

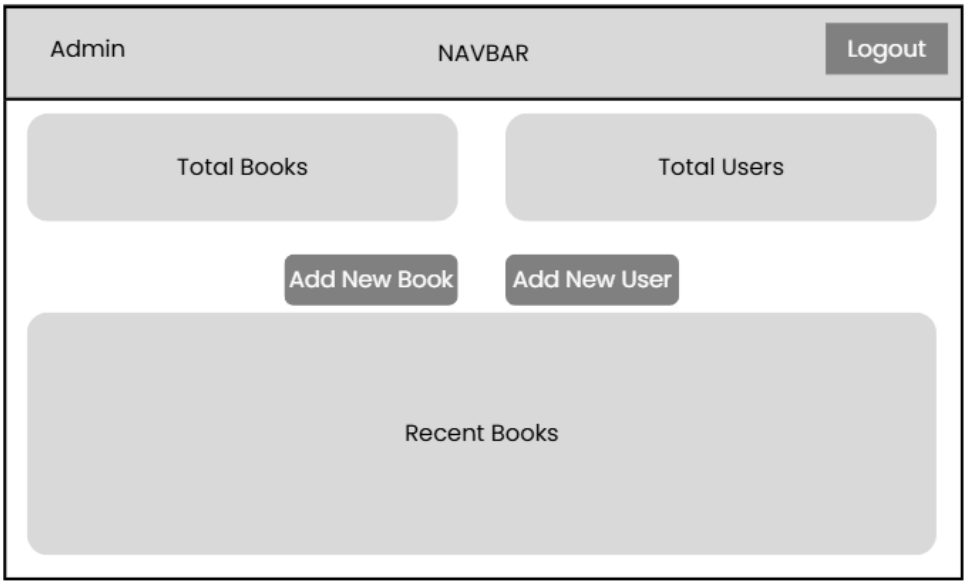


Register (User)

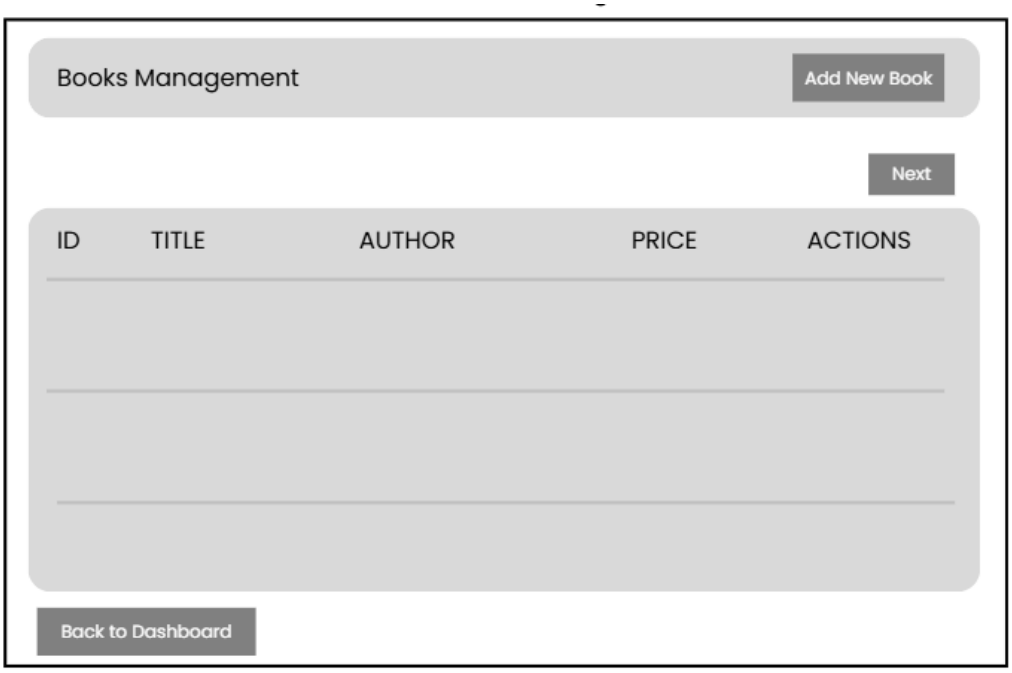


Administrator

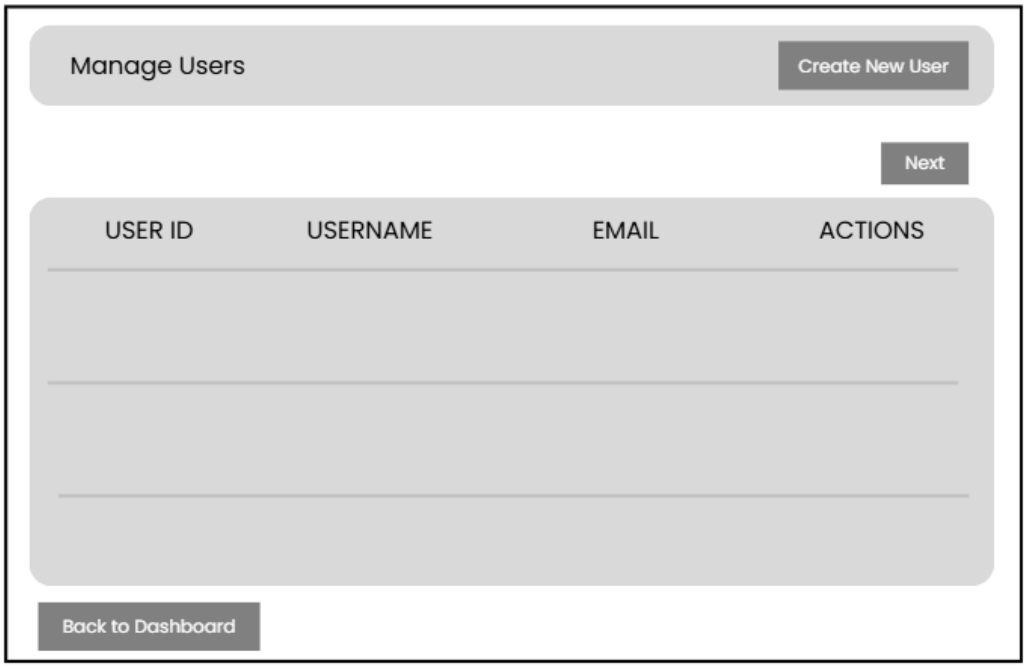
Admin Interface (Dashboard)



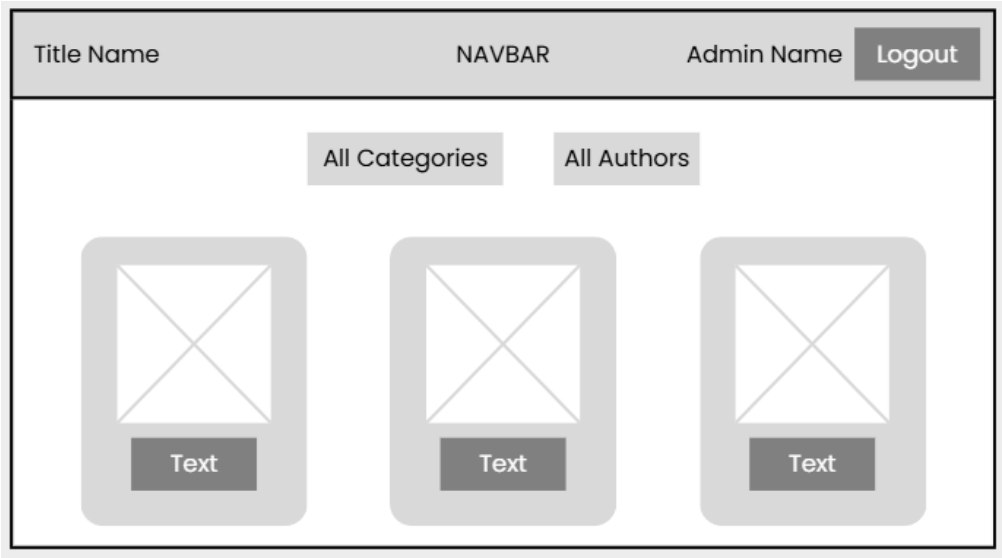
Manage Books



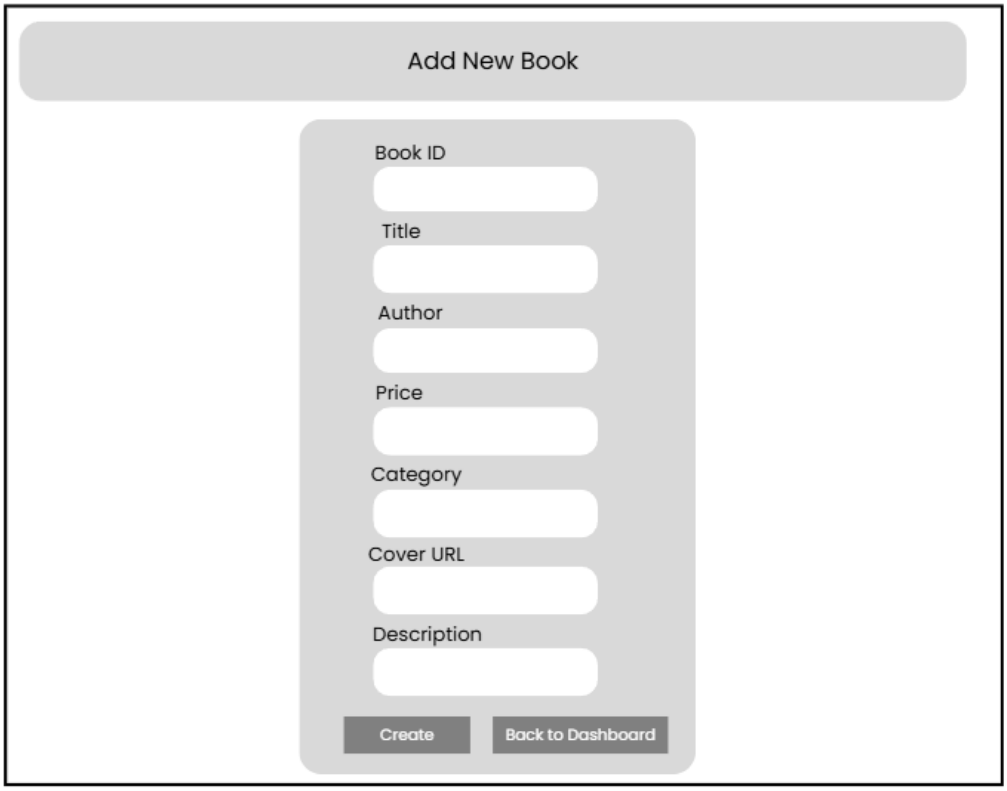
Manage Users



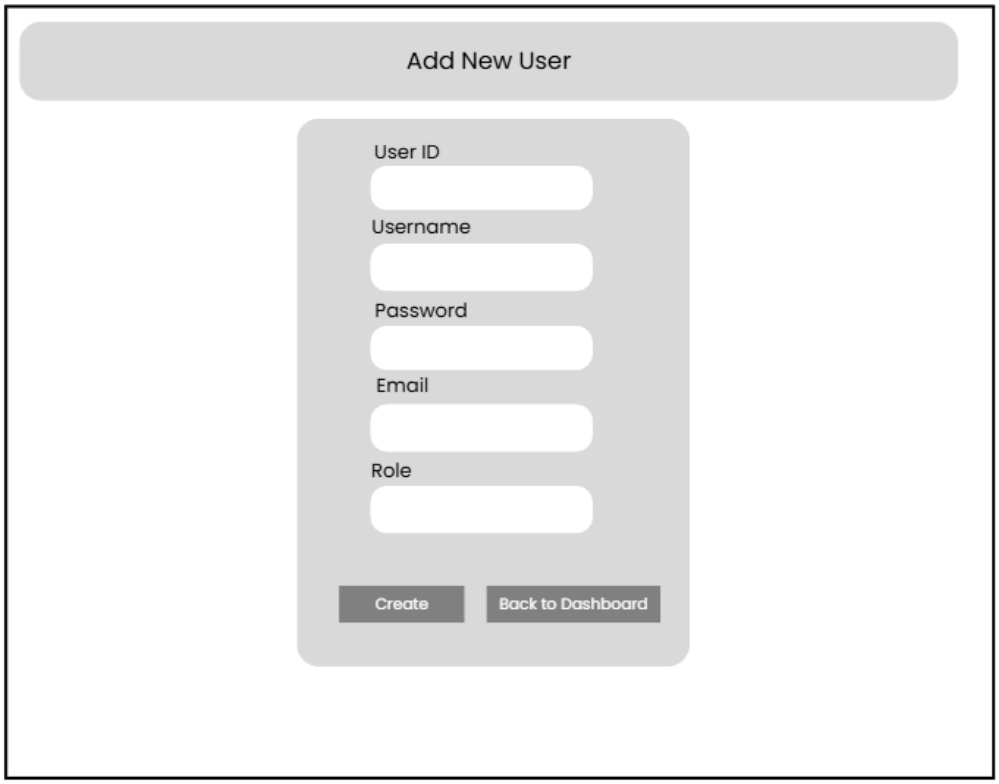
View Store



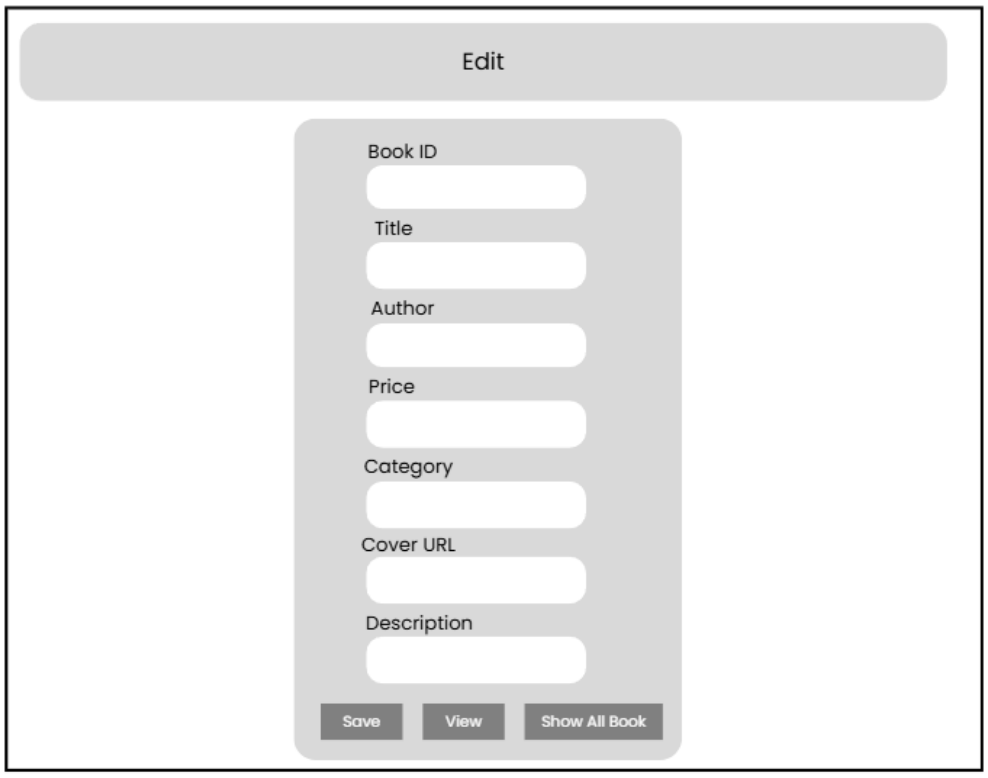
Add New Book



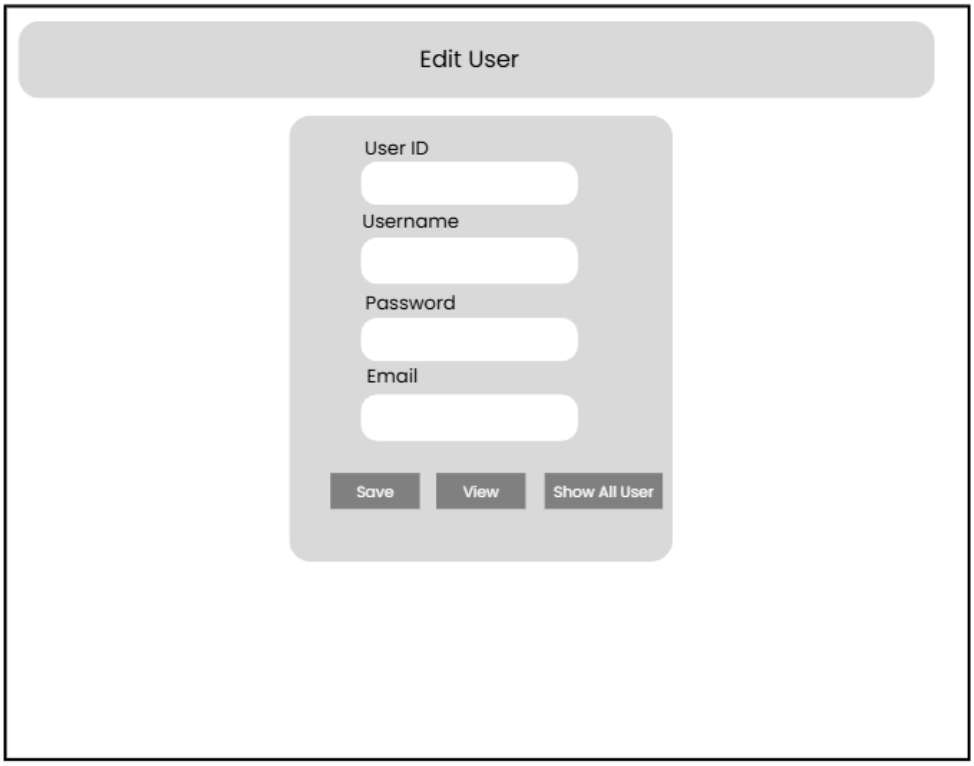
Add New User



Edit Book

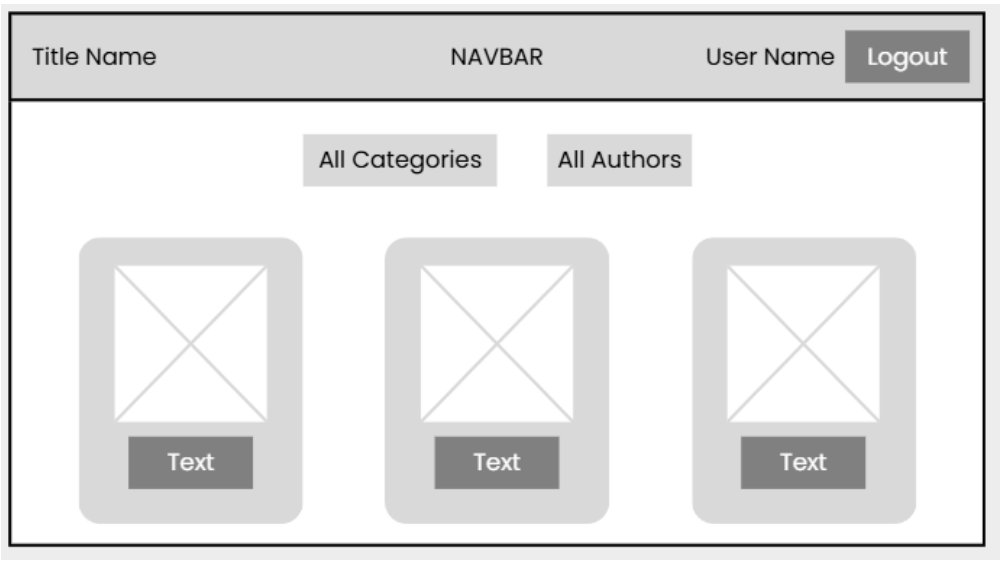


Edit User

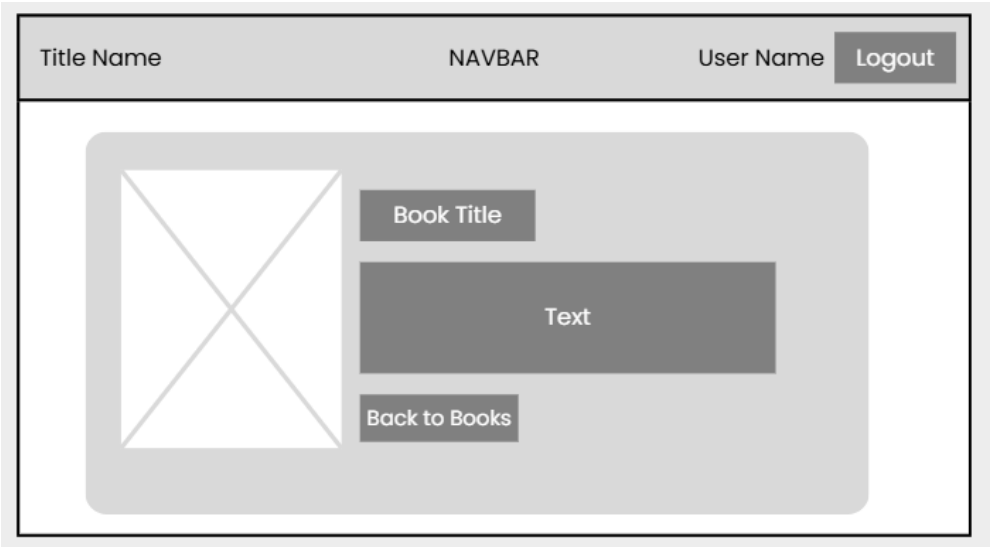

Edit User
User ID
Username
Password
Email
Save
View
Show All User

User

User Interface

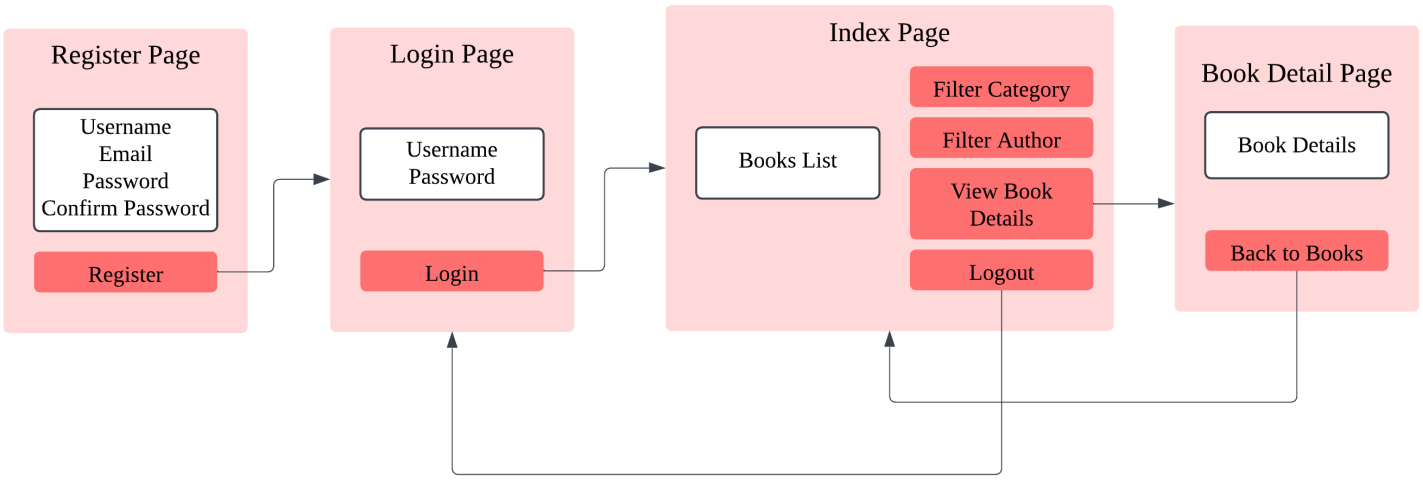


Book Detail

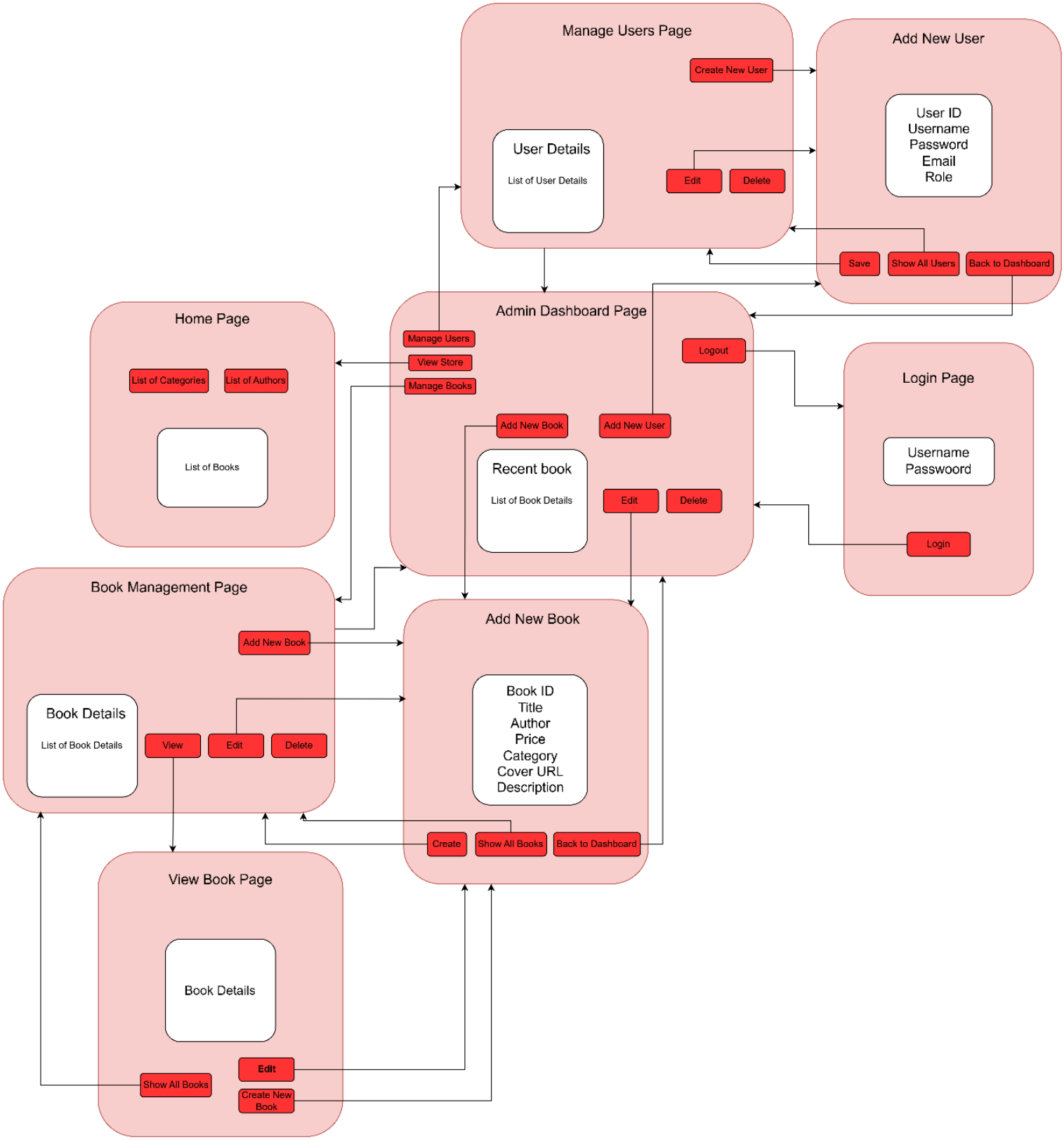


2.3 The Business Process Flow

2.3.1 User Flow



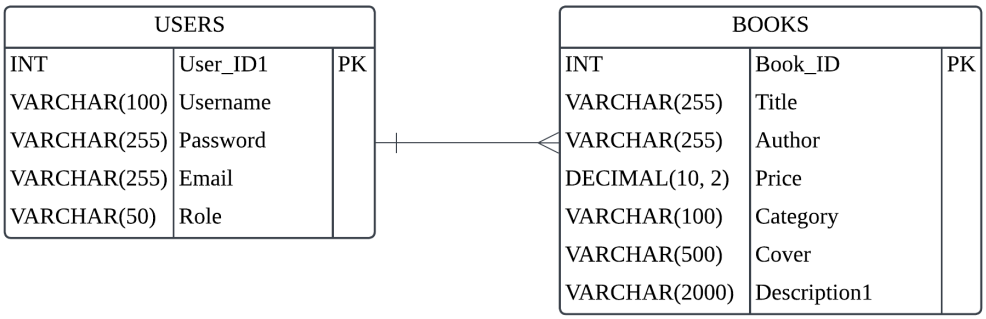
2.3.2 Admin Flow



2.4 Designing the Data Model

2.4.1 ER Diagram

2.4.2 Data Model



3.0 FUTURE RECOMMENDATION/ SUGGESTIONS

Missing Features:

- **Add to Cart & Purchase System:** These are crucial for completing the functionality of an online bookstore. Features like adding books to the cart, checkout, and payment processing would make the system fully functional for users.

Recommendations for Next Steps:

1. **User Features:**
    - Implement Add to Cart functionality, allowing users to select multiple items.
    - Build a Checkout system that calculates the total price and processes orders.
    - Add user order history for tracking past purchases.
2. **Admin Features:**
    - Add reports to monitor sales and user activity.
    - Implement book stock management for better inventory control.
3. **Future Enhancements:**
    - Introduce search and filter options for users to find books by genre, author, or price range.
    - Add a rating and review system for books.
    - Add promo codes for users to apply additional discounts during checkout.
    - Implement time-limited discounts to encourage purchases.

4.0 CONCLUSION

Through this project, we gained valuable insights and hands-on experience in using Java EE, particularly its components like Enterprise, WAR, and EJB. One key takeaway was the use of JAR files for shared libraries, which was a new and interesting concept for us. Unlike traditional projects where all libraries are contained within the same project file, this approach allowed us to import shared libraries from external project files, simplifying the management of dependencies.

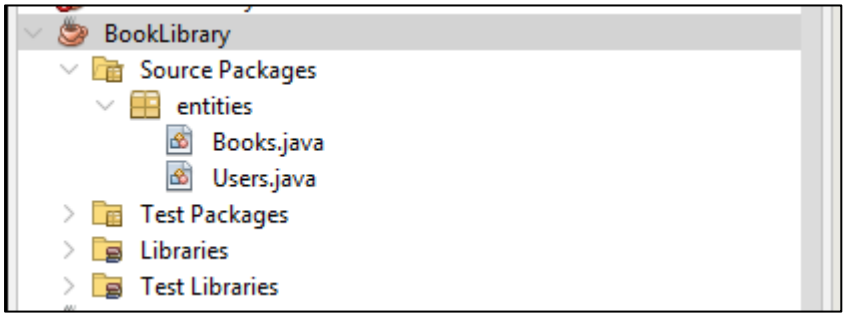
Additionally, we learned that connecting Java to a database can be significantly more challenging compared to other programming languages like PHP and ASP.NET. This challenge was consistent across groups, as many encountered similar issues related to persistence and database integration. It highlighted the complexity of database connectivity in Java EE and gave us a deeper understanding of its nuances.

This project tested our patience and problem-solving skills, as errors were frequent and sometimes puzzling. There were instances where reverting to the original code resolved issues without us fully understanding what went wrong. These experiences underscored the importance of careful debugging and maintaining a methodical approach when troubleshooting.

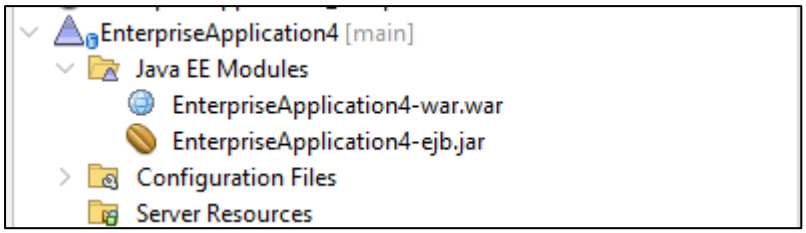
Overall, this project was a rewarding learning journey, teaching us not only technical skills but also resilience and adaptability in the face of challenges.

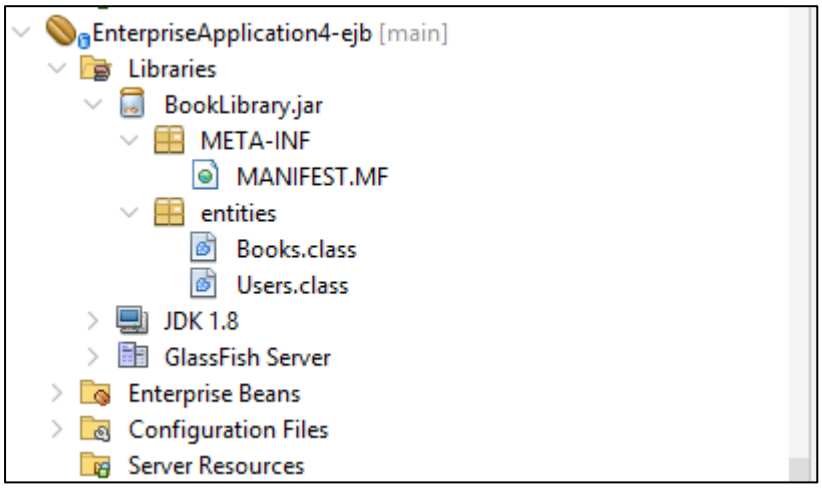
5.0 APPENDIX

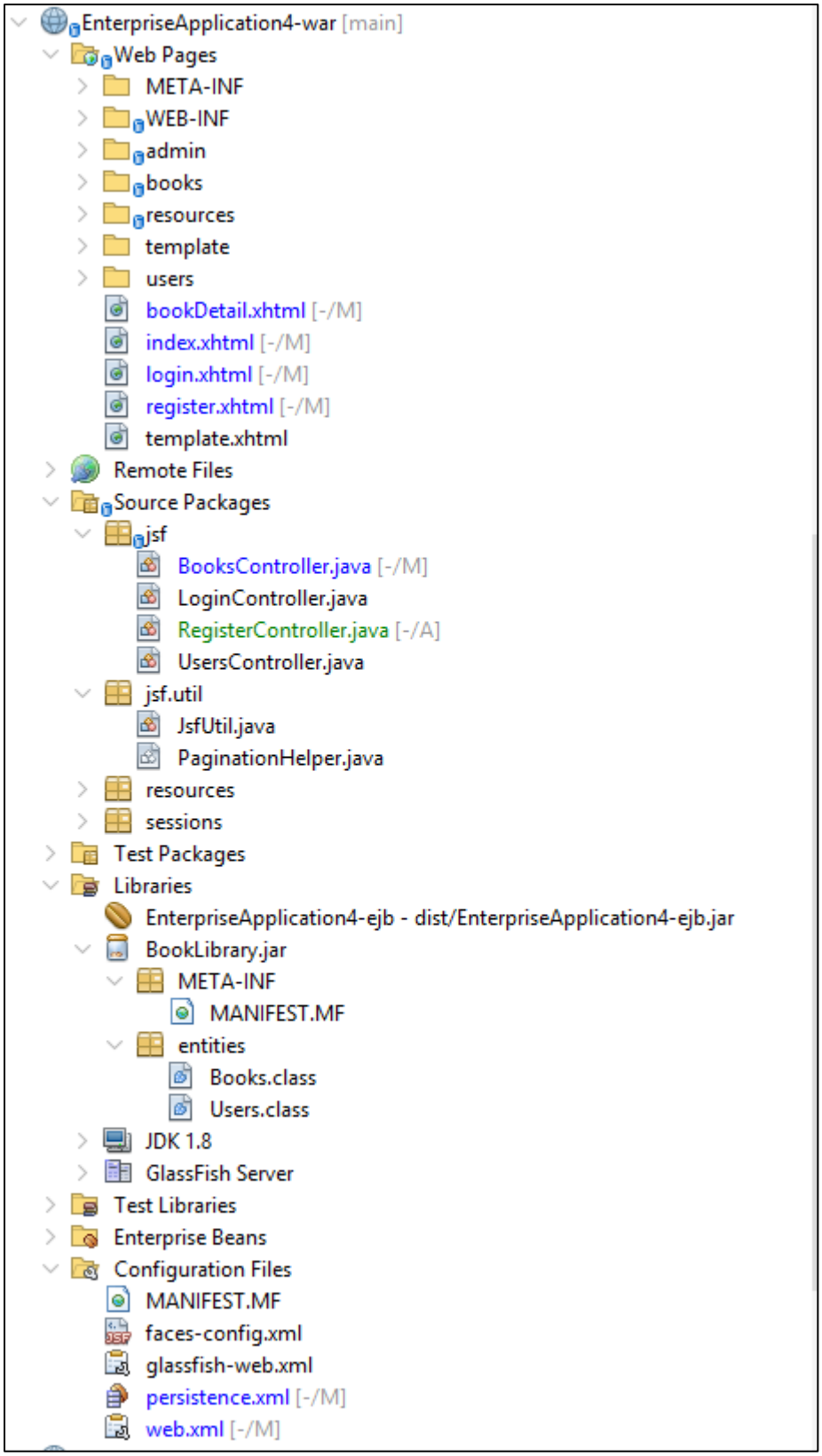
Project: BookLibrary



Project: EnterpriseApplication4

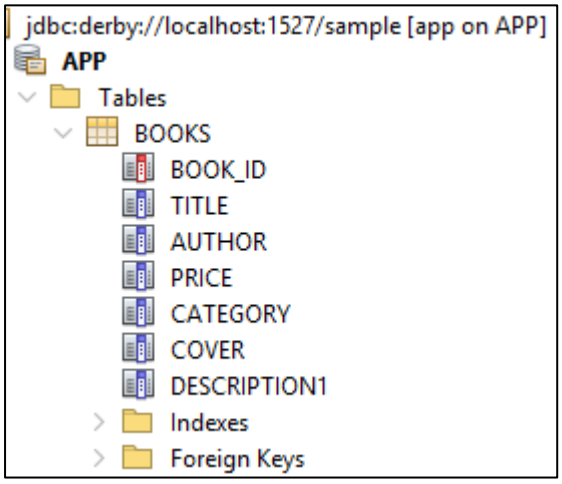


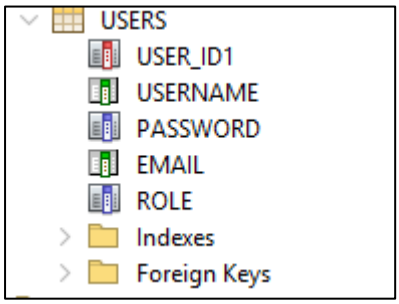



EnterpriseApplication4-war [main]
Web Pages
META-INF
WEB-INF
admin
books
resources
template
users
bookDetail.xhtml [-/M]
index.xhtml [-/M]
login.xhtml [-/M]
register.xhtml [-/M]
template.xhtml
Remote Files
Source Packages
jsf
BooksController.java [-/M]
LoginController.java
RegisterController.java [-/A]
UsersController.java
jsf.util
JsfUtil.java
PaginationHelper.java
resources
sessions
Test Packages
Libraries
EnterpriseApplication4-ejb - dist/EnterpriseApplication4-ejb.jar
BookLibrary.jar
META-INF
MANIFEST.MF
entities
Books.class
Users.class
JDK 1.8
GlassFish Server
Test Libraries
Enterprise Beans
Configuration Files
MANIFEST.MF
faces-config.xml
glassfish-web.xml
persistence.xml [-/M]
web.xml [-/M]

Java DB

Database Name: sample





6.0 REFERENCES

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