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INTRODUCTION

1. INTRODUCTION

- The **Online Bookstore System** is a simple and efficient software solution designed to manage and sell books through a digital platform.
- It provides a smooth experience for both **admin** and **customers**, allowing them to interact through one centralized system.
- The system allows the **admin** to add, update, and manage book listings, including details like book title, author, category, price, description, and book cover images.
- This makes it easier to organize and maintain the entire book collection.
- Users can easily browse through all available books and use powerful **search and filter options**, such as category, author, and price range, to quickly find the books they need.
- The system ensures a fast, simple, and user-friendly book selection experience.
- Customers can view book details, add items to the cart, place orders, and track their purchases through the user panel.
- The system also includes features for handling inquiries, order management.
- The **admin panel** helps the administrator manage books, orders, users, and categories, improving overall efficiency and reducing manual work.
- By automating these processes, the Online Bookstore System reduces errors, saves time, and improves both store management and customer satisfaction.
- This project aims to offer a **secure, reliable, and easy-to-use platform** for buying and managing books online, suitable for both small bookstores and large digital book-selling businesses.

2.

Proposed System

2.1 Scope

1. Book Management

- Admin can add, update, or remove books from the system.
- Details like title, author, category, price, description, and images can be managed easily.

2. User-Friendly Browsing

- Customers can search and filter books by category, author, or price.
- Helps users quickly find the books they want.

3. Shopping and Orders

- Users can view book details, add books to cart, and place orders online.
- Customers can track their orders from the system.

4. Admin Control Panel

- Admin can manage books, users, categories, group, city, feedback and orders in one place.
- Makes store management fast and organized.

5. Automation and Efficiency

- Reduces manual work and errors by automating tasks.
- Saves time and improves customer satisfaction.

6. Scalability

- Can be used by small bookstores or large online book stores.
- Secure and reliable for handling multiple users and orders.

7. Customer Support

- System can handle inquiries or messages from customers efficiently.

2.2 Objectives

1. Simplify Book Management for Admin

- Allow the admin to easily add, update, or delete books.
- Manage all book details like title, author, category, price, description, and images from one place.
- Reduce manual work and errors in maintaining the book collection.

2. Provide a Smooth Shopping Experience for Customers

- Let users browse books easily with search and filter options.
- Customers can view book details, add books to cart, and place orders online.
- Enable customers to track their orders and manage their account.

3. Improve Efficiency and Automation

- Automate repetitive tasks like order processing and inventory management.
- Save time for both admin and customers.
- Reduce mistakes caused by manual handling.

4. Enhance Customer Satisfaction

- Offer a fast, secure, and user-friendly platform.
- Make it easy to find, order, and receive books.
- Handle customer inquiries efficiently.

5. Support Business Growth

- Suitable for small bookstores and large online book stores.
- Allow scalability for adding more books, users, and categories.
- Enable admins to manage the store more effectively as it grows.

2.3 Constraints

2.3.1 H/W (Hardware) Constraints

Hardware constraints refer to the physical components of the system that limit how the software can run efficiently. For the Online Bookstore System, the possible hardware constraints are:

1. Server Requirements

- The server hosting the system must have enough storage and memory to handle book data, images, and user requests.
- Example: Minimum 8 GB RAM and 500 GB storage for smooth performance.

2. Client Device Requirements

- Users (customers/admin) should access the system from devices that support modern web browsers.
- Example: Desktop, laptop with a stable internet connection.

3. Processing Power

- Both server and client devices should have sufficient CPU performance to process requests quickly.
- If the hardware is weak, the system may be slow or unresponsive.

4. Network Dependency

- The system requires a stable internet connection for real-time access, searching books, and placing orders.
- Poor network speed can affect system performance and user experience.

2.3.2 S/W (Software) Constraints

Software constraints refer to the limitations imposed by the software environment needed to run the system. For the Online Bookstore System, the constraints are:

1. Operating System Compatibility

- The system must run on servers with supported OS like Windows Server or Linux.
- Client devices should support browsers like Chrome, Firefox, Edge, or Safari.

2. Database Requirements

- The system relies on a database (like SQL Server, MySQL, or PostgreSQL) to store book and user data.
- Database size, structure, and query efficiency can limit system performance if not properly managed.

3. Browser Compatibility

- Web application must be tested to work correctly on all modern browsers.
- Older browsers may not support some features like responsive design or dynamic scripts.

4. Security Software

- Proper firewall and antivirus software are needed to prevent unauthorized access.
- Security constraints may limit some system actions to protect sensitive data (like user credentials and payment info).

5. Software Dependencies

- The system may require additional software or frameworks like .NET, Angular, or PHP depending on the technology used.
- Incompatibility or missing dependencies can prevent the system from running properly.

2.4 Advantages

1. Easy Book Management

- Admin can add, update, or remove books quickly without manual record-keeping.
- Reduces errors in maintaining the book collection.

2. Convenient for Customers

- Users can search, filter, and browse books easily.
- Books can be purchased from anywhere, anytime using the web.

3. Time-Saving and Efficient

- Automation of order processing and inventory management saves time for both admin and customers.
- Reduces repetitive manual tasks.

4. Enhanced Customer Satisfaction

- Fast, secure, and user-friendly platform ensures a smooth shopping experience.
- Features like cart, order tracking, and home delivery improve convenience.

5. Scalable and Flexible

- Can be used by small bookstores or large online shops.
- Supports adding new books, users, and categories easily.

6. Better Business Control

- Admin panel allows managing books, users, orders, categories, groups, cities, and feedback in one place.
- Helps in better reporting, auditing, and store management.

7. Customer Support and Communication

- Handles customer inquiries and feedback efficiently.
- Email notifications and order updates improve communication.

2.5 Limitations

1. Internet Dependency

- System requires a stable internet connection to access and use.
- Poor connectivity may slow down or prevent access.

2. Initial Setup Cost

- Setting up the system may require hardware, software, and server costs.

3. Technical Knowledge Required

- Admin needs basic computer and software knowledge to manage the system efficiently.

4. Browser and Device Compatibility

- Some older browsers or devices may not support all features properly.

5. Limited Offline Functionality

- Cannot perform tasks like order placement or inventory management without internet.

6. Security Risks

- As with any online system, there is a risk of hacking or data breaches if security measures are weak.

2.6 Project Modules

ADMIN:

- **Login:** The login module is designed for the admin. Only authorized admin users can access the admin panel. Admin can log in to the Online Book Store Management System using their registered credentials.
- **Dashboard:** In this section, the admin can view the overall system summary including:
 - User management
 - Book management
 - Category management
 - City management
 - Order management
 - Payment overview
 - Feedback overview
- **Book Management:** In this section, the admin can add, update, delete, or view books. Admin can manage details such as title, author, category, price, description, stock, and images.
- **Category Management:** In this section, the admin can add, update, delete, or search book categories. This helps in organizing books under proper categories.
- **User Management:** In this section, the admin can add, delete, update, and search user records. Admin can also manage user groups (admin/user).
- **Order Management:** In this section, the admin can view all orders placed by customers. Admin can update the delivery status, track order details, and manage invoices.
- **Feedback Management:** In this section, the admin can view customer feedback and ratings given for books or orders. Admin can analyze feedback to improve the service.

USER:

- **Browse Books:** Users can explore the website and view available books by categories, authors, and filters.
- **Registration:** The registration module is for new users visiting the website. Users must register by providing their personal details to access full features like placing orders and managing their cart.
- **Login:** The login module is designed for registered users. After logging in, users can browse books, add items to the cart, and place orders.
- **Cart Management:** In this section, users can add books to their shopping cart, update quantity, or remove books from the cart before placing an order.
- **Book Orders:** Users can place orders for selected books. They can track order status, view history, and download invoices.
- **Payment:** Users can make secure online or cash-on-delivery payments for their orders. Payment status and method are recorded in the system.
- **Feedback :** Users can give feedback or ratings for purchased books or completed orders.
- **Logout:** Users can securely log out of their account from the Online Book Store Management System.

3

Environment Specification

3.1 Hardware and Software Requirements

➤ Hardware Requirements :-

Processor	Intel Core i5
RAM	4 GB
Hard Disk	51.4 GB
Disk Space	118 GB Minimum

➤ Software Requirements :-

Operating System	Microsoft Windows 11
Frontend	NetBean-26
Backend	NetBean-26
DataBase	MySQL v- 8.0.43
Server	Payara Server
Browser	Chrome,Edge,Firefox

3.2 Development Tools

The Online Bookstore System was developed using a combination of frontend, backend, and database tools. These tools helped to build a secure, scalable, and efficient web application. The following development tools and technologies were used:

1. Integrated Development Environment (IDE)

NetBeans IDE



- The entire project (frontend + backend) was developed using NetBeans, a powerful Java-based IDE.
- NetBeans provides features such as code completion, debugging, project management, and integration with application servers.
- It supports Java EE technologies like JSF, EJB, and JPA, making it suitable for enterprise-level applications.

2. Frontend Technologies

JSF (JavaServer Faces)

- JSF was used to create the user interface for both customer and admin modules.
- Provides reusable components for forms, buttons, tables, and input fields.
- Helps create a clean MVC-based structure, making the UI more organized.
- Supports backing beans for connecting UI with backend logic.

3. Backend Technologies

EJB (Enterprise JavaBeans)

- EJB was used for handling business logic of the application.
- Useful for tasks like:
- Processing orders
- Handling user authentication
- Managing books and categories
- Managing cart and feedback
- Provides security, transaction management, and scalability.

RESTful Web Services (JAX-RS)

- REST APIs were created to handle communication between frontend and backend.
- These APIs support operations like:
- Fetching book details
- Adding items to cart
- Placing orders
- Retrieving feedback and user data
- Provides lightweight and fast communication using JSON.

4. Database Technology

MySQL Database



- MySQL was used as the main database to store all application data such as:
- Books
- Users
- Categories
- Orders
- Order items
- Feedback
- MySQL Workbench was used to design and manage the database.

JPA (Java Persistence API)

- JPA was used for Object–Relational Mapping (ORM).
- Entities were created to map Java classes to database tables.
- Simplifies database operations like insert, update, delete, and select.
- Makes the data layer clean and easy to maintain.

5. Application Server

GlassFish / WildFly (if used)



- The project can be deployed on an enterprise application server like GlassFish or WildFly.
- Supports Java EE technologies such as EJB, JSF, and JPA.

6. API Testing Tools

Postman



- Used to test REST APIs for correct request-response handling.

4

System Planning

4.1 Feasibility Study

Feasibility study evaluates whether the Online book store system is practical and possible to develop. It includes several dimensions:

1. Technical Feasibility

- Checks if the required technology (JSF, EJB, REST, Client, MySQL, NetBeans) is available.
- Confirms that your team can develop the system with existing tools.

2. Operational Feasibility

- Checks if users (admin, customers) can use the system easily.
- Confirms that the system solves the real problem (bookstore automation).

3. Economic Feasibility

- Analyzes cost vs. benefits.
- Cheaper than maintaining manual records.
- Helps increase sales and customer satisfaction.

4. Time Feasibility

- Confirms that the project can be completed within the available time.

4.2 Software Engineering Model

For this project, the **Iterative Waterfall Model** (or Modified Waterfall) is suitable.

Why Iterative Waterfall?

- Requirements were clear from the beginning.
- Structured phase-by-phase development.

Phases Used :-

1. Requirement Analysis

- Gathering all requirements for the Book Store System.
- Understanding user groups, workflows, book management needs, and client-server interactions.

2. System Design

- Designing the UI structure for JSF pages.
- Creating ER Diagrams for the MySQL database.
- Preparing Class Diagrams for EJB and JPA entities.
- Designing RESTful API structure.

3. Implementation

- Developing front-end using JSF.
- Writing business logic using EJB.
- Building REST API services.
- Creating entities using JPA.
- Using NetBeans IDE for development.
- Integrating the system with MySQL database.

4. Testing

- Performing Unit Testing of EJB classes.
- Testing REST APIs using tools.
- Manual testing of JSF pages and workflows.
- Fixing issues and refining modules.

5. Deployment

- Deploying the application on GlassFish/Payara Server.
- Configuring database resources and application settings.

6. Maintenance

- Fixing bugs after deployment.
- Improving system efficiency and adding additional features.
- Updating database or UI based on feedback.

4.3 Risk Analysis

This section lists the possible risks during the project and how you will handle them.

Risk	Type	Impact	Mitigation (Solution / Preventive Action)
JSF / EJB configuration errors	Technical Risk	High	Proper configuration, follow setup documentation, test each module separately
API communication failure between JSF, EJB, REST	Technical Risk	High	Test APIs using Postman, enable logging, ensure correct JSON parsing
Database connection failure (MySQL)	Technical Risk	High	Use stable connection pool, add error handling, monitor DB server status
Users not understanding the UI	Operational Risk	Medium	Create simple UI, add tooltips, provide user instructions
Miscommunication between developers	Operational Risk	Medium	Conduct regular meetings, maintain documentation, use project tracking tools
Data leakage (sensitive user/book/order data)	Security Risk	High	Apply HTTPS, secure API endpoints, restrict admin/user privileges
SQL Injection attacks	Security Risk	High	Use prepared statements, JPA parameter binding, validate inputs
Delay in development or testing	Schedule Risk	Medium	Weekly progress review, assign tasks clearly, maintain timeline
Team member absence	Schedule Risk	Medium	Distribute responsibilities, maintain documentation so others can continue work
Lack of tools or required hardware	Financial/Resource Risk	Medium	Use open-source tools (NetBeans, MySQL), ensure backups, request tools early

4.4 Project Table

4.4.1 Task Dependency

Task	Depends on
Requirement Analysis	-
Designing	Requirements
Database Creation	Design
Backend Development	Database
Frontend Pages	Backend APIs
Testing	Backend + Frontend
Deployment	Testing

4.4.2 Timeline Chart

Task	Week 1	Week 2	Week 3	Week 4	Week 5
Requirements	█				
Design		█			
Database			█		
Backend Dev			█		
Frontend Dev				█	
Testing					█

4.4.3 Project Table

Task	Description	Start Date	End Date	Status
Requirement Collection	Understanding features	11-11-2025	15-11-2025	Completed
UI Design	Designing JSF pages	15-11-2025	22-11-2025	Completed
Backend Dev	EJB + REST APIs	23-11-2025	06-12-2025	In Progress
Testing	Checking errors	07-12-2025	14-12-2025	Pending

5

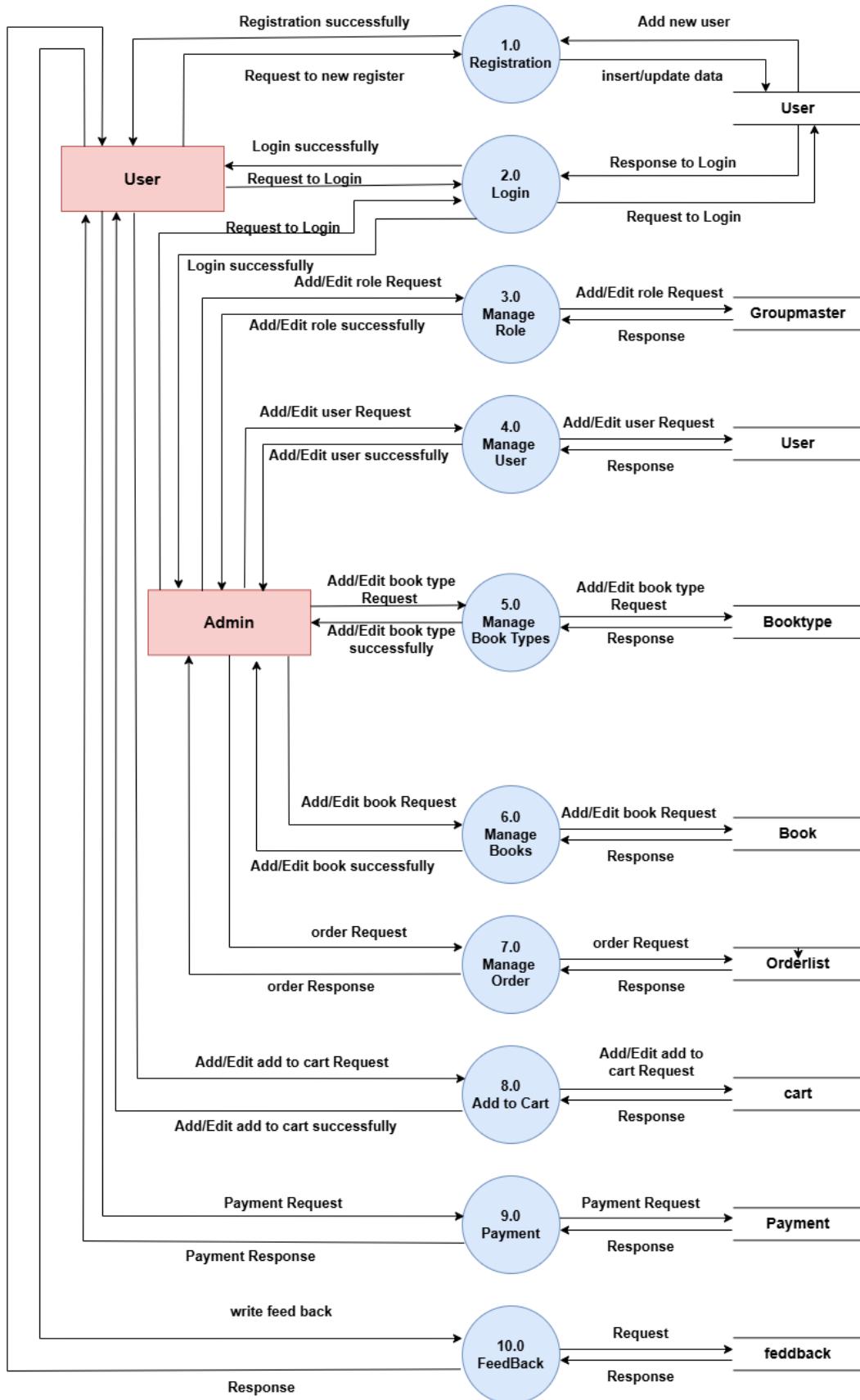
Detail Planning

5.1 Data Flow Diagram

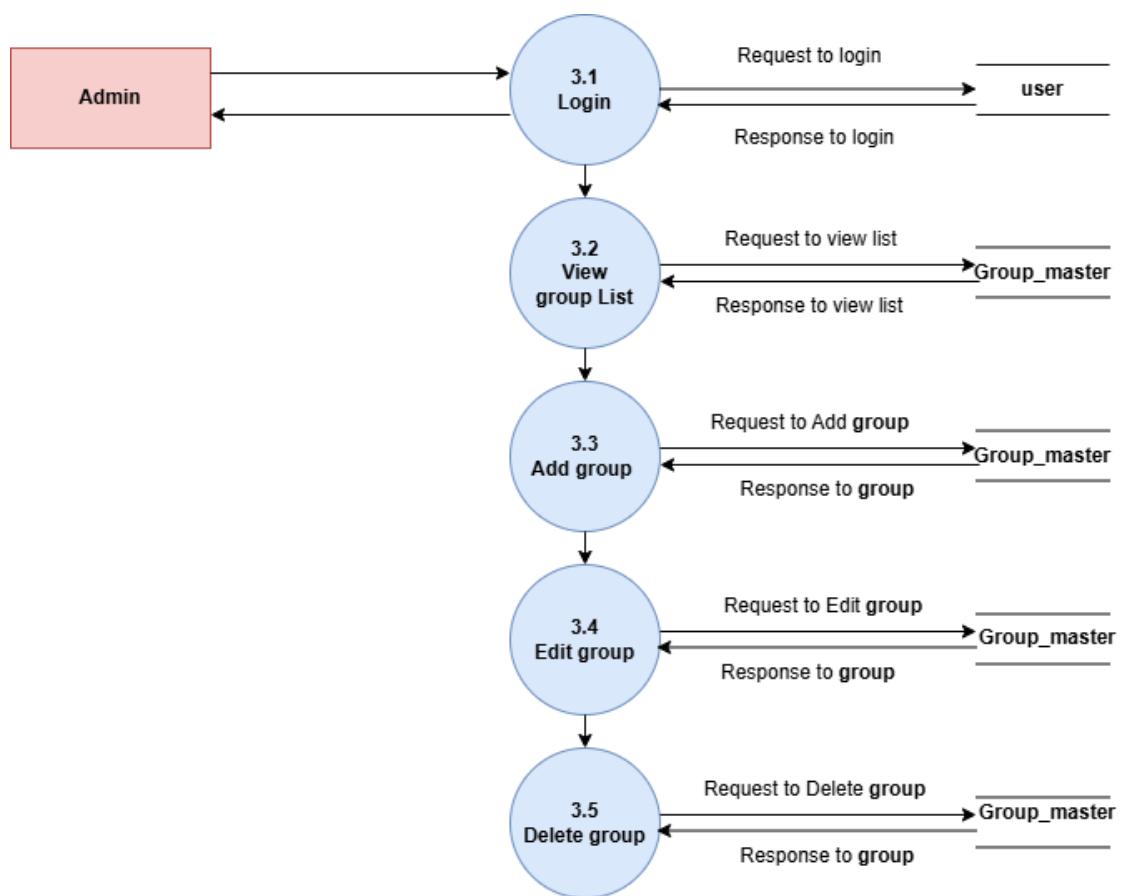
- Online Book store: **Zero level DFD**



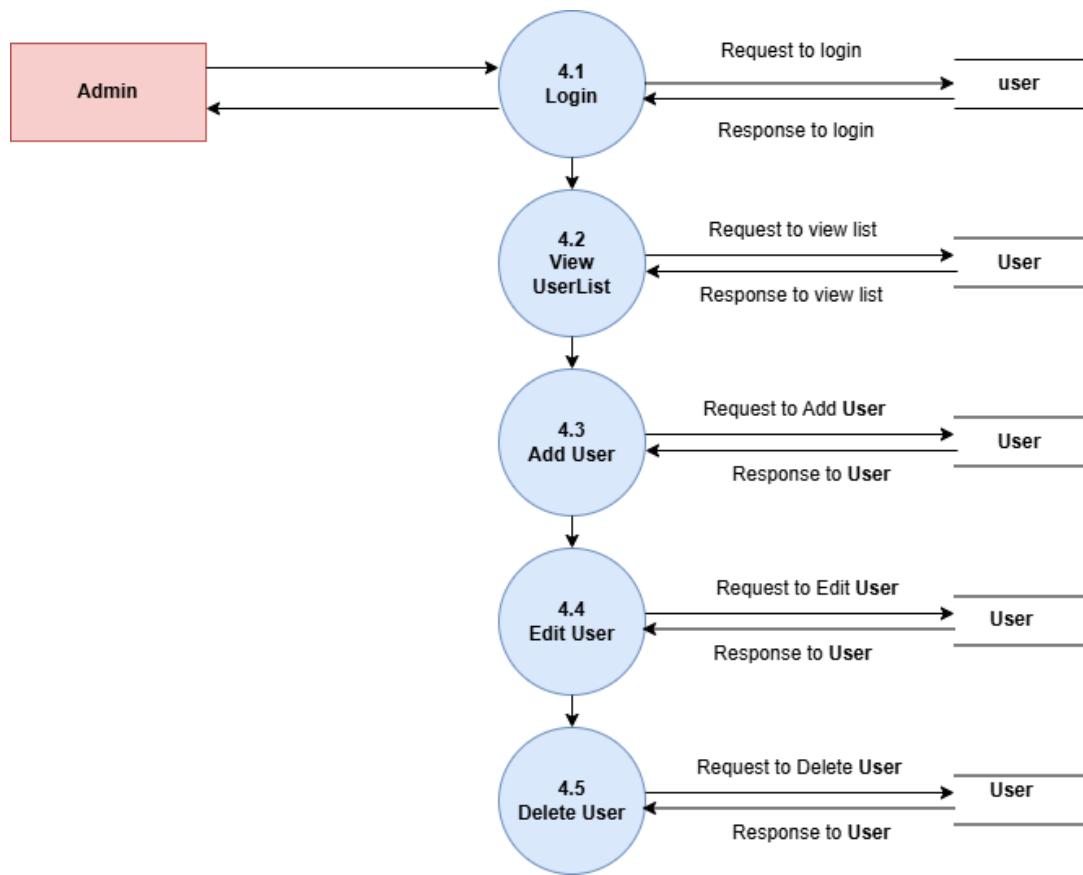
➤ One level DFD



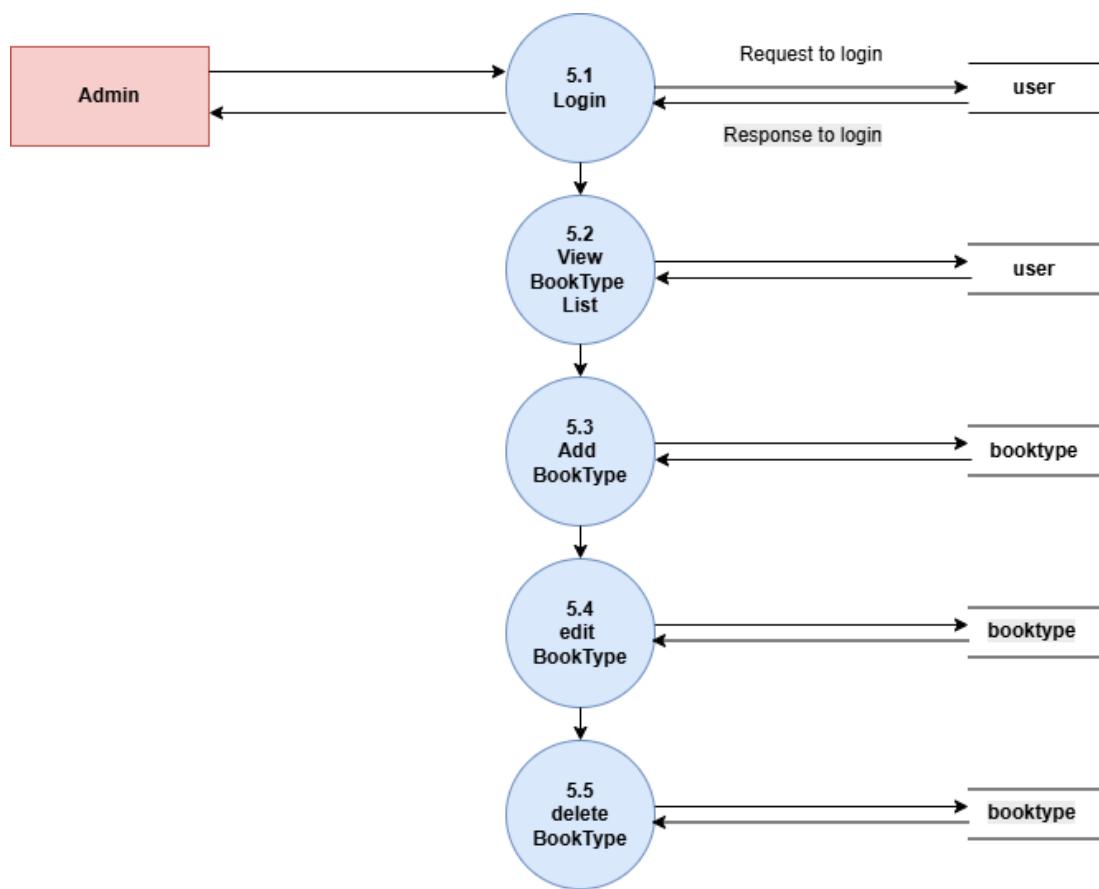
➤ Admin 2 level Groupmaster



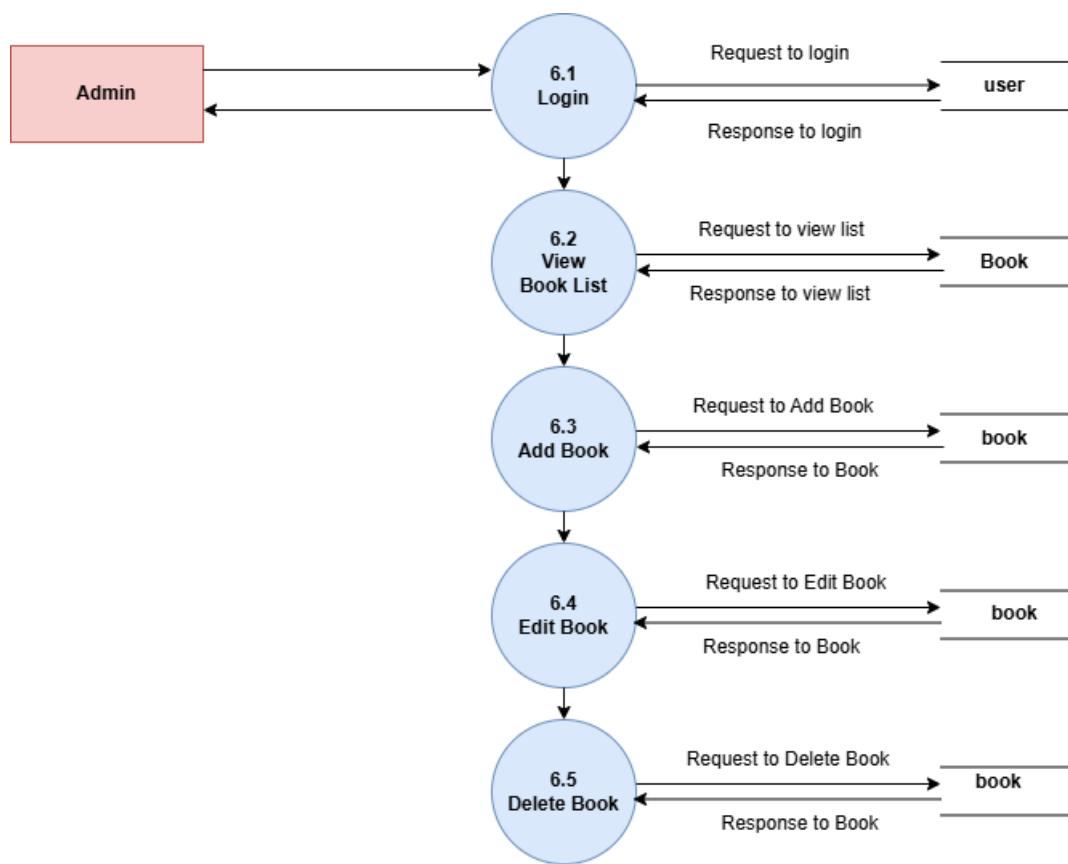
➤ Admin : 2 level User Management



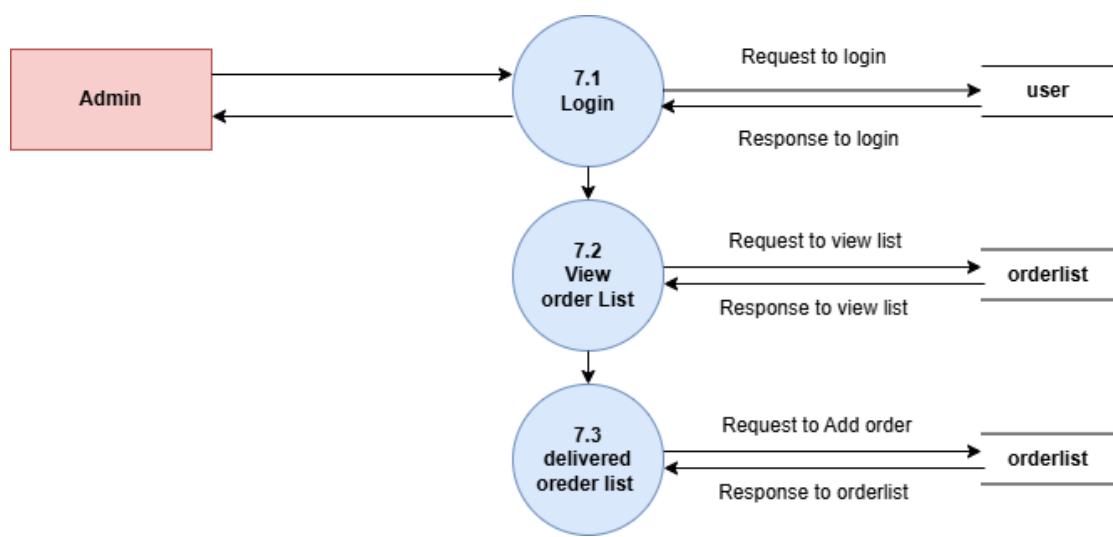
➤ Admin : 2 level Book Type Management



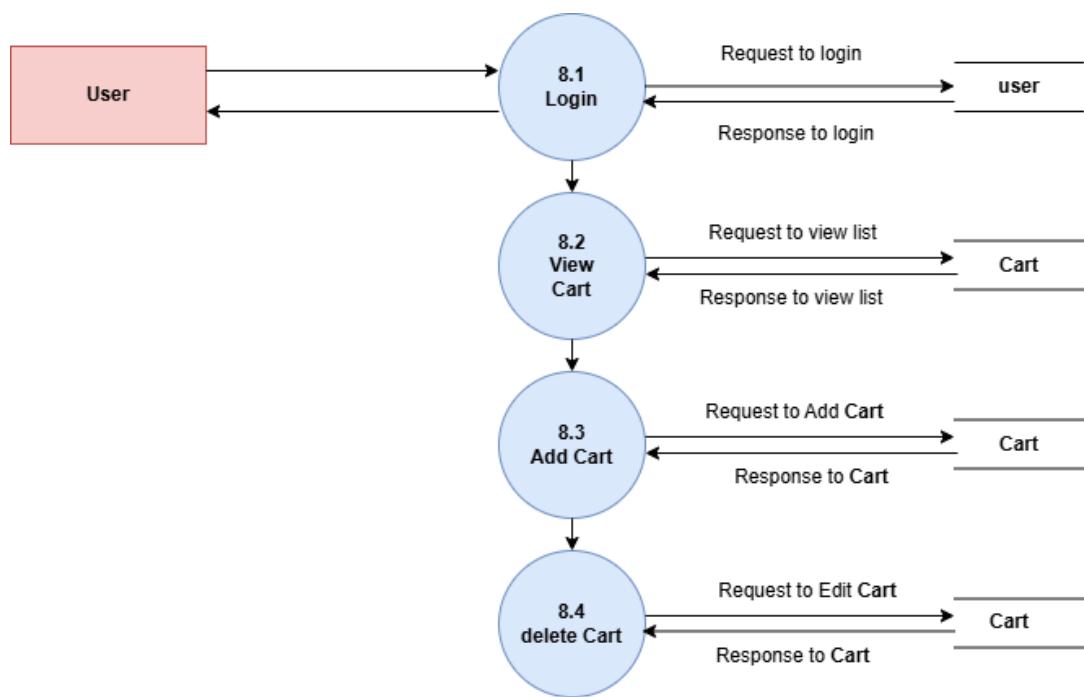
➤ Admin : 2 level Books Management



➤ Admin : 2 level Order Management

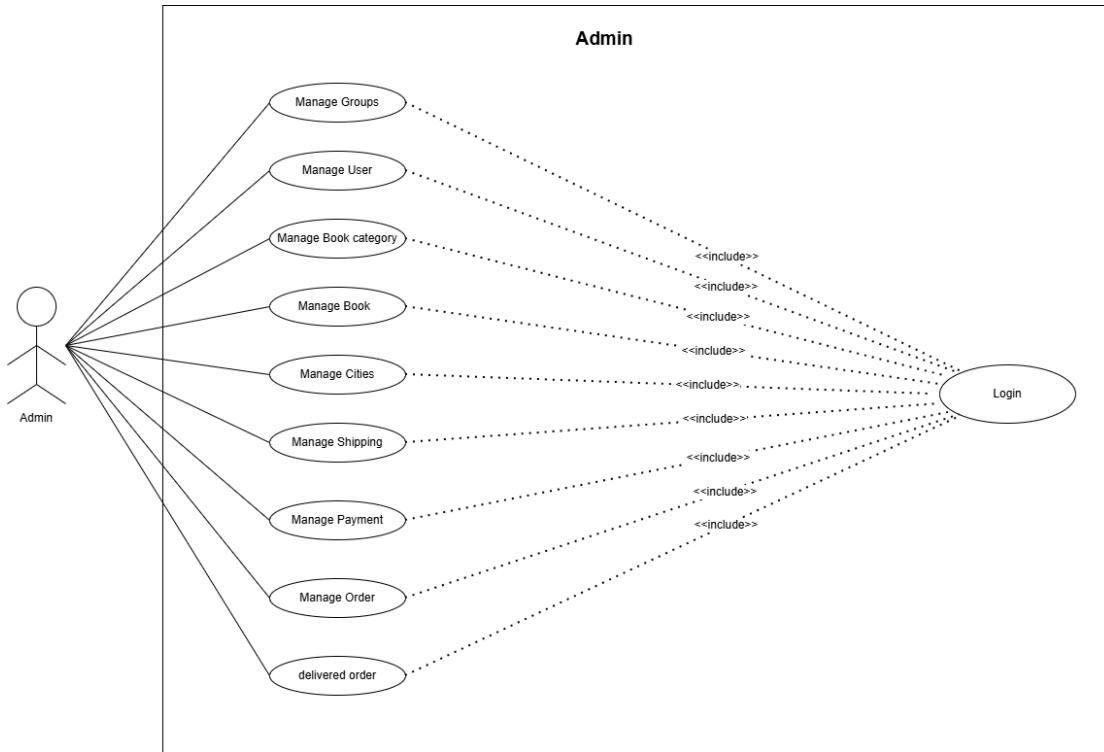


➤ User: 2 level Add to cart Management

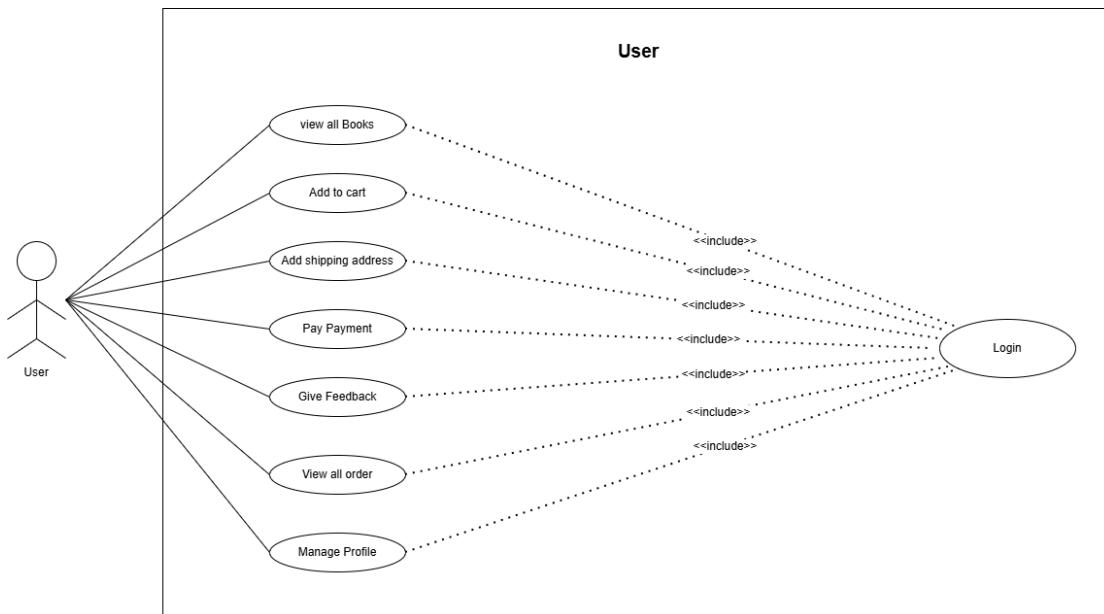


5.2 UML Use Case Diagram

➤ Admin

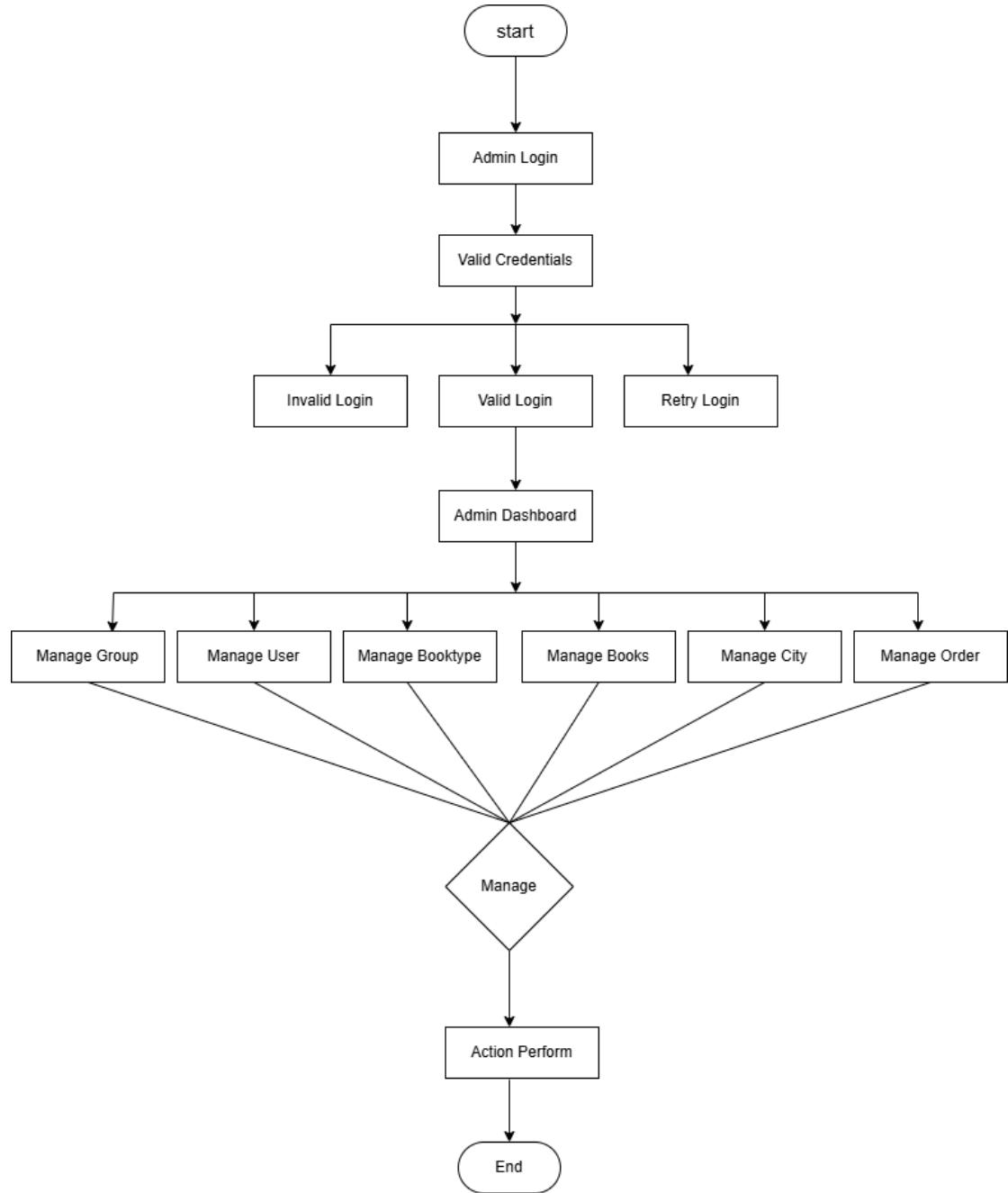


➤ User

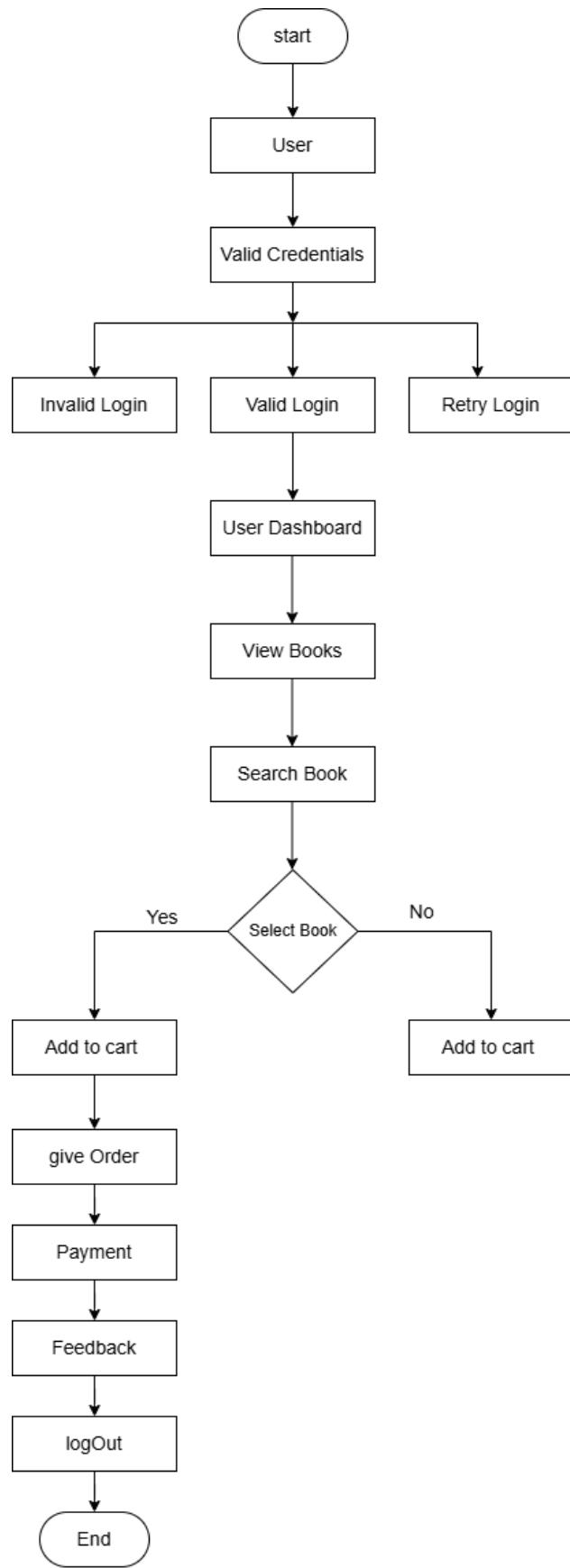


5.2 UML Activity Diagram

➤ Admin

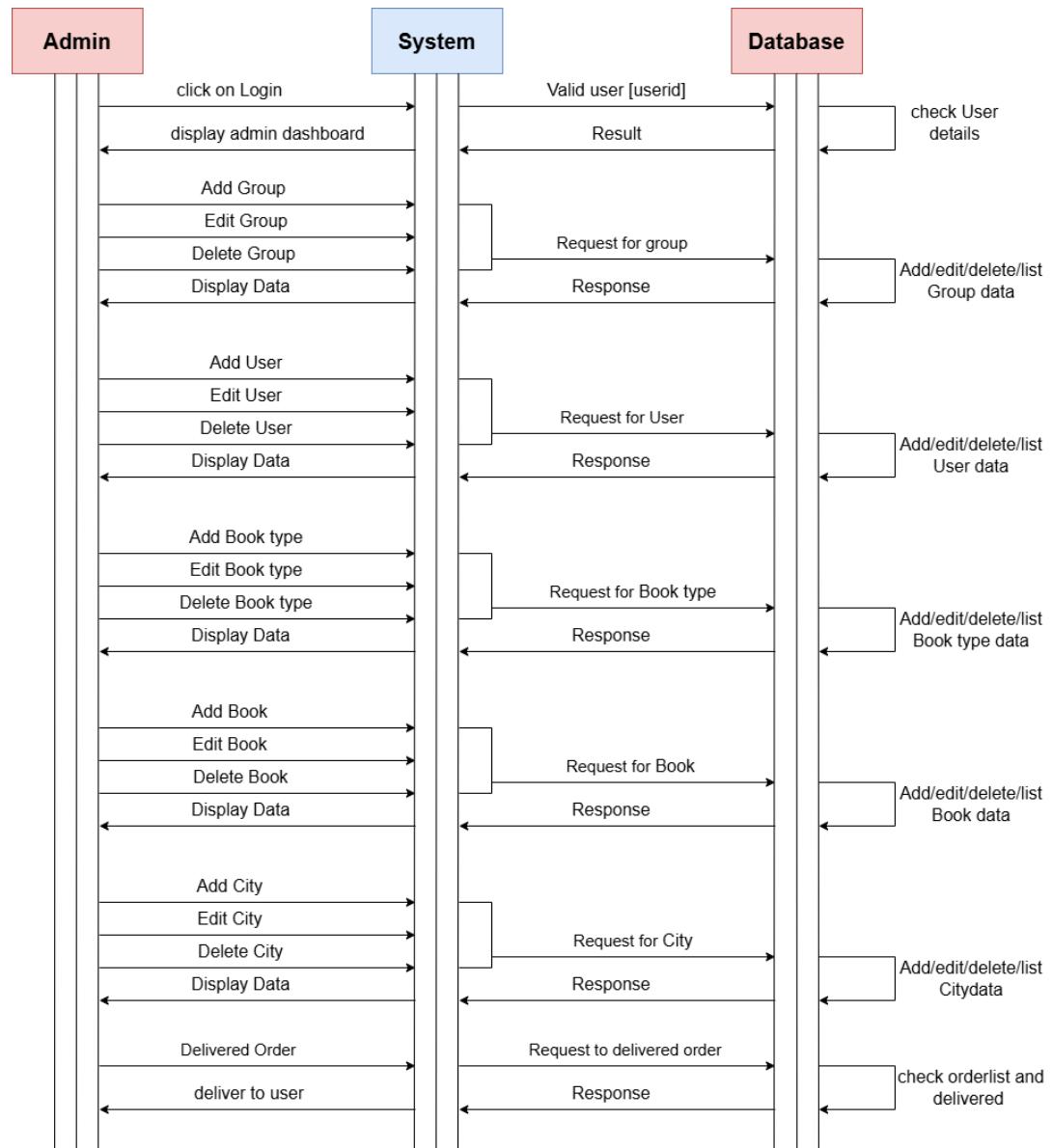


➤ User

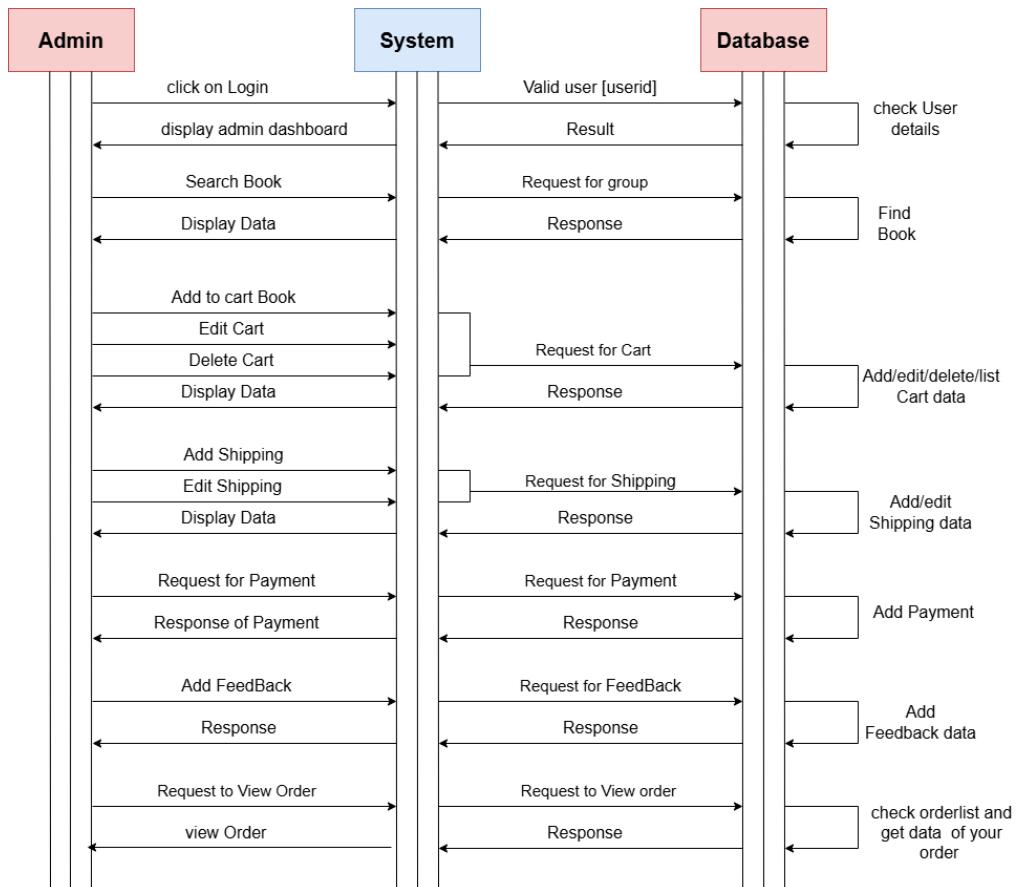


5.3 Sequence Diagram

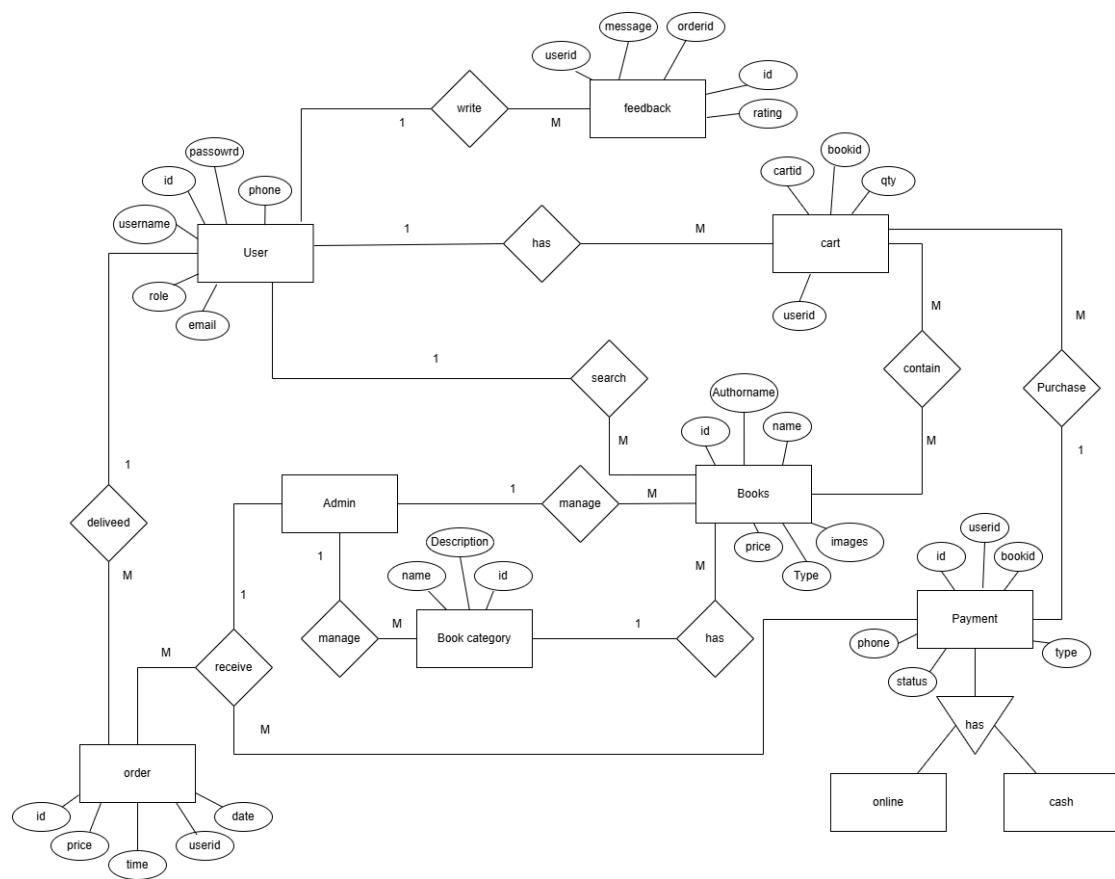
➤ Admin



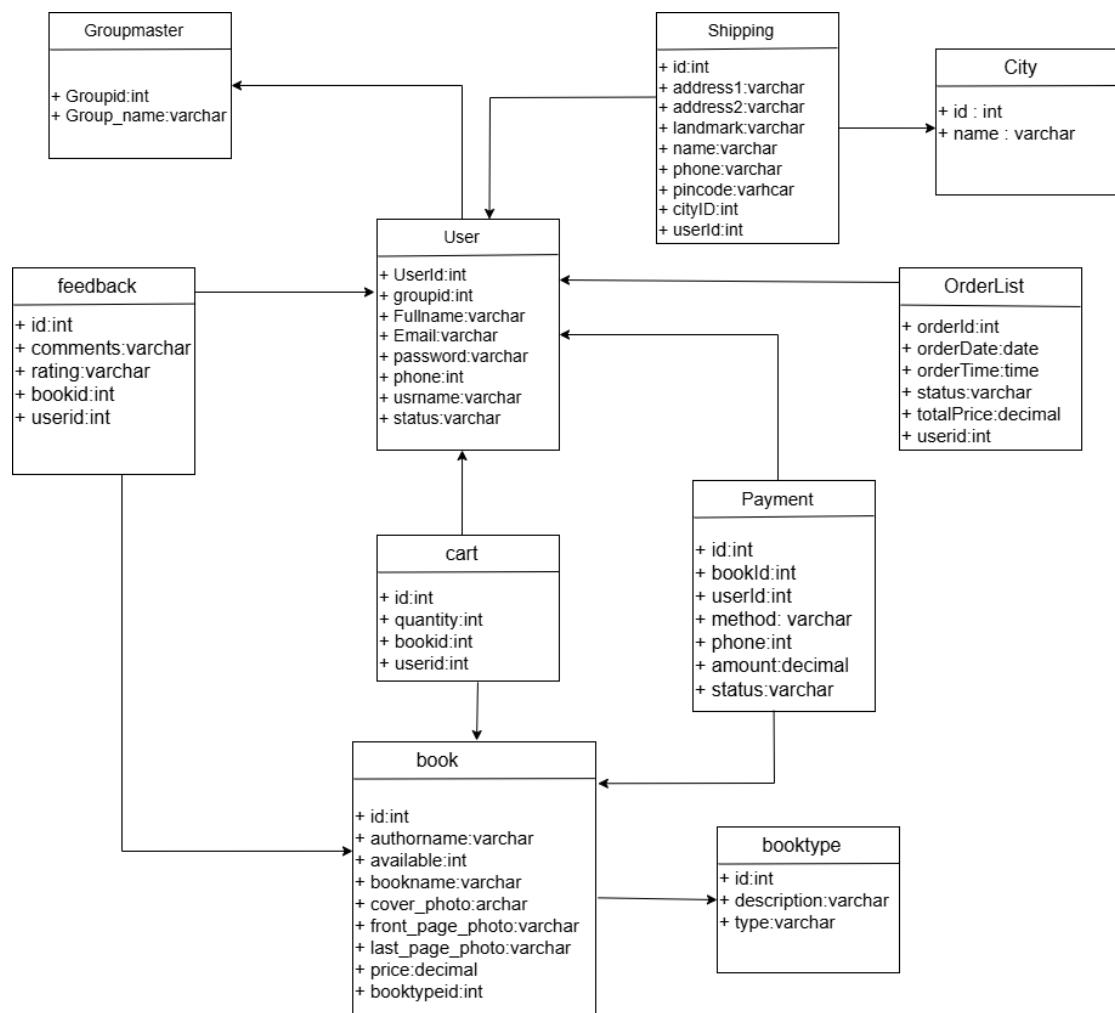
➤ User



5.4 ER Diagram



5.6 Table Relation



5.7 Data Dictionary

➤ **Group_master**

Column_name	Data Type	Key	Length
Group_id	int	Primary key	-
Group_name	varchar	-	255
Name	varchar	-	255

➤ **User:-**

Column_name	Data Type	Constraints	Length
id	int	Primary key	-
Group_id	int	Foreign key	-
Fullname	varchar	-	255
phone	int	-	15
Username	varchar	-	255
Password	varchar	-	255
Email	varchar	-	255
Status	varchar	-	255

➤ **BookType:-**

Column_name	Data Type	Constraints	Length
id	int	Primary key	-
Type	varchar	-	255
Description	varchar	-	255

➤ Book

Column_name	Data Type	Constraints	Length
id	int	Primary key	-
BooktypeId	int	Foreign key	-
Bookname	varchar	-	255
Authorname	varchar	-	255
Price	decimal	-	38,0
Available	int	-	-
Cover_photo	varchar	-	255
front_page_photo	varchar	-	255
last_page_photo	varchar	-	255

➤ Cart

Column_name	Data Type	Constraints	Length
id	int	Primary key	-
Userid	int	Foreign key	-
Bookid	int	Foreign key	-
Quantity	int	-	-

➤ City

Column_name	Data Type	Constraints	Length
id	int	Primary key	-
Name	varchar		255

➤ Orderlist:-

Column_name	Data Type	Constraints	Length
OrderId	int	Primary key	-
UserId	int	Foreign key	-
bookId	int	Foreign key	-
paymentId	int	Foreign key	-
Time	time	-	-
date	date	-	-
Status	varchar	-	255
Total_price	decimal	-	38,0

➤ Shipping

Column_name	Data Type	Constraints	Length
id	int	Primary key	-
Userid	int	Foreign key	-
cityid	int	Foreign key	-
Name	varchar	-	255
phone	int	-	10
Address1	varchar	-	255
Address2	varchar	-	255
Landmark	vachar	-	255
Pincode	int	-	10

➤ **Payment:-**

Column_name	Data Type	Constraints	Length
id	int	Primary key	-
Bookid	int	Foreign key	-
Userid	int	Foreign key	-
Paymentmethod	varchar	-	255
Phone	int	-	10
Amount	decimal		10,2
Status	boolean	-	-

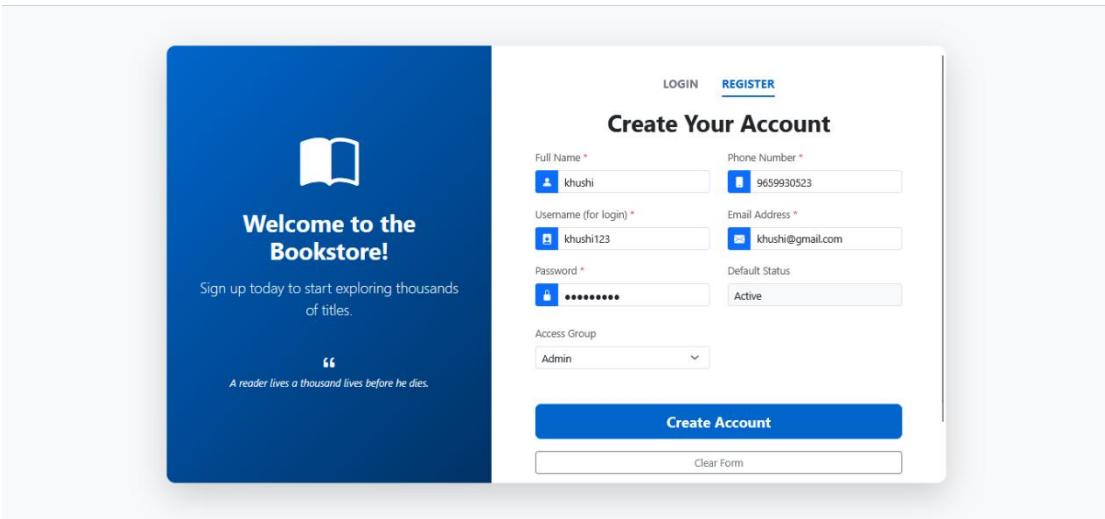
➤ **Feedback**

Column_name	Data Type	Constraints	Length
id	int	Primary key	-
Userid	int	Foreign key	-
Bookid	int	Foreign key	-
Rating	int	-	-
Comments	varchar	-	255

6

Interface Design

➤ Registration



The registration page features a blue header with the text "Welcome to the Bookstore!" and a book icon. Below the header, there's a quote: "A reader lives a thousand lives before he dies." The main form is titled "Create Your Account" and includes fields for Full Name, Phone Number, Username, Email Address, Password, Default Status, and Access Group. A "Create Account" button is at the bottom, and a "Clear Form" link is below it.

Full Name *	Phone Number *
khushi	9659930523

Username (for login) *	Email Address *
khushi123	khushi@gmail.com

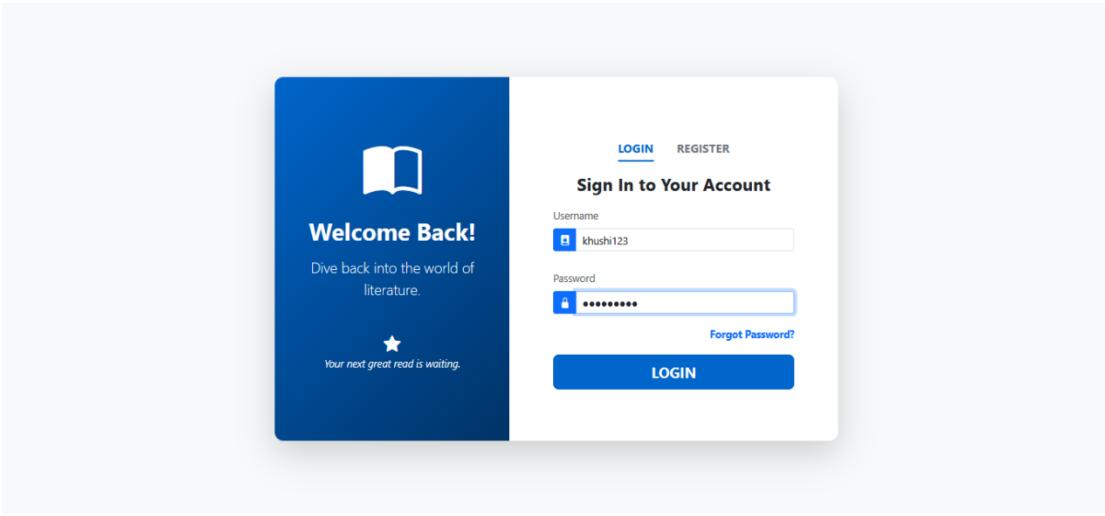
Password *	Default Status
*****	Active

Access Group
Admin

Create Account

[Clear Form](#)

➤ Login



The login page features a blue header with the text "Welcome Back!" and a book icon. Below the header, there's a quote: "Your next great read is waiting." The main form is titled "Sign In to Your Account" and includes fields for Username and Password. A "Forget Password?" link and a "LOGIN" button are at the bottom.

Username
khushi123

Password

[Forget Password?](#)

LOGIN

➤ Admin : Dashboard

Dashboard

- Total Books: 13
- Categories: 10
- Total Users: 3
- Total Orders: 4
- Total Revenue: ₹ 4336.00

➤ Admin : Book Category

ID	Type	Description	Actions
1	MCA	Master of Computer Applications - MCA syllabus books	<input checked="" type="checkbox"/> <input type="checkbox"/>
2	MSc I.C.T	Master of Science in Information and Communication Technology	<input checked="" type="checkbox"/> <input type="checkbox"/>
3	MSc I.T	Master of Science in Information Technology	<input checked="" type="checkbox"/> <input type="checkbox"/>
4	BSc I.T	Bachelor of Science in Information Technology	<input checked="" type="checkbox"/> <input type="checkbox"/>
5	BCA	Bachelor of Computer Applications - BCA syllabus books	<input checked="" type="checkbox"/> <input type="checkbox"/>

Add Book Category

Type: Data Science

Description: Certificate course in Data Science and Analytics

Add Cancel

➤ Admin : Book

BookStore (Admin)

Manage Books

+ Add Book

ID	Book	Author	Category	Price	Stock	Actions
1	C++ Programming for MCA	Bjarne Stroustrup	MCA	₹ 800	10	
2	Java Complete Reference	Herbert Schildt	MCA	₹ 900	12	
3	JSF 2.3 Development	Adam Freeman	MCA	₹ 950	8	
4	JavaScript: The Good Parts	Douglas Crockford	MSc I.C.T	₹ 700	15	
5	Angular Essentials	Marko Gargenta	MSc I.C.T	₹ 850	10	
6	EJB 3 in Action	Venkat Subramaniam	MSc I.C.T	₹ 950	9	
7	Artificial Intelligence: A Modern Approach	Ian Goodfellow	MSc I.T	₹ 1200	5	
8	Machine Learning with Python	Andrew Ng	MSc I.T	₹ 1000	7	
9	C Programming for Beginners	Herbert Schildt	BSc I.T	₹ 600	12	
10	Networking Basics	Nick Morgan	BSc I.T	₹ 650	10	

1 / 2

BookStore (Admin)

Add New Book

Book Name:	<input type="text" value="java"/>	Cover Photo	<input type="file" value="Choose file 50 699.jpg"/>
Author:	<input type="text" value="Herbert Schildt"/>	Front Page Photo	<input type="file" value="Choose file 7 3550.jpg"/>
Price:	<input type="text" value="250"/>	Last Page Photo	<input type="file" value="Choose file 26 625.jpg"/>
Available:	<input type="text" value="5"/>		
Book Type (Category):	<input type="text" value="MSc I.C.T"/>		

Add Book

➤ Admin : Order List

The screenshot shows the 'Pending Orders' section of the admin dashboard. On the left, there's a sidebar with navigation links: Dashboard, Books, Categories, Users, **Orders** (which is highlighted in blue), Shipping, City Management, Group Management, Feedback, and Payment List. At the top right, there are user profile and logout buttons. The main area displays a table with columns: Order ID, User, Date, Time, Total, Status, and Action. There are three rows of data:

Order ID	User	Date	Time	Total	Status	Action
1	meet	12/12/2025	11:58:56	₹3	Pending	<button>Delivered</button>
2	yesha	12/12/2025	12:00:03	₹700	Pending	<button>Delivered</button>
3	yesha	12/12/2025	12:00:03	₹650	Pending	<button>Delivered</button>

At the bottom of the table, there are navigation buttons for sorting and filtering.

➤ Admin : User management

The screenshot shows the 'Manage Users' section of the admin dashboard. On the left, there's a sidebar with navigation links: Dashboard, Books, Categories, **Users** (which is highlighted in blue), Orders, Shipping, City Management, Group Management, Feedback, and Payment List. At the top right, there are user profile and logout buttons. The main area displays a table with columns: ID, Username, Full name, Email, Phone, Group, Active, and Actions. There are three rows of data:

ID	Username	Full name	Email	Phone	Group	Active	Actions
48	khushi	khushi	khushi@gmail.com	9664830149	Admin	Active	
49	yesha	yesha	yesha@gmail.com	4563217890	user	Inactive	
51	meet	meet	meet@gmail.com	9664830149	user	Active	

At the bottom of the table, there are navigation buttons for sorting and filtering.

BookStore (Admin)

Dashboard
Add User

Books

Categories

Users

Orders

Shipping

City Management

Group Management

Feedback

Payment List

Username: yesha

Password: *****

Full Name: yesha udhanawala

Phone: 7536984120

Email: yesha@gmail.com

Group: user

Status: Active

[Save](#) [Cancel](#) [Back to List](#)

➤ Admin : Payment List

BookStore (Admin)

Dashboard
Payment List

Phone:
Payment Method:
User Name:
Book Name:
[Search](#)
[Clear](#)

#	Payment Method	Phone	Amount	Status	User	Book
1	COD	4563217890	₹ 860.00	Paid	yesha	C++ Programming for MCA
2	COD	9664830149	₹ 960	Paid	meet	Java Complete Reference
3	COD	9664830149	₹ 1010	Paid	meet	JSF 2.3 Development
4	Online Payment	9664830149	₹ 33	Paid	meet	HTML , CSS
5	Online Payment	9664830149	₹ 730	Paid	yesha	JavaScript: The Good Parts

[<](#) [1 / 2](#) [>](#)

➤ User : DashBoard

BookStore

Home Books Order About Contact Cart (0) yeha ▾

Discover Your Next Great Read

Explore thousands of books across all genres with fast delivery and unbeatable prices.

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Featured Books

Discover our handpicked selection of bestsellers and must-read titles

C++ Programming for MCA by Bjarne Stroustrup ₹800.00 Add to Cart	Java Complete Reference by Herbert Schildt ₹900.00 Add to Cart	JSF 2.3 Development by Adam Freeman ₹950.00 Add to Cart	JavaScript: The Good Parts by Douglas Crockford ₹700.00 Add to Cart
Angular Essentials by Marko Garganta ₹850.00 Add to Cart	EJB 3 in Action by Venkat Subramaniam ₹950.00 Add to Cart	Artificial Intelligence: A Modern Approach by Ian Goodfellow ₹1,200.00 Add to Cart	Machine Learning with Python by Andrew Ng ₹1,000.00 Add to Cart

[View All Books](#)

Why Choose BookStore?

Fast Delivery
Get your books delivered within 2-3 business days with our reliable shipping partners.

Secure Payment
Multiple payment options including online payment and cash on delivery for your convenience.

24/7 Support
Our customer service team is always ready to help you with any questions or concerns.

➤ User : Book List

BookStore

Home Books Order About Contact  

Book Name Author  

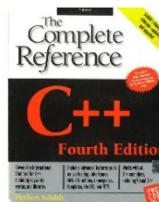
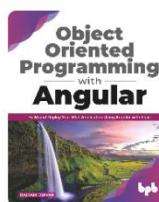
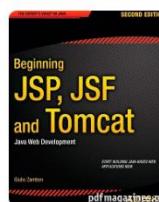
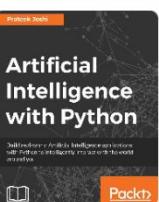
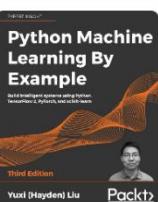
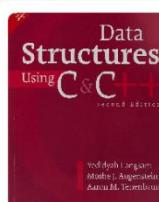
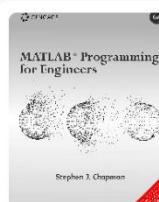
Filters

Search Category

Categories

- All Categories
- MCA
- MSc I.C.T
- MSc I.T
- BSc I.T
- BCA
- Diploma CE
- B.E CSE
- M.E IT
- AI Certificate
- Data Science

[Clear Filter](#)

 C++ Programming f... By Bjarne Stroustrup ₹800 In Stock Add to Cart View	 Java Complete Refer... By Herbert Schildt ₹900 In Stock Add to Cart View	 JSF 2.3 Development By Adam Freeman ₹950 In Stock Add to Cart View	 JavaScript: The Good... By Douglas Crockford ₹700 In Stock Add to Cart View
 Angular Essentials By Marko Gargenta ₹850 In Stock Add to Cart View	 EJB 3 in Action By Venkat Subramaniam ₹950 In Stock Add to Cart View	 Artificial Intelligence with Python By Ian Goodfellow ₹1200 In Stock Add to Cart View	 Machine Learning wi... By Andrew Ng ₹1000 In Stock Add to Cart View
 C Programming for B... By Herbert Schildt ₹600 In Stock Add to Cart View	 Networking Basics By Nick Morgan ₹650 In Stock Add to Cart View	 Java Programming F... By Venkat Subramaniam ₹700 In Stock Add to Cart View	 PHP: The Complete ... By Mosh Hamedani ₹850 In Stock Add to Cart View
 HTML , CSS By illi ₹3 In Stock Add to Cart View			

➤ User : Cart List

The screenshot shows a user's cart with three items:

Book Name	Price	Quantity	Stock Left	Total	Action
Java Complete Reference	₹900	<input type="button" value="-"/> 1 <input type="button" value="+"/>	9	₹900	<button>Delete</button>
JSF 2.3 Development	₹950	<input type="button" value="-"/> 1 <input type="button" value="+"/>	6	₹950	<button>Delete</button>
JavaScript: The Good Parts	₹700	<input type="button" value="-"/> 1 <input type="button" value="+"/>	12	₹700	<button>Delete</button>

Subtotal: ₹2550.0
Delivery Charge: ₹30
Grand Total: ₹2580.0

[Confirm to Proceed](#)

➤ User : shipping Form

The screenshot shows a shipping details form with the following fields filled:

- Full Name *: yesha udhanawala
- Phone *: 753412890
- Address Line 1 *: 7
- Address Line 2: Dimple nagar , parvat patiya
- Landmark: surat
- Pincode *: 351096
- City *: surat

[Save](#)

➤ User : Order List

My Orders

Order	Date	Time	Price	Status
Order 1	11/12/2025	05:01:46	₹ 830	Delivered
Order 2	12/12/2025	12:00:03	₹ 700	Pending
Order 3	12/12/2025	12:00:03	₹ 650	Pending
Order 4	12/12/2025	12:03:52	₹ 33	Pending
Order 5	12/12/2025	12:26:34	₹ 900	Pending
Order 6	12/12/2025	12:26:34	₹ 950	Pending
Order 7	12/12/2025	12:26:34	₹ 700	Pending

➤ User : Invoice Print

Invoice ODR36

Customer Details	
Name:	yehsa
Email:	yehsa@gmail.com
Phone:	4563217890

Book	Author	Price	Delivery Charge	Total
	Douglas Crockford	₹700	₹30	₹700

Payment Details

Method: Online Payment
Amount: ₹700
Status: Paid

Order Info

Date: Fri Dec 12 17:30:03 IST 2025
Time: Fri Dec 12 17:30:03 IST 2025

Total: ₹700

[Print Invoice](#) [Back to Orders](#)

7

System Testing

7. System Testing

➤ Login

Sr no	Description	Input value		Expected Result	Actual Result	Paas/ Fail
		username	password			
1.	Check for validation	john123	john	Redirect to admin dashboard	Redirect to admin dashboard	Pass
2.	Check for validation	John123	Null	Error:password is required.	Error: password is required.	Fail
3.	Check for validation	Null	Null	Error:Both required message	Error:Both required message	Fail

➤ Registration

Sr No.	Description	Input Values	Expected Result	Actual Result	Pass/Fail
1	Check input detail validation	If all fields are filled properly and clicked on sign up button	Redirect to Login Page	Redirect to Login Page	Pass
2	Password validation	Check for password strength. Must contain 1 alphabet, 1 number and 1 special character	Enter Valid Password	Enter Valid Password	Fail
3	Email validation	Check for valid email.	Enter Valid Email	Enter Valid Email	Fail
4	Check for validation	If all details are not filled	Error: Please enter details	Error: Please enter details	Fail

➤ **Book Type**

Sr No.	Description	Input Values	Expected Result	Actual Result	Pass/Fail
1	Check input detail validation	If all fields are filled properly and clicked on save button	Redirect to Show Book type List page	Redirect to Show Book type List Page	Pass
2	Book type name	If null book type name	Error : book type is required.	Error : book type is required.	Fail
3	Description	Check for Description	Enter Description	Enter Description	Pass

➤ **Book**

Sr No.	Description	Input Values	Expected Result	Actual Result	Pass/Fail
1	Check input detail validation	If all fields are filled properly and clicked on save button	Redirect to Show Book List page	Redirect to Show Book List Page	Pass
2	Bookname	If null book type name	Error : book name is required.	Error : book name is required.	Fail
3	authorname	Check for authorname	Enter authorname	Enter authorname	Pass
4.	Price	Check if price in String	Error:enter only numbers	Error:enter only numbers	Fail
5.	available	Check for stock of book	Enter book quantity	Enter book quantity	Pass

8

Future Enhancement

8. Future Enhancement

- **Mobile Application Integration**

A dedicated Android/iOS mobile app can be developed so users can browse and purchase books conveniently from their smartphones.

- **Digital E-Book Support**

The system can be expanded to offer **e-books**, allowing customers to buy and read digital formats directly from the platform.

- **Multi-Language Support**

Adding support for multiple languages (English, Hindi, Tamil, etc.) will make the platform accessible to a wider audience.

- **Customer Chat Support / Chatbot**

A built-in AI chat assistant or helpdesk system can be added to provide instant customer support and resolve queries quickly.

- **Auto Email & SMS Alert System**

Notifications for order confirmation, shipping updates, out-of-stock alerts, and promotional messages can be automated.

- **Cloud Deployment**

Migrating the system to cloud platforms (AWS, Azure, Google Cloud) will ensure better scalability, performance, and reliability.

- **Author Panel (New Enhancement)**

A dedicated author panel can be introduced where authors can:

- Create and manage their own book listings
- Update book details and pricing
- View book sales statistics
- Respond to customer questions
- Upload new book editions or covers
- This will make the system more interactive and useful for authors and publishers.

9

Glossary

9. Glossary

The Online Bookstore System is a web-based platform designed to manage books, users, and orders efficiently. It uses **NetBeans IDE 26** as the primary development tool for both frontend and backend programming. The system interface is built using **JSF (JavaServer Faces)**, which provides reusable components for forms, tables, and user interactions. Business logic is handled through **EJB (Enterprise JavaBeans)**, enabling secure and scalable processing of tasks like authentication, book management, and order handling. Communication between frontend and backend is managed through **RESTful Web Services (JAX-RS)** using JSON. All project data such as books, users, categories, orders, and feedback is stored in a **MySQL 8.0.43 database**, accessed through **JPA (Java Persistence API)** for seamless object-relational mapping. The system runs on **Payara Server**, supporting enterprise Java technologies. Tools like **Postman** are used to test API endpoints. Users can browse, search, and filter books, while admins manage books, categories, users, and orders through the admin panel. The platform supports secure login, cart management, and order tracking. Hardware requirements include an Intel Core i5 processor, 4 GB RAM, and 118 GB disk space, while software includes Windows 11 and modern browsers such as Chrome or Edge. The system ensures automation, scalability, security, and improved customer experience.

10

References

<https://github.com/kamlendu/ict-2025>

<https://dev.mysql.com/downloads/installer/>

<https://netbeans.apache.org/front/main/download/>

https://payara.fish/downloads/?utm_source

<https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/css/bootstrap.min.css>

<https://cdn.jsdelivr.net/npm/bootstrap@5.3.2/dist/js/bootstrap.bundle.min.js>

<https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.4.0/css/all.min.css>