Project Report on

Ebook web appliaction

Submitted in partial fulfillment of the requirement for the award of degree of

Master of Computer Application (MCA)

at

University of Mumbai

Submitted by

Harshad Yashwant Bagal

Under the guidance of

Ms.Sudeshna Roy

Bharati Vidyapeeth's

Institute of Management and Information Technology

Sector 8, CBD Belapur

Navi Mumbai

2024 - 2025

Bharati Vidyapeeth's

Institute of Management and Information Technology

Navi Mumbai

Certificate of Approval

This is to certify that the Project titled **'Ebook web application '** is successfully done by **Harshad Bagal**

during internship of his course in partial fulfillment of **Masters of Computer Application** under the **University of Mumbai, Mumbai**, through the Bharati Vidypeeths Institute of Management and Information Technology, Navi Mumbai carried out by him under our guidance and supervision.

Sign & Date
Ms.Sudeshna Roy

External Examiner

Signature and Date

Principal

Dr.Suhasini Vijaykumar

College Seal

Declaration

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

(Signature)

Harshad Yashwant Bagal

Date

Acknowledgement

I am delighted to extend my heartfelt appreciation to all those who played a pivotal role in the development of Ebook web application, This project aimed to provide users with a comprehensive and user-friendly platform to track, manage, and analyze their expenses. I am profoundly grateful for the guidance and support offered by my project guide, Ms.Sudeshna Roy

, whose expertise and constructive feedback were instrumental in shaping the project.

I would also like to express my gratitude to my classmates and friends who actively contributed by providing valuable feedback, insightful suggestions, and unwavering encouragement throughout the development process. Their support and enthusiasm played a crucial role in keeping me motivated and focused on delivering a high-quality product.

Additionally, I extend my appreciation to the end users of Ebook web application, whose feedback and usage patterns proved invaluable in identifying areas for improvement and refining the application’s features. Their engagement and input significantly contributed to the success of the project.

Abstract

Ebook web application is an advanced book selling recommendation system aimed at revolutionizing how users discover and enjoy films tailored to their preferences. The project tackles the challenges inherent in traditional movie selection methods by offering a sophisticated web application that provides real-time suggestions, personalized movie lists, and interactive user support.

The primary goal of Ebook web application is to empower users by providing a seamless and centralized platform for discovering movies that match their tastes. The development involves leveraging java ,jsp,servlet,mysql to create a robust web-based
application.

The approach includes an extensive analysis of existing book selling systems, highlighting gaps in services like sell books and buy books. Ebook web application addresses these gaps by introducing superior recommendation capabilities and a more intuitive interface.

Key findings from the project include the successful implementation of a reliable movie recommendation engine that effectively addresses user pain points. The conclusion underscores the significant value Ebook web application brings to enhancing movie discovery experiences and outlines future enhancements, such as enhanced recommendation algorithms, automated genre detection, and deeper integration with streaming platforms.

Chapter 1

Introduction of the project :

In today's digital age, the way we consume and manage information has undergone a significant transformation.

Electronic books, or eBooks, have emerged as a popular medium for reading and learning. The convenience, portability, and accessibility of eBooks have revolutionized the publishing industry and the reading experience.

To effectively manage and organize a vast collection of eBooks, a robust and efficient eBook management system is essential.

Such a system can streamline various tasks, including cataloging, searching, borrowing, and returning eBooks.

This project aims to develop an eBook management system that caters to the needs of both individuals and institutions. The system will provide a user-friendly interface to search for eBooks, borrow them

for a specified duration, and return them seamlessly. Additionally, it will incorporate advanced features like recommendation systems and personalized reading experiences.

By leveraging cutting-edge technologies and innovative design principles, this project aims to create a comprehensive and efficient eBook management solution.

Problem Definition :

In today's digital age, the proliferation of electronic books (eBooks) has transformed the way we read and consume information.

However, managing a large collection of eBooks can be a daunting task. Traditional methods of organizing and accessing eBooks are often inefficient and time-consuming. Challenges such as:

- **Organization:** Difficulty in categorizing, tagging, and searching for specific eBooks.
- **Accessibility:** Inefficient methods for accessing eBooks across multiple devices.
- **Security:** Risk of data loss or unauthorized access to digital content.
- **User Experience:** Lack of a user-friendly interface for browsing and reading eBooks.

To address these challenges, this project aims to develop a robust and user-friendly eBook management system. The system will provide a centralized platform for organizing, storing, and accessing eBooks, enhancing the overall reading experience.

By automating various tasks and incorporating advanced features, the system will streamline the management of eBook collections and improve user satisfaction.

1. Data Acquisition:

- Identify Source: Determine the source of the e-book content (e.g., author, publisher, or online repository).
-
- Clean and Preprocess: Clean the content, removing errors, inconsistencies, and formatting issues.

2. Data Processing and Structuring:

- Extract Metadata: Extract relevant metadata, such as title, author, publication date, and keywords.
- Structure Content: Organize the content into chapters, sections, and paragraphs.

4. E-book Validation and Testing:

- Validate Formatting: Ensure that the formatting is consistent and visually appealing.
- Test Readability: Verify that the e-book is readable on different devices and e-readers.
- Fix Errors: Identify and correct any errors or inconsistencies.

5. E-book Publication and Distribution:

- Choose Distribution Channel: Select a distribution channel (e.g., online store, e-book retailer, self-publishing platform).
- Prepare for Publication: Create a cover image, write a book description, and set a price.
- Publish E-book: Publish the e-book on the chosen platform.
- Promote E-book: Market the e-book through social media, email marketing, and other promotional activities.

Domain Knowledge for Your eBook Management System

Project Overview

This project aims to develop a robust and user-friendly eBook management system that caters to the needs of both users and administrators. The system will provide a centralized platform for organizing, storing, and accessing eBooks, enhancing the overall reading experience.

Core Functionalities:

- **User Management:**
    - User Registration and Login
    - Profile Management (Personal Information)
    - Secure Authentication and Authorization
- **Book Management:**
    - Book Catalog (Title, Author, ISBN, Genre, Price, Availability, Description)
    - Book Search and Filtering (Keyword Search, Genre, Author, etc.)
    - Book Uploading and Removal
- **Transaction Management:**
    - Shopping Cart
    - Checkout Process (Payment Gateway Integration)
    - Order Tracking and Shipment
- **Admin Panel:**
    - User Management (Adding, Editing, and Deleting Users)
    - Book Management (Adding, Editing, and Removing Books)

- Order Management (Processing Orders)

Technical Implementation:

The system will be built using a combination of Java, JSP, Servlet, and MySQL.

- **Java:** The core programming language for backend development, handling business logic, database interactions, and server-side scripting.
- **JSP:** Used to create dynamic web pages, generating HTML content on the server-side.
- **Servlet:** Java classes that extend the HttpServlet class to handle HTTP requests and generate dynamic responses.
- **MySQL:** A relational database management system for storing user information, book details, and transaction data.
- **Tomcat Server:** A popular Java servlet container that executes Java servlets and JSPs.

Problem Statement

The proliferation of digital books has led to a growing need for efficient and user-friendly eBook management systems. While there are various platforms for reading eBooks, many lack robust features for organizing, searching, and tracking personal libraries. Additionally, the lack of a centralized platform for buying, selling, and renting eBooks creates challenges for both readers and sellers.

This project aims to address these issues by developing a comprehensive eBook management system that offers a seamless user experience. By providing a centralized platform for eBook discovery, purchase, and management, this system will empower users to build and maintain their digital libraries efficiently.

Chapter 2

System Study

Currently, users often rely on disparate methods to manage their eBook collections, such as physical storage, cloud storage, or dedicated e-reader devices. While these methods offer basic storage and access, they often lack advanced features like centralized management, efficient search, and personalized recommendations. To address these limitations, this project proposes a comprehensive eBook management system. This system will provide a centralized platform for organizing, storing, and accessing eBooks. By incorporating features like advanced search and filtering, the system will empower users to easily find and purchase eBooks.

Additionally, the system will offer a seamless checkout process and order tracking, ensuring a smooth buying experience. For administrators, the system will provide a robust backend interface for managing book catalogs, processing orders, and tracking deliveries.

Existing System

Currently, users often rely on disparate methods to manage their eBook collections, such as physical storage, cloud storage, or dedicated e-reader devices. While these methods offer basic storage and access, they lack advanced features like centralized management, efficient search, and personalized recommendations.

Existing eBook management systems, if any, often suffer from limitations such as:.

- **Poor User Experience:** Some systems have outdated interfaces and slow performance, hindering user experience.

- **Security Concerns:** Inadequate security measures can lead to data breaches and unauthorized access to user accounts.

To overcome these limitations, this project aims to develop a robust and user-friendly eBook management system that offers a superior user experience.

Proposed System

The proposed eBook management system aims to address the limitations of existing systems by offering a comprehensive solution. Key features of the proposed system include:

- **Centralized Platform:** A single platform for managing eBook collections, making it easier to organize, search, and access eBooks.

- **Advanced Search and Filtering:** Powerful search capabilities to find eBooks based on title, author, genre, or keyword.

- **E-commerce Integration:** Seamless integration with e-commerce platforms to facilitate the buying and selling of eBooks.

- **User-Friendly Interface:** A user-friendly interface that is easy to navigate and use.

- **Secure Access:** Robust security measures to protect user data and prevent unauthorized access.

- **Personalized Recommendations:** Tailored recommendations based on user preferences and reading history.

By incorporating these features, the proposed system will provide a superior user experience and enhance the overall reading experience.

Objective of the Project

The primary objective of this eBook management system is to provide a comprehensive and user-friendly platform for organizing, accessing, and purchasing eBooks. To achieve this, the system aims to:

1. **Centralize eBook Management:**
    - Create a single platform where users can store and manage their entire eBook collection.
    - Eliminate the need for multiple storage solutions like physical drives or cloud services.
2. **Enhance Search and Discovery:**

- Implement advanced search and filtering capabilities to help users quickly find specific eBooks based on title, author, genre, or keyword.

- Utilize recommendation algorithms to suggest eBooks based on user preferences and reading history.

3. **Seamless Purchase Experience:**

   - Integrate with e-commerce platforms to provide a seamless buying experience.

   - Facilitate secure online payments and order tracking.

   - Offer various payment options to cater to different user preferences.

4. **Prioritize User Experience:**

   - Design a user-friendly interface with intuitive navigation and clear layouts.

   - Optimize the system for fast loading times and responsive performance.

   - Provide excellent customer support to address user queries and issues.

5. **Ensure Security and Privacy:**

   - Implement robust security measures to protect user data and prevent unauthorized access.

   - Encrypt sensitive information, such as passwords and payment details.

   - Regularly update security protocols to stay ahead of potential threats.

6. **Scale for Future Growth:**

- Design the system to handle increasing numbers of users and eBooks.
- Utilize scalable infrastructure to accommodate future growth.
- Implement efficient database management techniques to optimize performance.

By achieving these objectives, the eBook management system will empower users to build and maintain their digital libraries effortlessly, while providing a seamless and secure online reading experience.

Feasibility Studies

Economical:-The economic feasibility of the eBook Management System hinges on a careful analysis of potential costs and benefits. Development costs, hardware infrastructure, and database setup are initial investments. Ongoing expenses include server hosting, bandwidth, technical support, marketing, and advertising.

The system's potential to increase revenue through eBook sales, premium features, or subscriptions, combined with improved user satisfaction and loyalty, can offset these costs. Additionally, the system can provide valuable data-driven insights to inform business decisions.

Technical:-he technical feasibility of the eBook Management System is assessed based on the availability of necessary resources and technologies. Given the choice of Java, JSP, Servlet, Tomcat, and MySQL, the project's technical feasibility is strong.

Technology Stack:

- **Java:** Serves as the core programming language for backend development, handling business logic and database interactions.

- **JSP:** Used to create dynamic web pages, generating HTML content on the server-side.

- **Servlet:** Java classes that extend the HttpServlet class to handle HTTP requests and generate dynamic responses.

- **Tomcat:** A popular Java servlet container that executes Java servlets and JSPs.

- **MySQL:** A relational database management system for storing user information, book details, and transaction data.

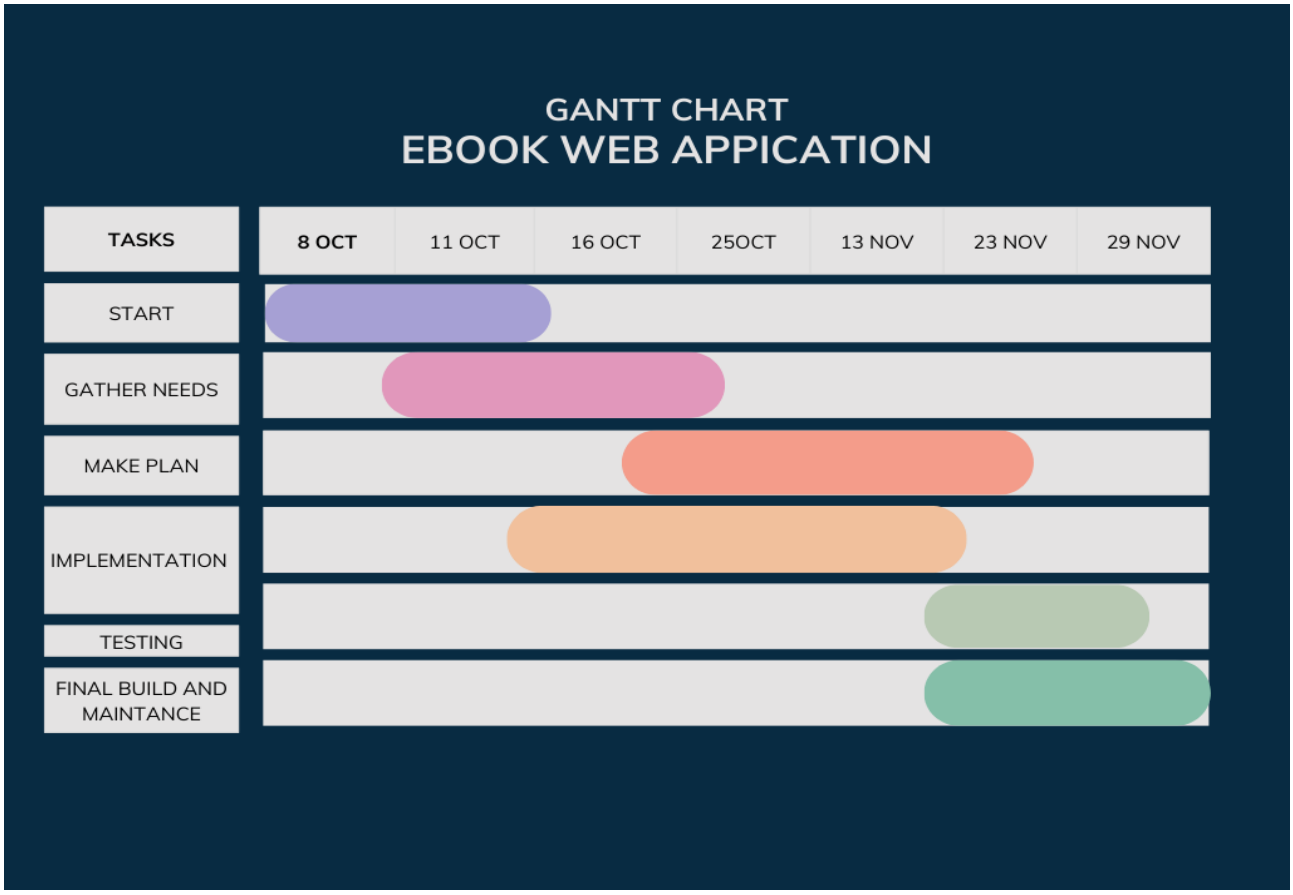
Operational:-The operational feasibility of the eBook Management System is assessed by examining its compatibility with various devices, operating systems, and screen resolutions. The system should be designed to be accessible and usable across different platforms, ensuring a seamless user experience.

Chapter 3

Analysis and Design

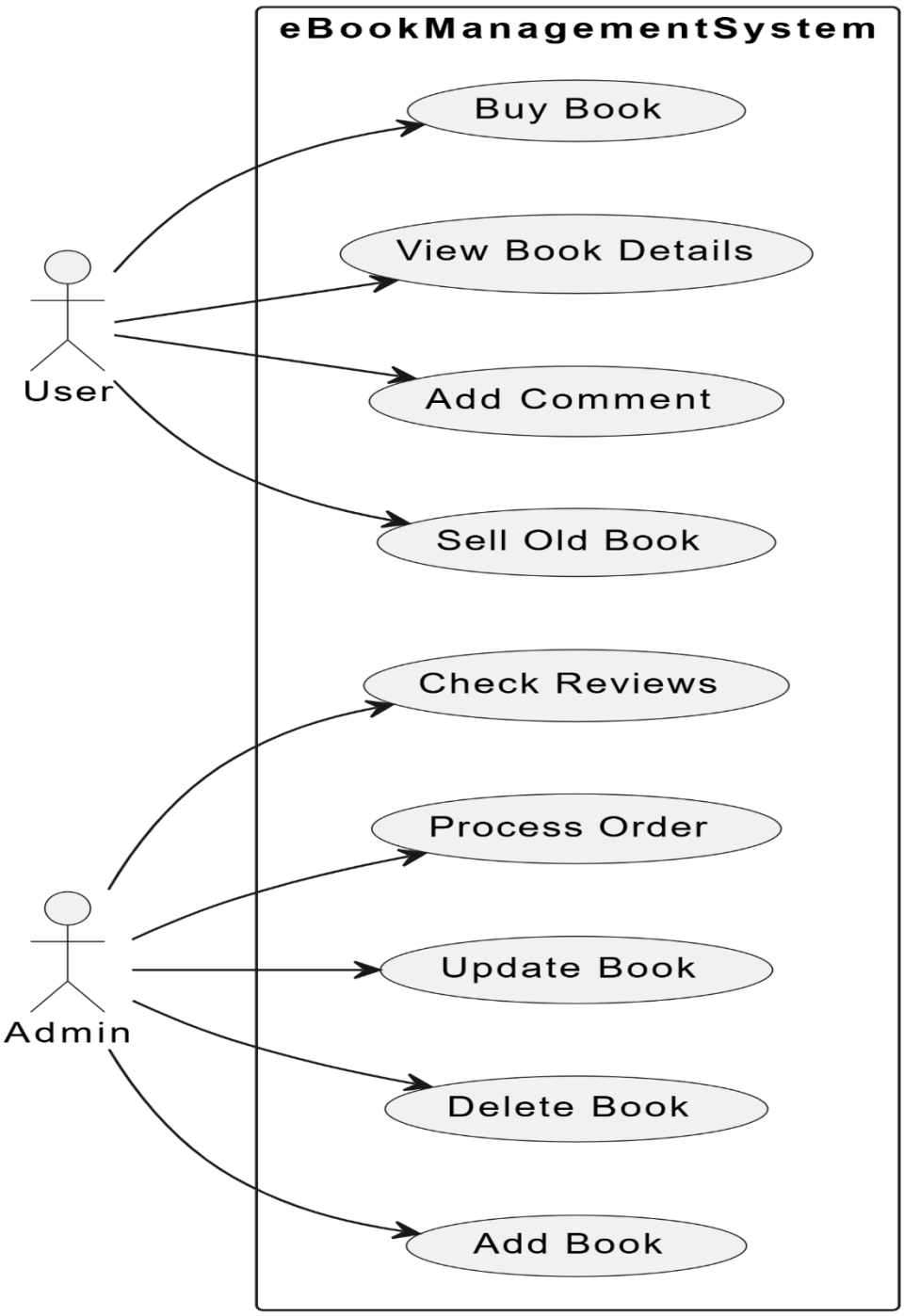
Gantt Chart :

A Gantt chart provides a visual timeline for project activities. Below is an example Gantt chart for the project:



Use Case Diagram :-

This use case diagram depicts the interactions between an Admin, a Dataset, and a User within
the ebook management system.



Operating Tools and Technology

For the development of our eBook Management System, we'll primarily leverage the following technologies:

Core Technologies:

- **Java:** A versatile programming language forming the backbone of our backend.
- **JSP:** A technology for creating dynamic web pages.

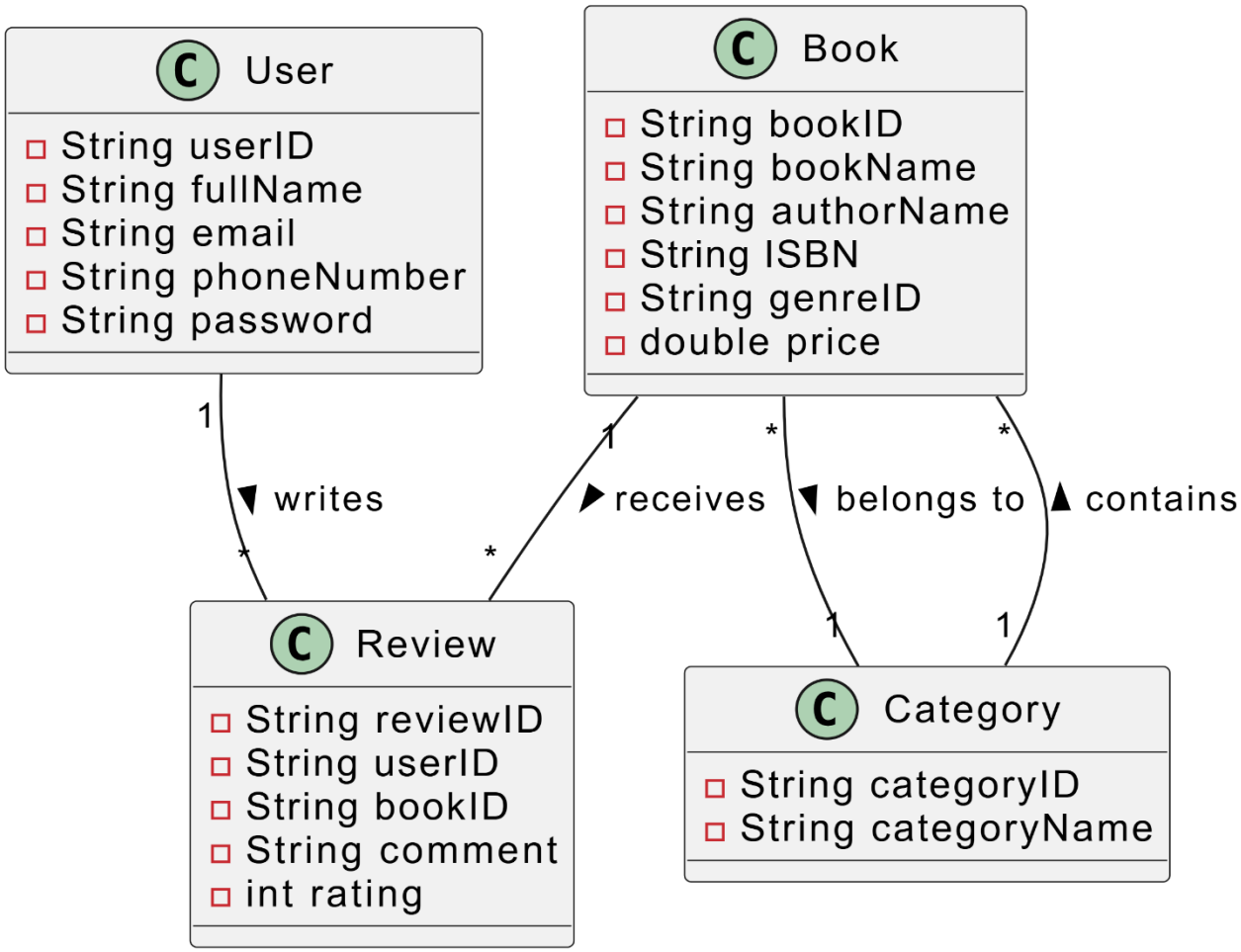
- **Servlet:** For handling HTTP requests and responses, essential for web applications.
- **MySQL:** A relational database system to store user, book, and transaction data.
- **Tomcat Server:** A web server to deploy and run our application.

Development Tools:

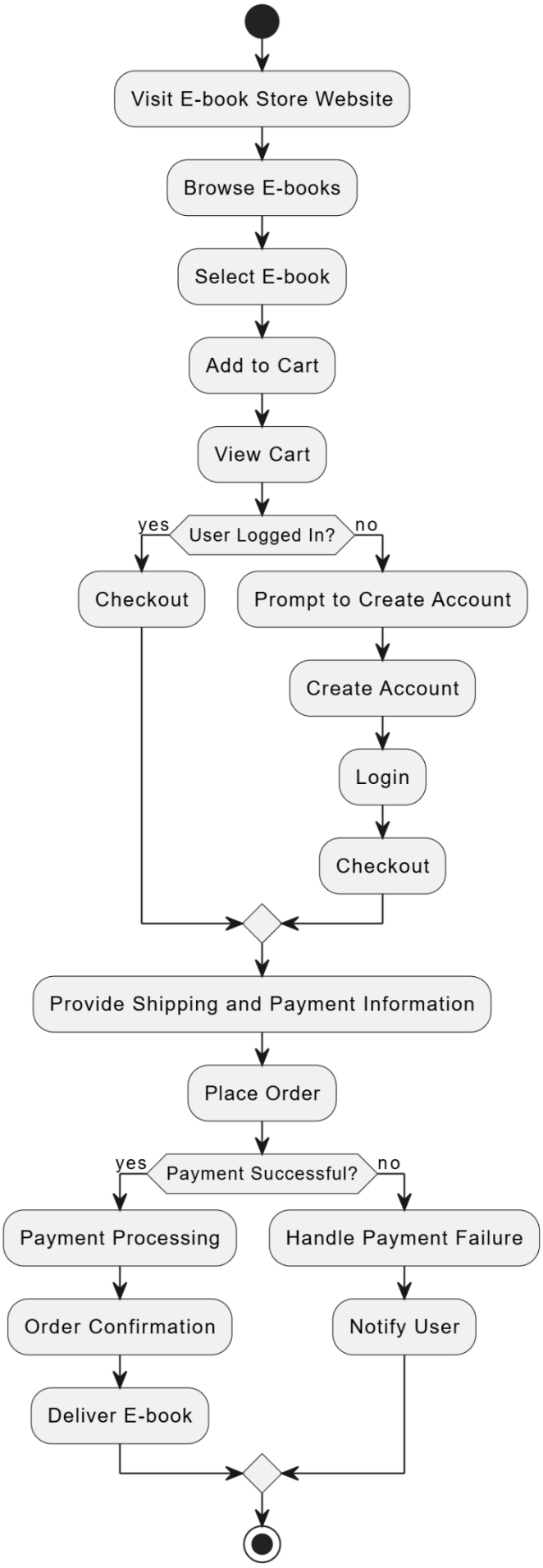
- **Eclipse IDE:** A powerful IDE for Java development, aiding in code editing, debugging, and deployment.

Chapter 4
System Design

ER Diagram



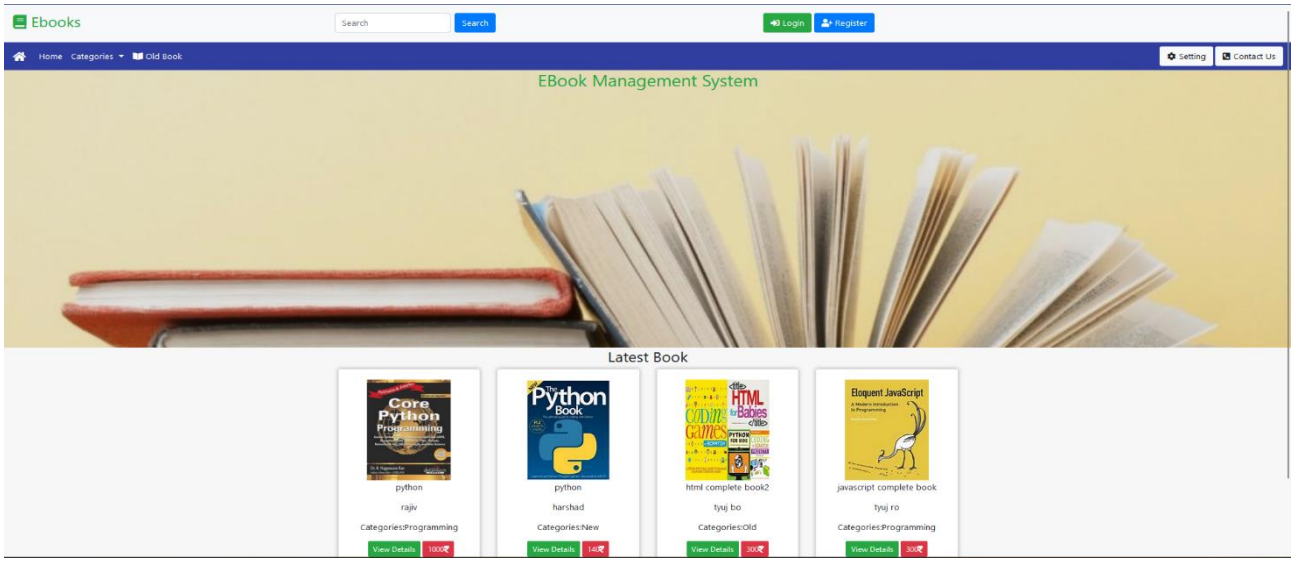
Activity Diagram:-


Visit E-book Store Website
Browse E-books
Select E-book
Add to Cart
View Cart
yes
User Logged In?
no
Checkout
Prompt to Create Account
Create Account
Login
Checkout
Provide Shipping and Payment Information
Place Order
yes
Payment Successful?
no
Payment Processing
Handle Payment Failure
Order Confirmation
Notify User
Deliver E-book

Chapter 5

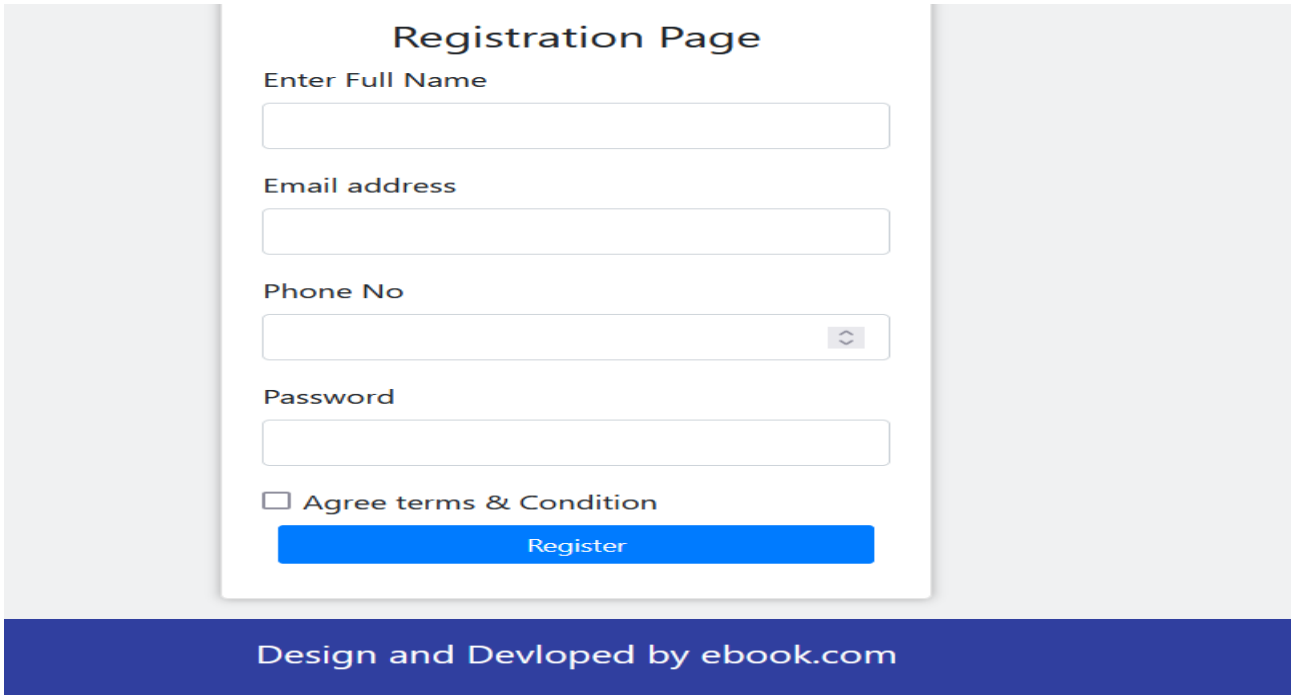
System Implementation

Coding and Home Page:-The provided screenshot shows a basic eBook Management System. It displays a simple interface with features like a search bar, navigation links, and a section showcasing the latest books. The system appears to be designed for managing and organizing digital books.



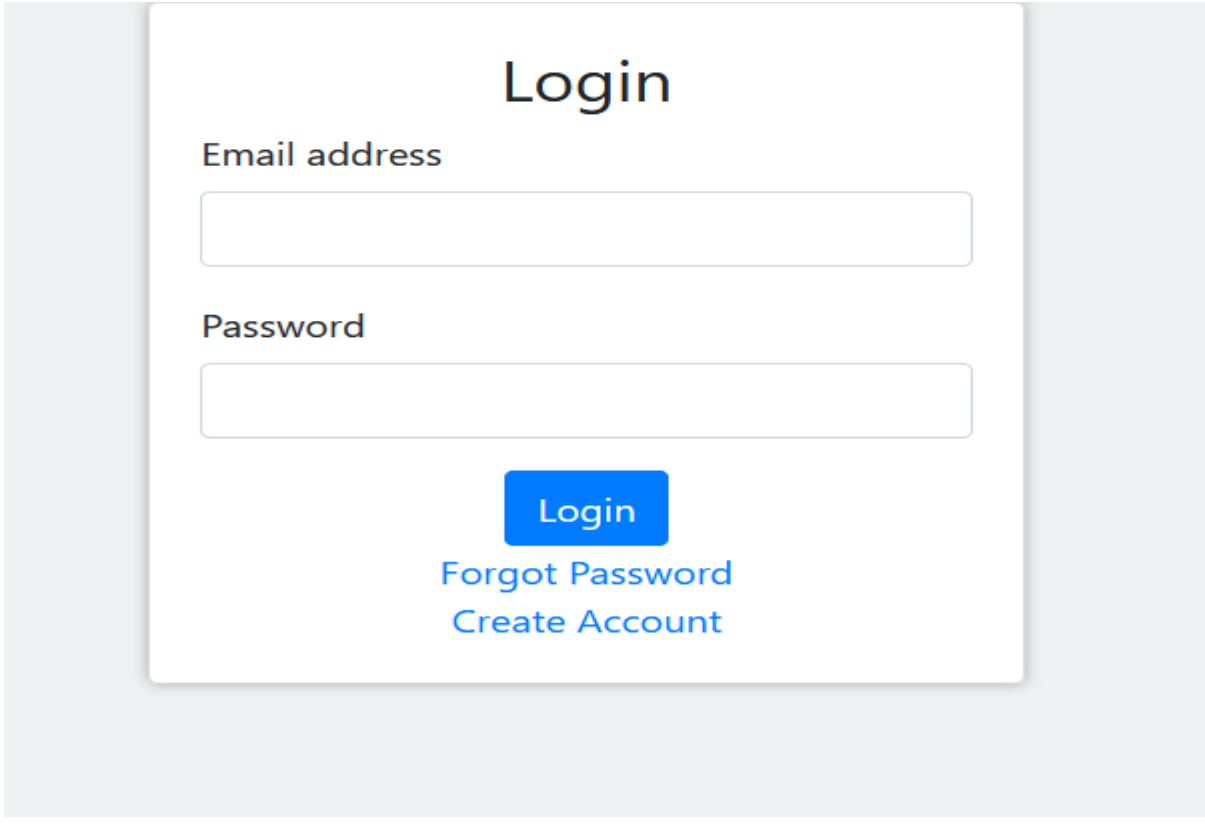
registration page:-

it displays a registration page. It has fields for entering full name, email address, phone number, password, and a checkbox to agree to terms and conditions. The page also includes a "Register" button and a footer crediting ebook.com for design and development.



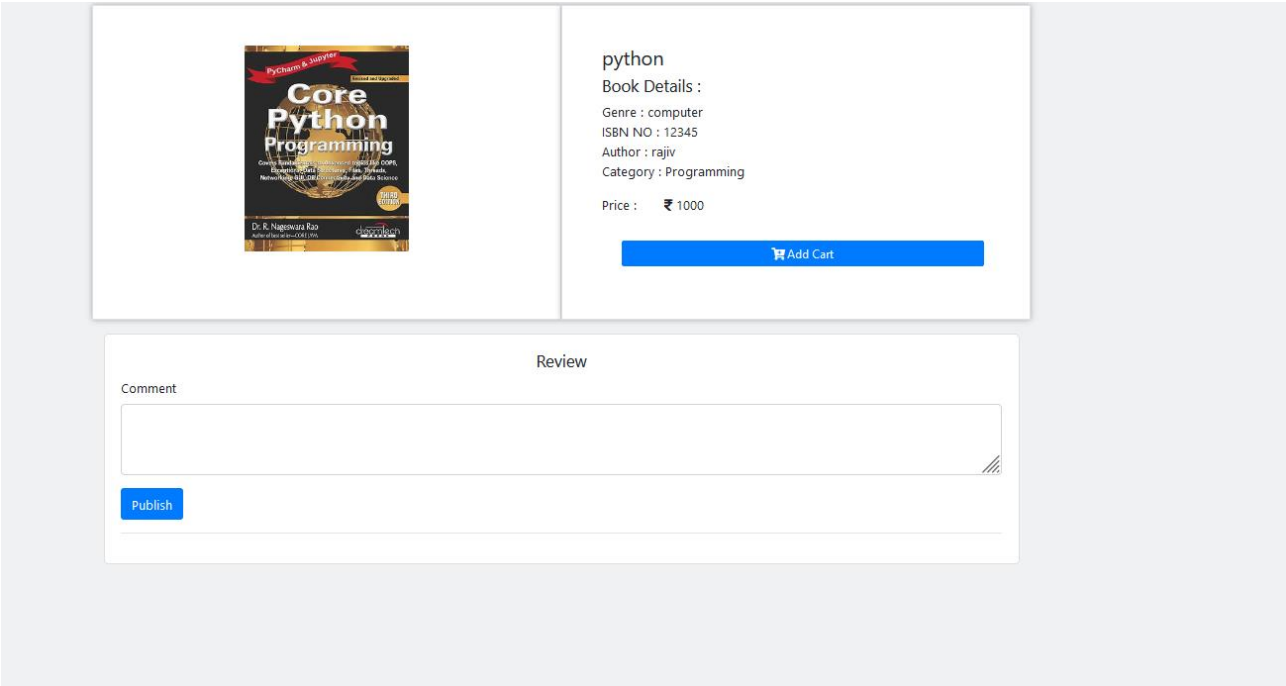
Login page:-

It has fields for entering email address and password, a "Login" button, and links to "Forgot Password" and "Create Account".

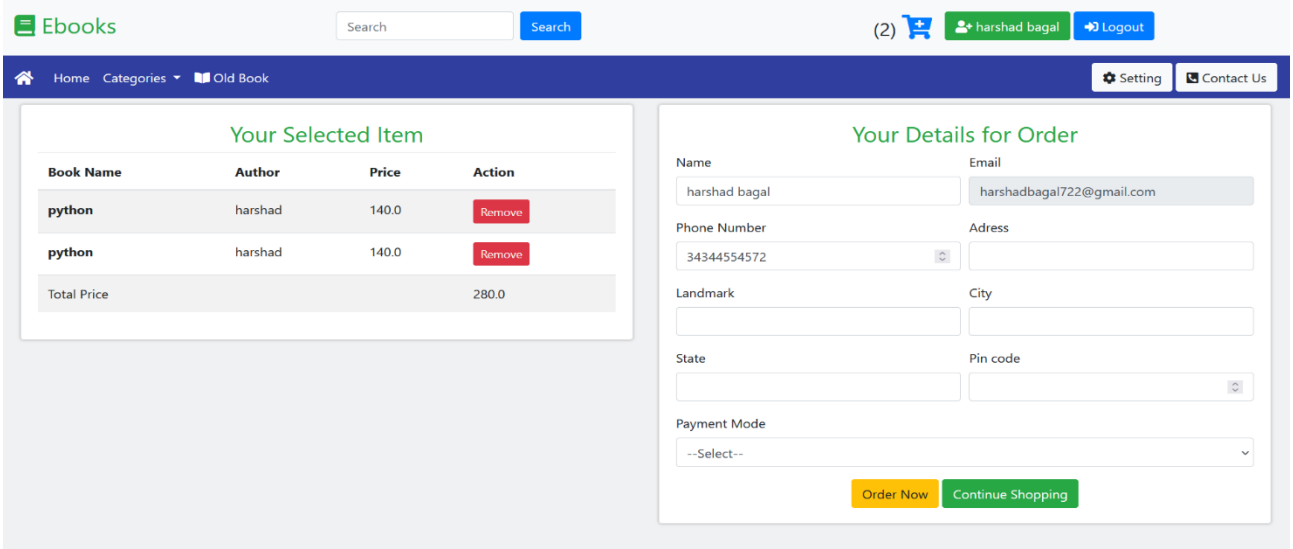


View details and buy books:-

displays a product page for a book titled "Core Python Programming." It shows the book cover, details like genre, ISBN, author, category, and price, an "Add to Cart" button, a review section with a comment box and a "Publish" button.

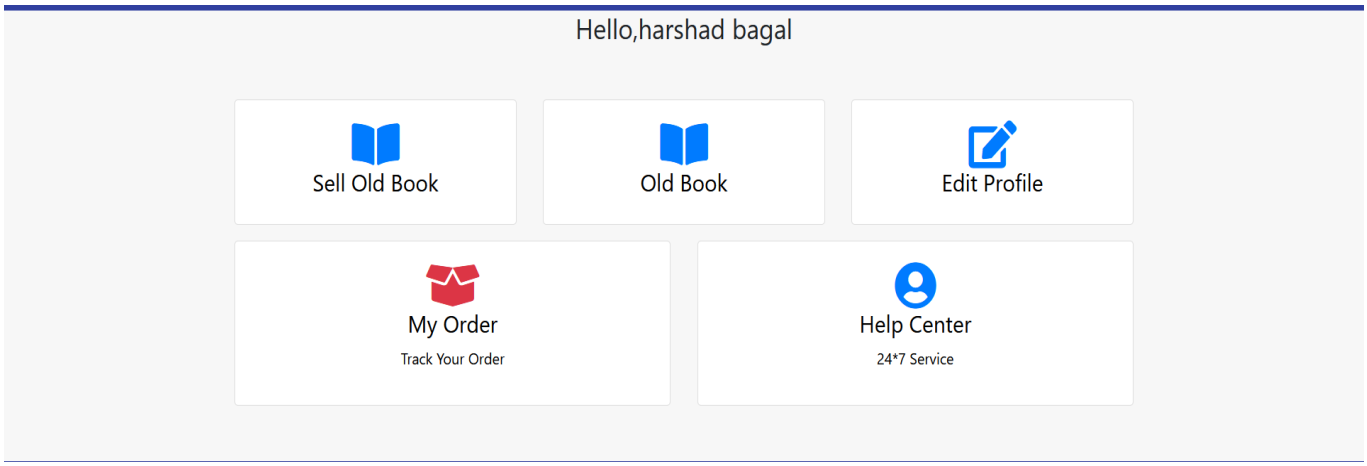


Add carts:- it shows a shopping cart page from an online bookstore. The page also displays the user's details for the order, including name, email, phone number, address, and payment mode. The user can remove items from the cart, continue shopping, or proceed to order.

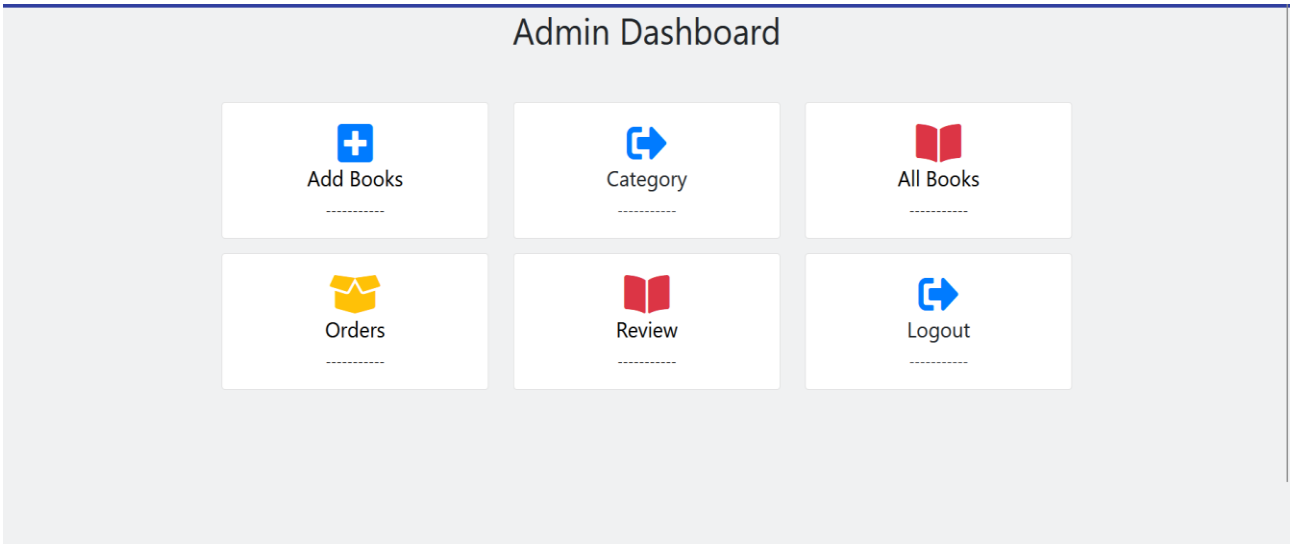


Sell Old books and order track:-

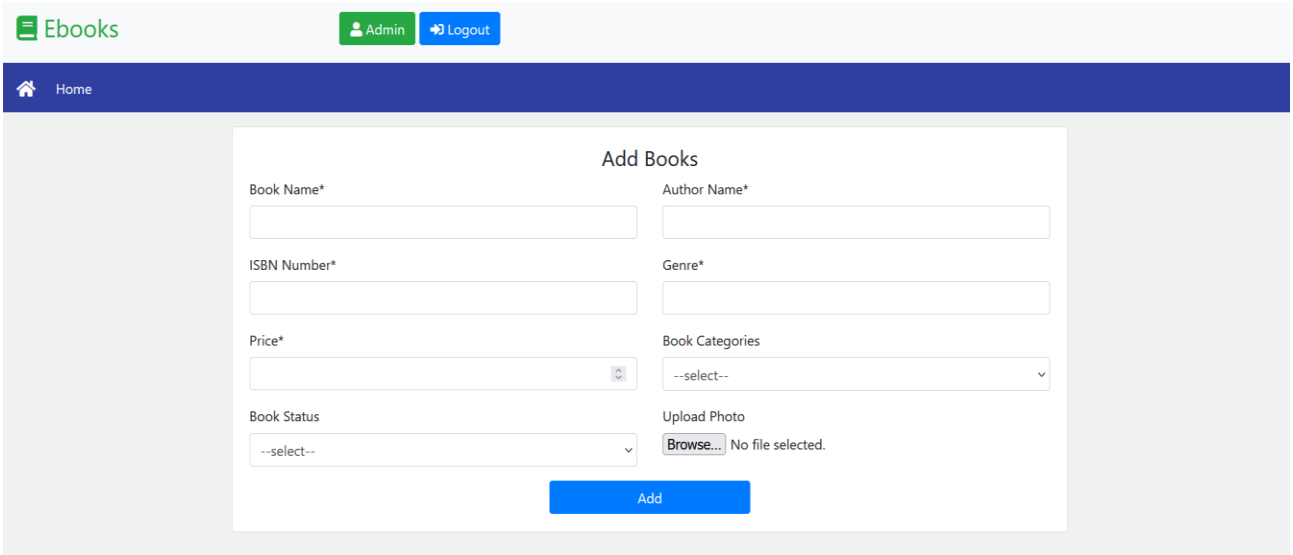
The image shows a user dashboard with options for selling old books, viewing old books, editing profile, tracking orders, and accessing help center.



Admin dashboard:- The image shows an admin dashboard with options for adding books, managing categories, viewing all books, checking orders, reviewing, and logging out.

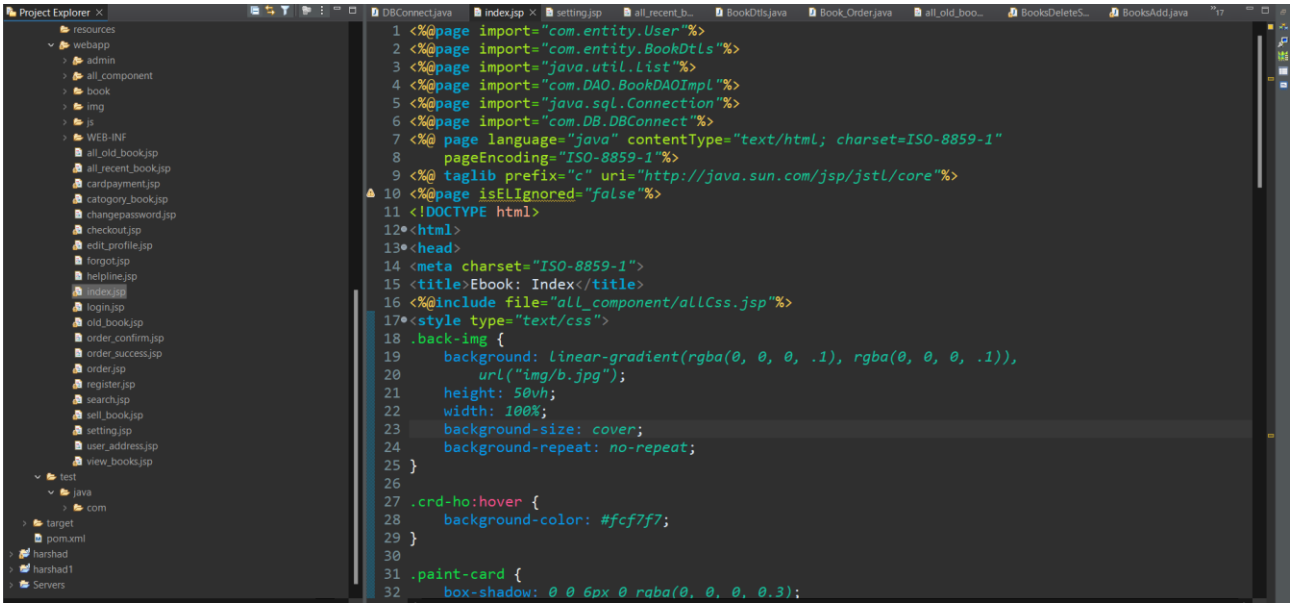


Add Books:- it shows a form for adding a new book to a library system. It requires fields for book name, author name, ISBN number, genre, price, book status, book category, and an option to upload a book photo.



Chapter 6

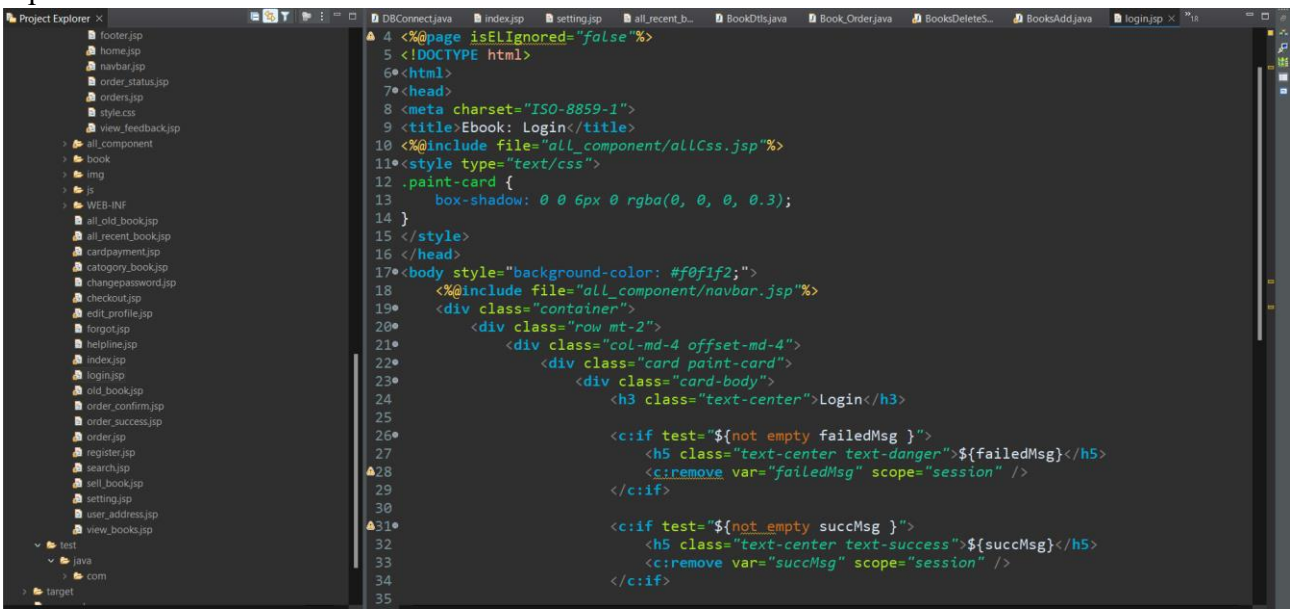
Code:-



```jsp
<%@page import="com.entity.User"%>
<%@page import="com.entity.BookDtls"%>
<%@page import="java.util.List"%>
<%@page import="com.DAO.BookDAOImpl"%>
<%@page import="java.sql.Connection"%>
<%@page import="com.DB.DBConnect"%>
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"%>
<%@page isELIgnored="false"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Ebook: Index</title>
<%@include file="all_component/allCss.jsp"%>
<style type="text/css">
.back-img {
    background: linear-gradient(rgba(0, 0, 0, .1), rgba(0, 0, 0, .1)),
        url("img/b.jpg");
    height: 50vh;
    width: 100%;
    background-size: cover;
    background-repeat: no-repeat;
}

.crd-ho:hover {
    background-color: #fcf7f7;
}

.paint-card {
    box-shadow: 0 0 6px 0 rgba(0, 0, 0, 0.3);
```

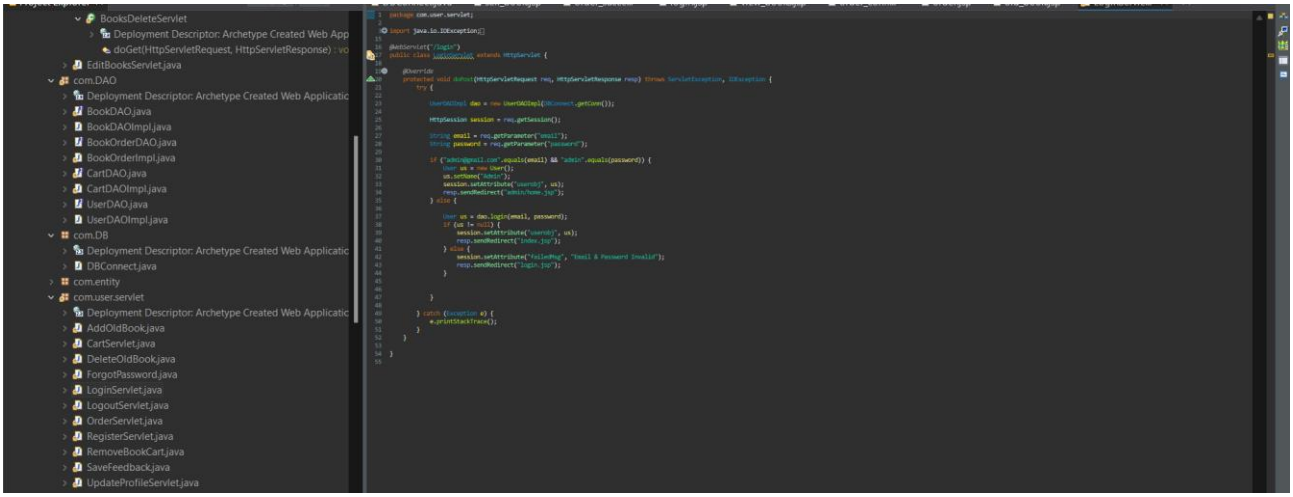
Index page :-the index page of an e-book project. The page appears to be under development, with HTML and JSP code visible, including imports, taglibs, and styling elements.

Login page code- it hows a login page for an e-book project. The page is being developed using HTML and JSP, with elements like a login form, error and success messages, and styling.and get input from user

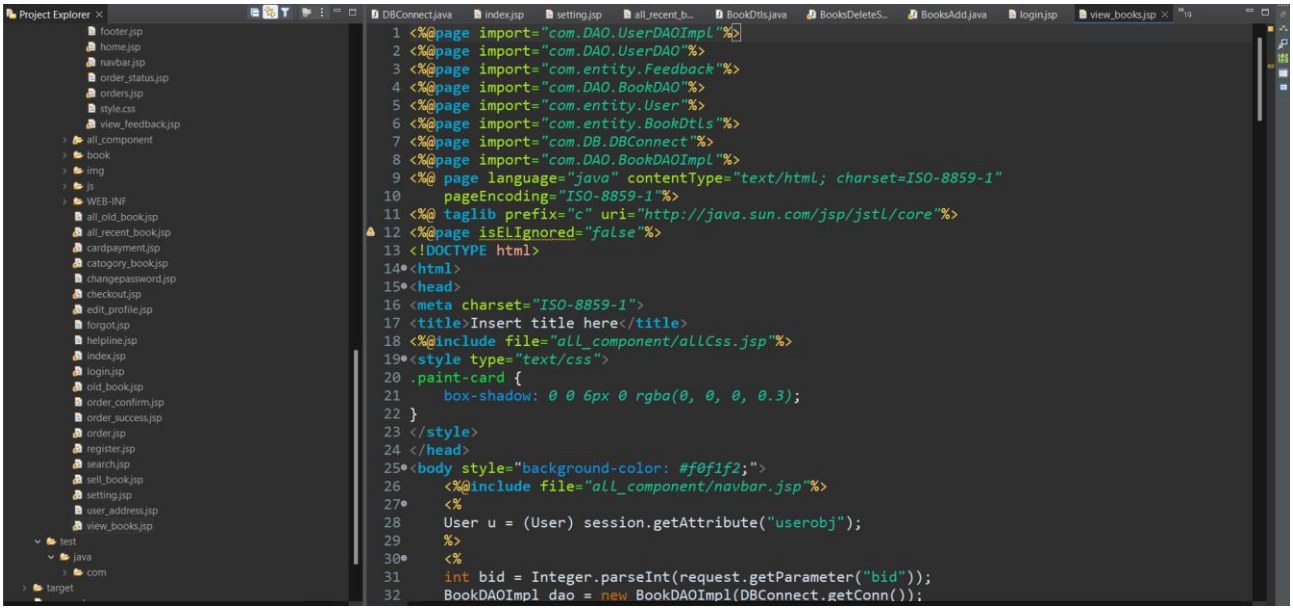


```jsp
<%@page isELIgnored="false"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Ebook: Login</title>
<%@include file="all_component/allCss.jsp"%>
<style type="text/css">
.paint-card {
    box-shadow: 0 0 6px 0 rgba(0, 0, 0, 0.3);
}
</style>
</head>
<body style="background-color: #f0f1f2;">
    <%@include file="all_component/navbar.jsp"%>
    <div class="container">
        <div class="row mt-2">
            <div class="col-md-4 offset-md-4">
                <div class="card paint-card">
                    <div class="card-body">
                        <h3 class="text-center">Login</h3>

                        <c:if test="${not empty failedMsg }">
                            <h5 class="text-center text-danger">${failedMsg}</h5>
                            <c:remove var="failedMsg" scope="session" />
                        </c:if>

                        <c:if test="${not empty succMsg }">
                            <h5 class="text-center text-success">${succMsg}</h5>
                            <c:remove var="succMsg" scope="session" />
                        </c:if>
```

Login servlet code:-it coonection with database

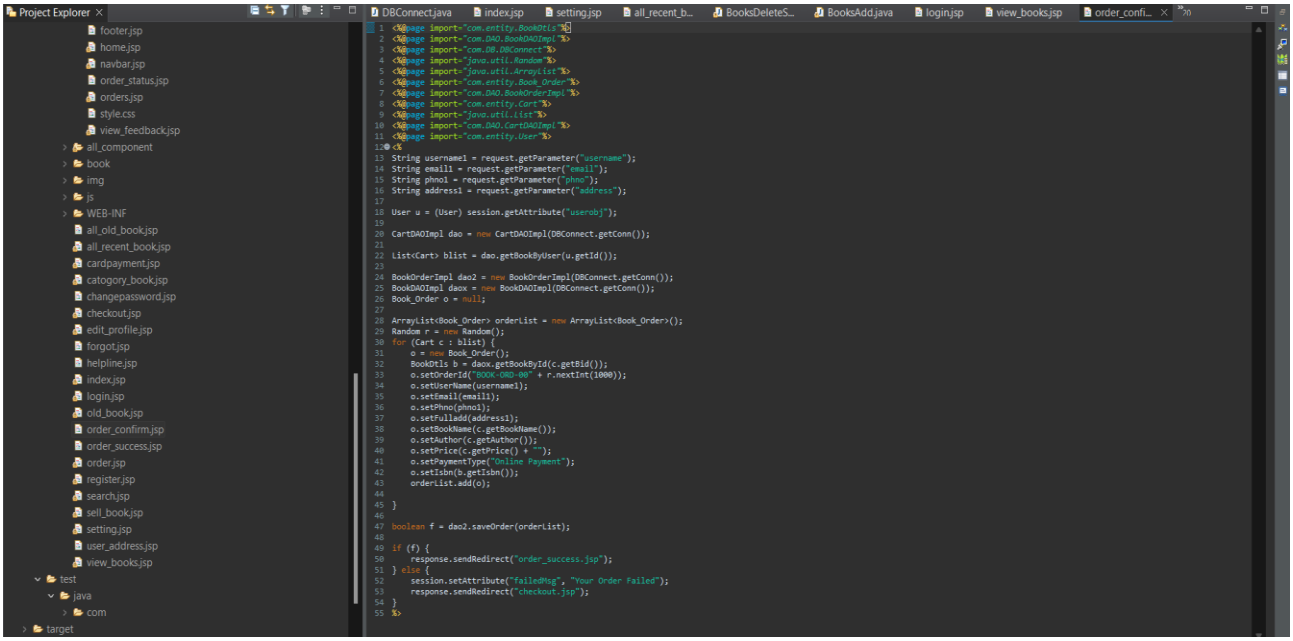


View books:- showcases the code for an insert page in an e-book project. The page appears to be under development, with HTML and JSP code visible, including imports, taglibs, and styling elements.

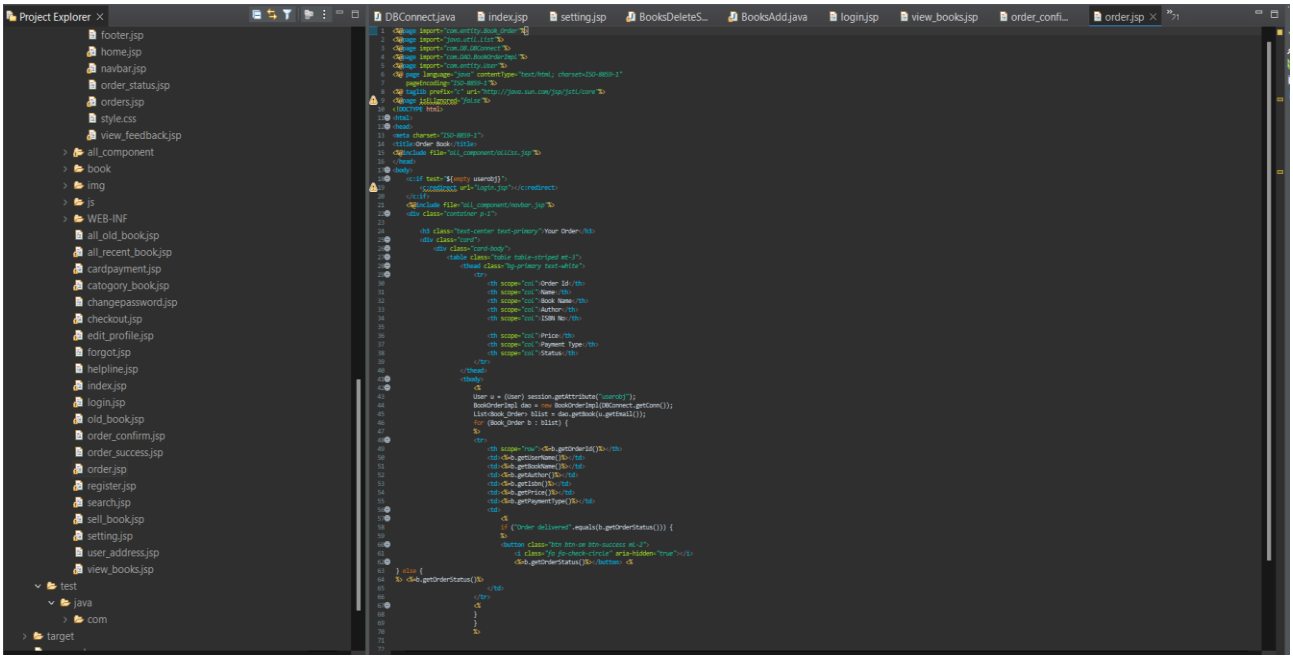


```
<%@page import="com.DAO.UserDAOImpl"%>
<%@page import="com.DAO.UserDAO"%>
<%@page import="com.entity.Feedback"%>
<%@page import="com.DAO.BookDAO"%>
<%@page import="com.entity.User"%>
<%@page import="com.entity.BookDtls"%>
<%@page import="com.DB.DBConnect"%>
<%@page import="com.DAO.BookDAOImpl"%>
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
    pageEncoding="ISO-8859-1"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"%>
<%@page isELIgnored="false"%>
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
<%@include file="all_component/allCss.jsp"%>
<style type="text/css">
.paint-card {
    box-shadow: 0 0 6px 0 rgba(0, 0, 0, 0.3);
}
</style>
</head>
<body style="background-color: #f0f1f2;">
    <%@include file="all_component/navbar.jsp"%>
    <%
    User u = (User) session.getAttribute("userobj");
    %>
    <%
    int bid = Integer.parseInt(request.getParameter("bid"));
    BookDAOImpl dao = new BookDAOImpl(DBConnect.getConn());
```

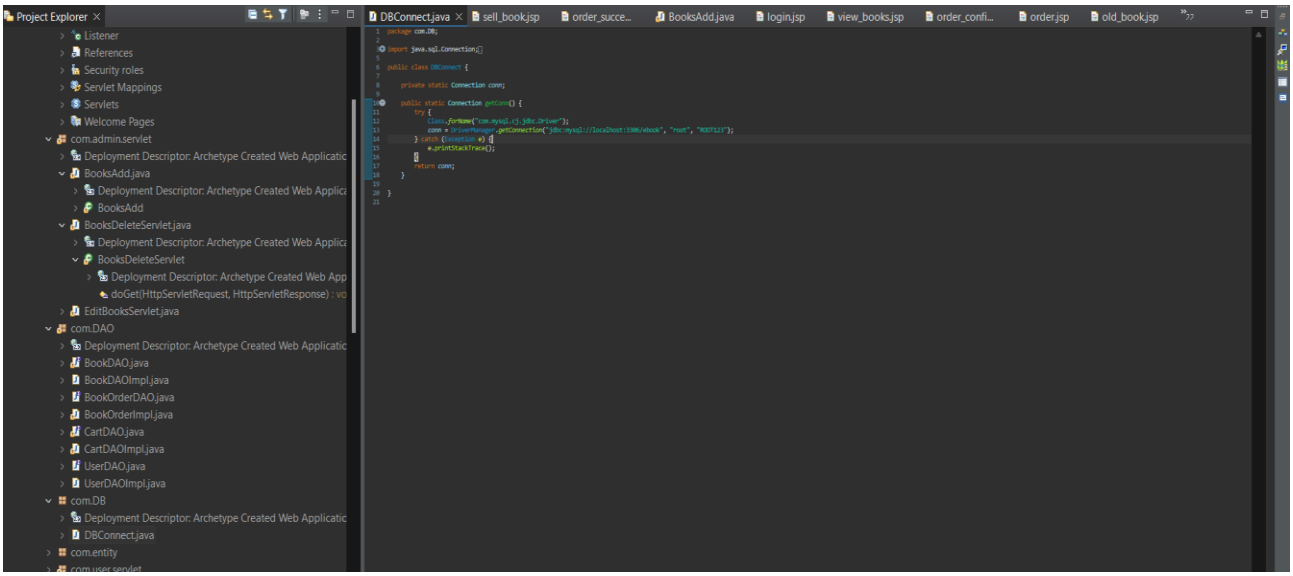
Order confirm jsp code:-



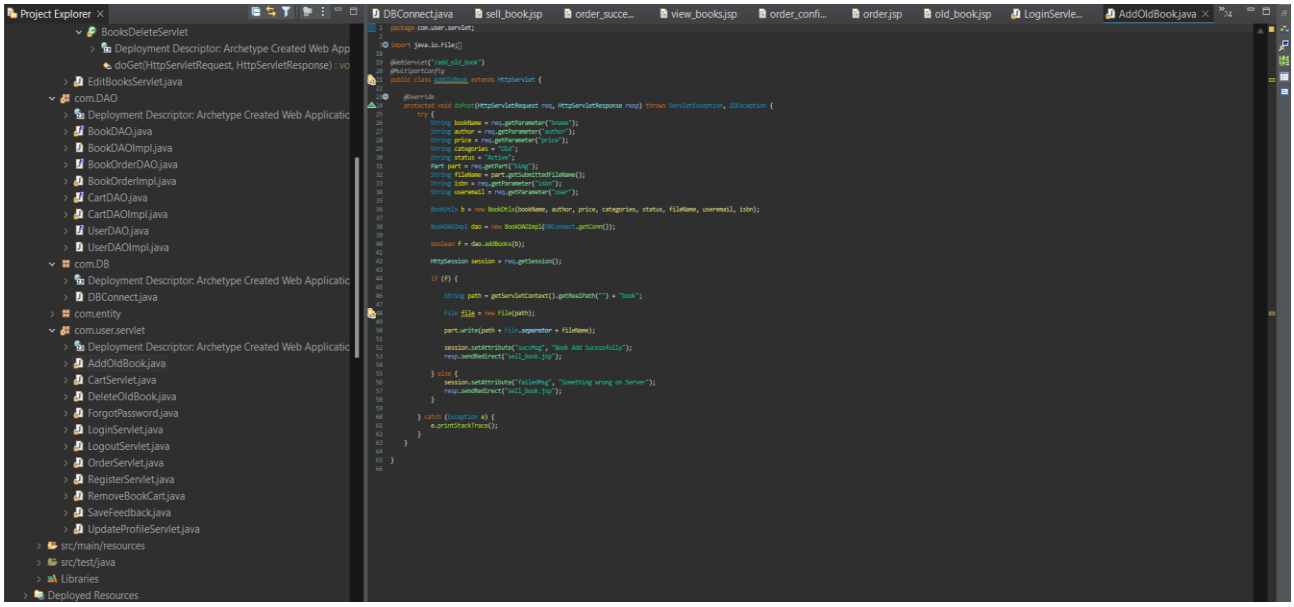
Order jsp:- it for order books code



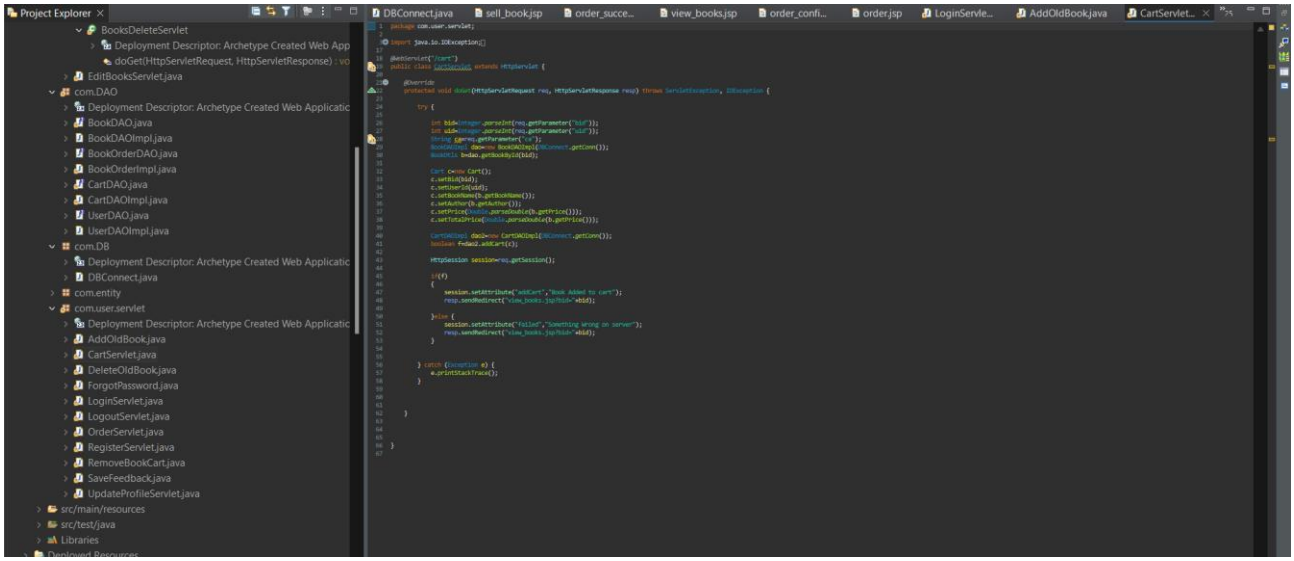
Database connection code:-



Addbook servlet:- here add book servlet code interact with datbase



Cartservlet code:-



Chapter 7 System Testing

Testing Methodologies for an E-book Management System

A robust e-book management system requires thorough testing to ensure its reliability, functionality, and user experience. Here are the key testing methodologies employed:

Unit Testing:

- Individual components, such as modules for user authentication, book search, and content delivery, are tested in isolation.
- This ensures that each unit functions correctly and meets its specific requirements.

Integration Testing:

- Different components are combined and tested to verify their seamless interaction and data flow.

System Testing:

- The entire system is tested as a whole, simulating real-world usage scenarios.
- This involves testing features like user registration, book search, checkout, and digital rights management (DRM).

User Acceptance Testing (UAT):

- End-users are involved in testing the system to ensure it meets their needs and expectations.
- UAT focuses on usability, functionality, and overall user experience.

Performance Testing:

- The system's performance is evaluated under various load conditions, including peak usage.
- This helps identify performance bottlenecks and optimize the system for efficient operation.

Security Testing:

- The system is tested for vulnerabilities, such as hacking attempts, data breaches, and unauthorized access.

Test Cases:-

Sr. No.	Event	Trigger	Activity	Response
1	User Visits Website	User opens the website	System displays homepage with featured books, categories, and search bar	User sees the homepage
2	User Searches for Books	User enters keywords in the search bar	System searches the database and displays matching books	User sees a list of matching books
3	User Views Book Details	User clicks on a book	System displays detailed information about the book (title, author, description, price, reviews)	User sees the book details
4	User Adds Book to Cart	User clicks "Add to Cart"	System adds the book to the user's cart and updates the cart total	User sees a confirmation message and the updated cart total
5	User Views Cart	User clicks "View Cart"	System displays the contents of the user's cart with items,	User sees the cart contents

Sr. No.	Event	Trigger	Activity	Response
			quantities, and total price	
6	User Proceeds to Checkout	User clicks "Checkout"	System redirects the user to the checkout page, displaying shipping and payment options	User sees the checkout page
7	User Completes Checkout	User enters shipping and payment information and confirms	System processes the order, sends a confirmation email, and redirects the user to the order confirmation page	User receives a confirmation email and sees the order confirmation page
8	User Downloads E-book	User clicks "Download" on a purchased e-book	System initiates the download process and provides a download link	User receives the download link and can download the e-book
9	Admin Adds New Category	Admin logs in and clicks "Add Category"	System displays a form for adding a new category	Admin enters category details and saves

Sr. No.	Event	Trigger	Activity	Response
10	Admin Adds New Book	Admin logs in and clicks "Add Book"	System displays a form for adding a new book	Admin enters book details (title, author, description, price, category, file) and saves
11	Admin Edits Book Details	Admin clicks "Edit" on an existing book	System displays the book details in edit mode	Admin edits book details and saves changes
12	Admin Deletes Book	Admin clicks "Delete" on an existing book	System removes the book from the database	Book is removed from the website
13	User Logs Out	User clicks "Logout"	System logs out the user and redirects to the login page	User is logged out and sees the login page

Chapter 8

Limitation and Future Enhancement

- **Data Privacy and Security:** Ensuring the security of user data, including personal information and payment details.

 Scalability: Addressing performance and scalability issues as the number of users and books grows.

 Integration with E-Readers: Ensuring seamless integration with various e-reader devices and software.

 Copyright and Licensing: Complying with copyright laws and licensing agreements.

 User Experience: Providing a user-friendly interface and optimal user experience.

- **Future Enhancements**

- To address these limitations and further enhance the system, the following future enhancements are proposed:

- **Advanced Search and Filtering:**

- Implementing more sophisticated search algorithms, such as fuzzy search and semantic search, to improve search accuracy.

- Providing advanced filtering options based on various criteria, such as author, genre, publication date, and language.

- **Personalized Recommendations:**

- Leveraging machine learning techniques to analyze user behavior and preferences to provide personalized book recommendations.

- Incorporating social features, such as book clubs and reading challenges, to foster a sense of community.

- **Mobile Optimization:**

- Developing a mobile-friendly interface to cater to users who prefer to access the system on their smartphones and tablets.

- Ensuring optimal performance and user experience on mobile devices.

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