# BACHELOR OF COMPUTER SCIENCE

# MAJOR BASED ELECTIVE - II

# MINI PROJECT WORK


DEPARTMENT OF COMPUTER SCIENCE, INFORMATION TECHNOLOGY & COMPUTER APPLICATIONS

**SHRIMATI INDIRA GANDHI COLLEGE**

Affiliated to Bharathidasan University | Nationally Accredited at 'A Grade (3rd Cycle) by NAAC

An ISO 9001:2015 Certified Institution

**APRIL 2022 – 2023**

# BOOK SHOP APPLICATION IN JAVA

**PROJECT REPORT**

**SUBMITTED TO**

**BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI - 24**

In partial fulfilment of the requirements for the award of

**BACHELOR DEGREE IN COMPUTER SCIENCE**


**Submitted by**

| NAME | REGISTER NUMBER |
|---|---|
| S.AKSHAYA | CB22S611881 |
| S.ANGELIN SONA | CB22S611882 |
| M.ARTHI | CB22S611883 |
| R.ARTHI | CB22S611884 |
| C.BHUVANASRI | CB22S611885 |

Under the guidance of

**Dr.V.Mathimalar,M.Sc,M.Phil.,P.G.D.B.A.,M.B.A.,Ph.D.,**




PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE, INFORMATION TECHNOLOGY & COMPUTER APPLICATIONS

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**Dr.V.MATHIMALAR,M.Sc.,M.Phil.,P.G.D.B.A.,M.B.A.,Ph.D.,**

Department of Computer Science,

Shrimati Indira Gandhi College,

Tiruchirappalli — 620 002.

**CERTIFICATE**

This is to certify that the project work entitled "BOOK SHOP APPLICATION" has been carried out by the following students under my supervision and guidance during the academic Year 2022 — 2023.

| REGISTER NUMBER | NAME OF THE STUDENTS |
|---|---|
| CB22S611881 | S.AKSHAYA |
| CB22S611882 | S.ANGELIN SONA |
| CB22S611883 | M.ARTHI |
| CB22S611884 | R.ARTHI |
| CB22S611885 | C.BHUVANASRI |

Signature of the Guide

Signature of the Head of the Department

# ACKNOWLEDGEMENT

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*We express our thanks to* **Ms.N.VIJAYALAKSHMI, M.Sc., PGDCA. , M.Phil.,SET.,UGC-NET., M.C.A.,M.Phil.,** *Head, Department of Computer Science, IT & Computer Applications, Shrimati Indira Gandhi College, Tiruchirappalli for sustained encouragement shown towards the successful completion of this project.*

*We express our thanks and deep sense of gratitude to our guide* **Dr.V.MATHIMALAR,M.Sc.,M.Phil.,P.G.D.B.A.,M.B.A.,Ph.D.,** *Assistant Professor of Computer Science, IT & Computer Applications, Shrimati Indira Gandhi College, Tiruchirappalli for the guidance and encouragement during the course of our study and its successful accomplishment of the project.*

*We also submit our hearty thanks to our Course in charge* ***Dr.S.HEMALATHA,M.Sc.,M.Phil.,Ph.D*** *Assistant Professor, Department of Computer Science, IT & Computer Applications, Shrimati Indira Gandhi College, Tiruchirappalli for the guidance and encouragement shown towards the successful completion of our project and Tutor* ***Ms.C.SHYAMALADEVI, M.CA.,M.Phil.,B.Ed.,*** *Assistant Professor, Department of Computer Science, IT & Computer Applications, Shrimati Indira Gandhi College, Tiruchirappalli.*

# BOOK SHOP APPLICATION

## ABSTRACT


The "Book Shop Application" is a cutting-edge software solution designed to revolutionize bookshop management by efficiently handling key aspects: book names, editions, and prices. At its core, the application introduces a streamlined book management system, providing an intuitive interface for bookstore staff to seamlessly add, update, and remove books. This ensures a well-organized and up-to-date inventory, enhancing day-to-day operations.

A notable feature is the robust edition tracking system, allowing for meticulous recording and retrieval of information on different book versions. This facilitates easy navigation for both customers and staff, improving accessibility to specific editions. The introduction of a dynamic pricing mechanism empowers administrators to set and adjust book prices based on factors such as edition, demand, and market trends. This adaptability ensures competitiveness in the ever-evolving book retail landscape, contributing to the financial success of the bookstore.

The application prioritizes a user-friendly interface, enhancing the overall experience for both staff and customers. Administrators enjoy comprehensive control over inventory, edition tracking, and pricing strategies, while staff members have tailored permissions for efficient day-to-day operations. With a focus on customer satisfaction, the Book Shop Application enriches the experience by providing detailed book information, edition highlights, and transparent pricing. In conclusion, this application is poised to redefine bookshop management, setting new standards for efficiency and user engagement in the dynamic world of book retail.

# INTRODUCTION


The "Book Shop Application" is an innovative and tailored software solution designed to elevate the management and functionality of bookshops. Recognizing the distinct needs of book retailers, this application focuses on three pivotal elements: book names, editions, and prices. The intent is to streamline and enhance the overall bookshop experience, catering to the specific requirements of both bookstore staff and customers.

In an era where technological advancements play a crucial role in shaping retail landscapes, the "Book Shop Application" emerges as a strategic tool to optimize book inventory and pricing strategies. By providing a user-friendly interface, the application aims to simplify the often intricate processes associated with book management, edition tracking, and pricing mechanisms.

This introduction sets the stage for a closer exploration of the features embedded within the "Book Shop Application," unveiling how it addresses the intricacies of cataloging book information, managing various editions, and implementing dynamic pricing strategies. As bookshops navigate the challenges of a dynamic market, this application offers a purpose-built solution to enhance operational efficiency, improve customer interactions, and ensure competitiveness in the ever-evolving book retail landscape.

## OBJECTIVE

The objective of the "Book Shop Application" is to streamline bookshop operations by providing a user-friendly platform for efficient management of book names, editions, and prices. It aims to enhance staff productivity, improve customer experiences, and adapt dynamically to market trends, ensuring a competitive edge in the book retail sector.

## PURPOSE

The purpose of the "Book Shop Application" is to simplify and optimize bookshop management. By centralizing book information, tracking editions, and facilitating dynamic pricing, the application aims to enhance operational efficiency, improve customer satisfaction, and ensure the bookstore's competitiveness in the dynamic retail landscape.

## SCOPE

The "Book Shop Application" encompasses comprehensive book inventory management, edition tracking, and dynamic pricing features. It offers a user-friendly interface for bookstore staff to efficiently handle book entries. The scope includes enhancing day-to-day operations, providing precise cataloging of book editions, and adapting pricing strategies dynamically, ensuring the application caters to the evolving needs of bookshops in a dynamic retail environment.

# MODULES

The "Book Shop Application" is structured with distinct modules to effectively manage book-related information. The key modules include:

**1. Book Management Module:**

- Enables the addition, modification, and removal of books from the inventory.
- Captures essential details such as book names, prices, and editions.

**2. Edition Tracking Module:**

- Facilitates precise cataloging and tracking of various editions for each book.
- Enhances accessibility for both staff and customers to locate specific versions.

**3. Pricing Module:**

- Implements a dynamic pricing mechanism based on factors like edition, demand, and market trends.
- Empowers administrators to set and adjust book prices to remain competitive.

**4. User Interface Module:**

- Provides a user-friendly interface for staff and customers.
- Ensures ease of navigation and interaction with the application.

**5. Administrative Control Module:**

- Grants administrators comprehensive control over the entire application.
- Includes functionalities to manage inventory, track editions, and set pricing strategies.

**6. Reporting and Analytics Module:**

- Generates reports and analytics to offer insights into sales, popular editions, and overall bookstore performance.
- Aids data-driven decision-making for inventory and pricing strategies.

**7. Customer Interface Module:**

- Enhances customer experience by providing detailed information on available books, editions, and transparent pricing.

- Supports informed decision-making for customers during the book selection process.

**8. Security Module:**

- Ensures secure access with role-based permissions for staff members.

- Safeguards sensitive data and maintains the integrity of the application.

These modules collectively contribute to the seamless functioning of the "Book Shop Application," providing a comprehensive and efficient solution for bookshop management.

## SOFTWARE REQUIREMENTS

- Operating system : Windows OS
- Front End : HTML
- Back end : MYSQL workbench
- Tool : Eclipse IDE

## FEATURES

The "Book Shop Application" is equipped with a range of features to facilitate effective bookshop management, emphasizing book names, prices, and editions. Key features include:

1. **User Authentication:**

   Allow users to register, log in, and manage their accounts.

2. **Book Catalog:**

   Maintain a database of books with information such as title, author, genre, price, and availability.

3. **Search and Filter:**

   Enable users to search for books by title, author, genre, or other criteria, and provide filtering options to refine results.

4. **Shopping Cart:**

   Allow users to add books to a shopping cart, view the items in their cart, and proceed to checkout.

5. **Checkout Process:**

   Implement a secure checkout process where users can review their order, enter shipping and payment information, and confirm their purchase.

6. **Order Management:**

   Allow users to view their order history, track the status of their orders, and manage returns or cancellations if necessary.

7. **Admin Panel:**

   Create an admin panel where administrators can manage the book catalog, view and fulfill orders, and monitor user activity.

8. **Wishlist:**

   Enable users to create and manage wishlists of books they're interested in purchasing in the future.

9. **Reviews and Ratings:**

   Allow users to leave reviews and ratings for books they've purchased, and display this information on the book detail page

.

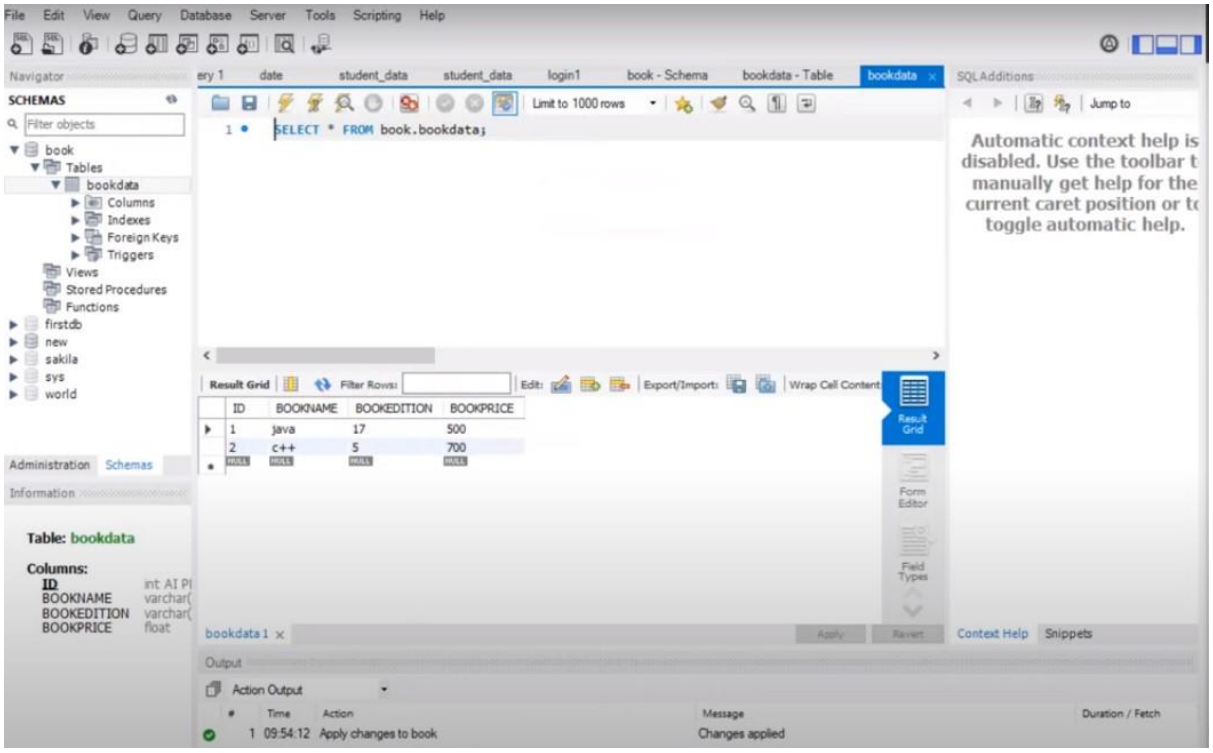
10. **Payment Gateway Integration:**

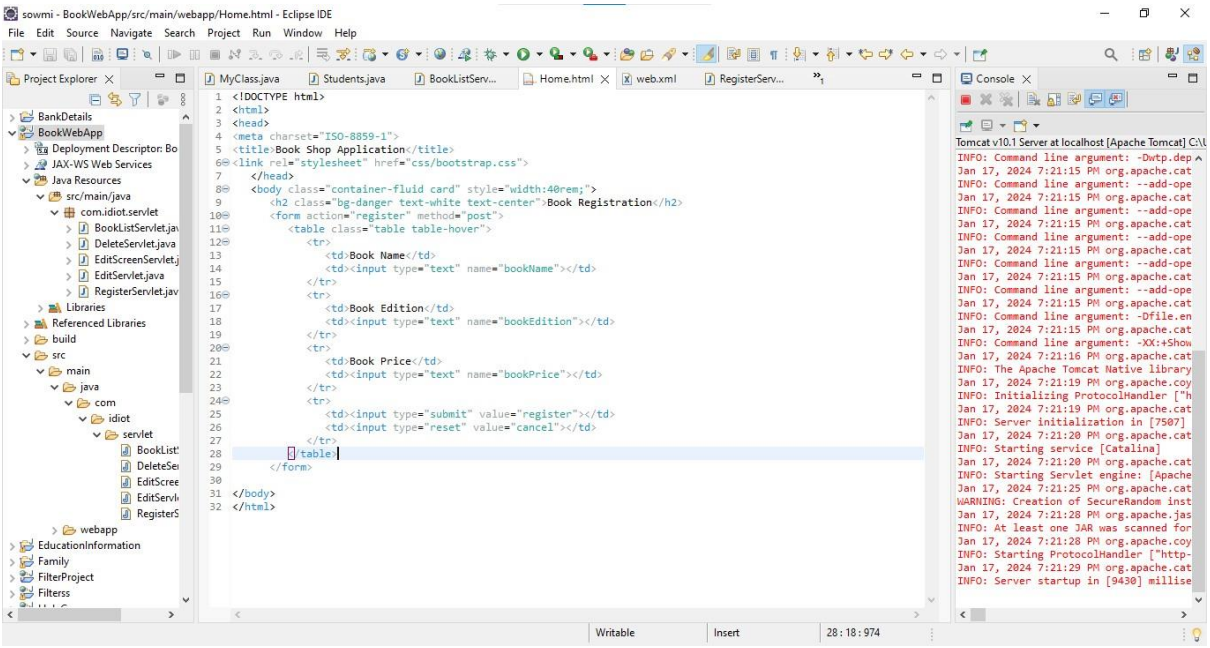
    Integrate a payment gateway to securely process payments from users.

These modules collectively contribute to the seamless functioning of the “Book Shop Application,”providing a comprehensive and efficient solution for bookshop management.

## Book Registration

| | |
|---|---|
| Book Name | |
| Book Edition | |
| Book Price | |
| register | cancel |

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File Edit Source Navigate Search Project Run Window Help
Project Explorer
BankDetails
BookWebApp
Deployment Descriptor: Bo
JAX-WS Web Services
Java Resources
src/main/java
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BookListServlet.jav
DeleteServlet.java
EditScreenServlet.j
EditServlet.java
RegisterServlet.jav
Libraries
Referenced Libraries
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main
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com
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servlet
webapp
EducationInformation
Family
FilterProject
Filterss
MyClass.java
Students.java
BookListServ...
Home.html
web.xml
RegisterServ...
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="ISO-8859-1">
5 <title>Book Shop Application</title>
6 <link rel="stylesheet" href="css/bootstrap.css">
7 </head>
8 <body class="container-fluid card" style="width:40rem;">
9 <h2 class="bg-danger text-white text-center">Book Registration</h2>
10 <form action="register" method="post">
11 <table class="table table-hover">
12 <tr>
13 <td>Book Name</td>
14 <td><input type="text" name="bookName"></td>
15 </tr>
16 <tr>
17 <td>Book Edition</td>
18 <td><input type="text" name="bookEdition"></td>
19 </tr>
20 <tr>
21 <td>Book Price</td>
22 <td><input type="text" name="bookPrice"></td>
23 </tr>
24 <tr>
25 <td><input type="submit" value="register"></td>
26 <td><input type="reset" value="cancel"></td>
27 </tr>
28 </table>
29 </form>
30
31 </body>
32 </html>
Console
Tomcat v10.1 Server at localhost [Apache Tomcat] C:\
INFO: Command line argument: -Dwtp.dep
Jan 17, 2024 7:21:15 PM org.apache.cat
INFO: Command line argument: --add-ope
INFO: Command line argument: -Dfile.en
INFO: Command line argument: -XX:+Show
INFO: The Apache Tomcat Native library
INFO: Initializing ProtocolHandler ["h
INFO: Server initialization in [7507]
INFO: Starting service [Catalina]
INFO: Starting Servlet engine: [Apache
WARNING: Creation of SecureRandom inst
INFO: At least one JAR was scanned for
INFO: Starting ProtocolHandler ["http-
INFO: Server startup in [9430] millise
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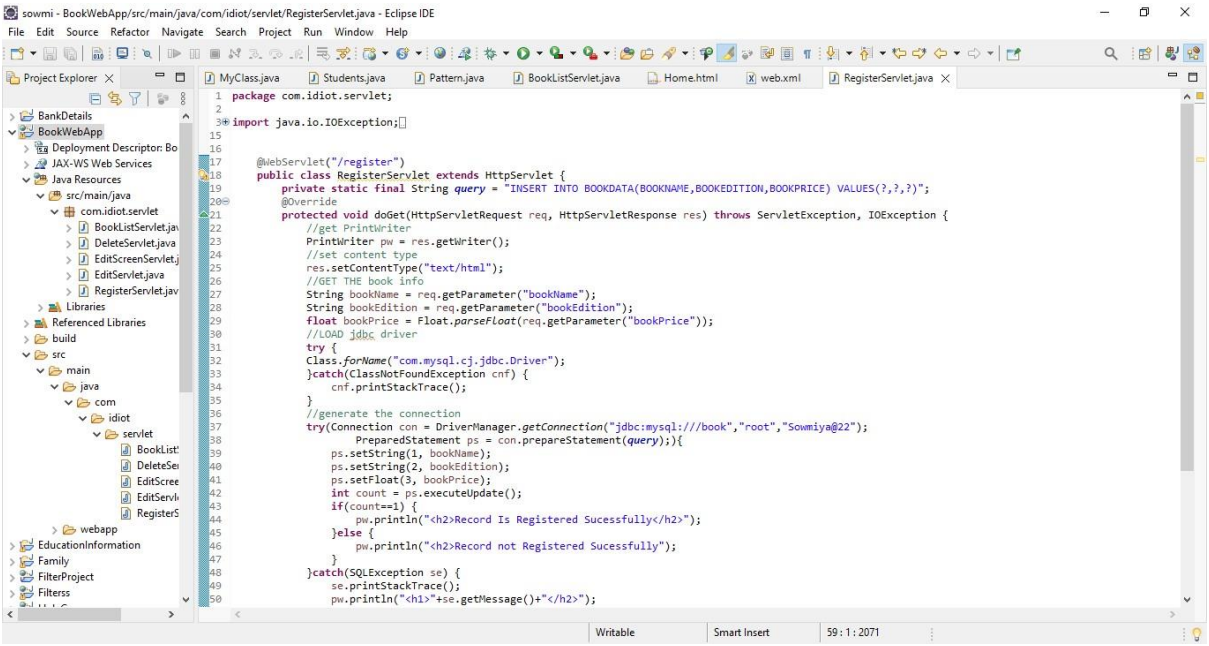
28 : 18 : 974


sowmi - BookWebApp/src/main/java/com/idiot/servlet/RegisterServlet.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
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Java Resources
src/main/java
com.idiot.servlet
BookListServlet.jav
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Libraries
Referenced Libraries
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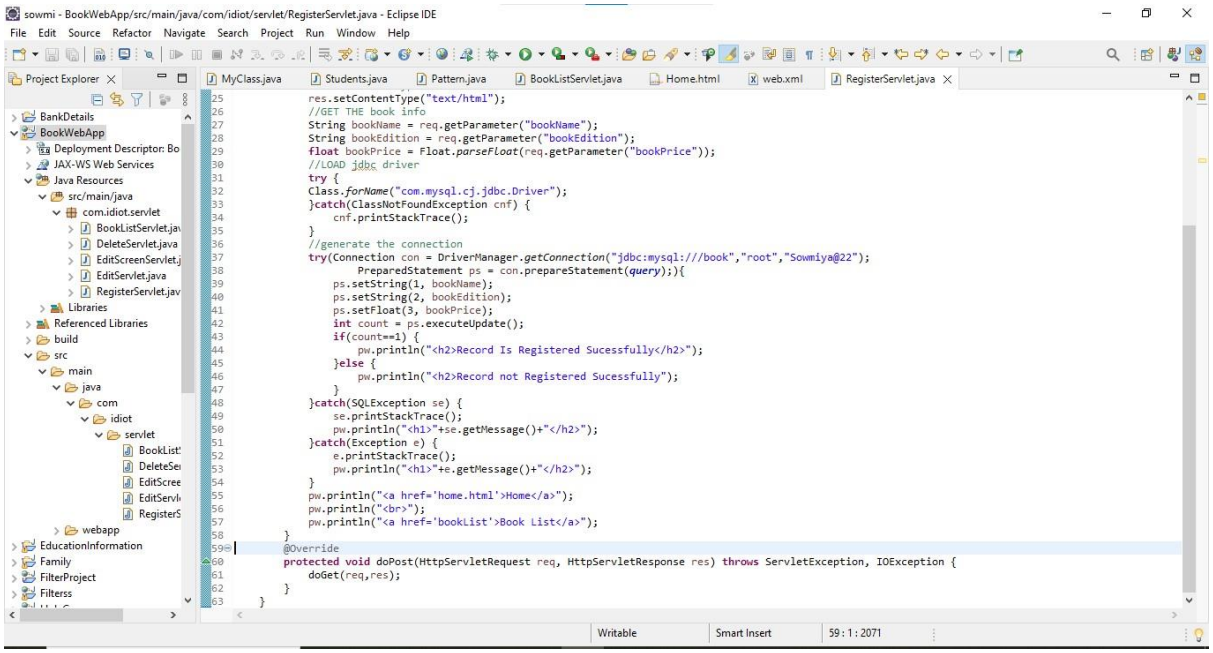
src
main
java
com
idiot
servlet
webapp
EducationInformation
Family
FilterProject
Filterss
MyClass.java
Students.java
Pattern.java
BookListServlet.java
Home.html
web.xml
RegisterServlet.java
1 package com.idiot.servlet;
2
3 import java.io.IOException;
15
16
17 @WebServlet("/register")
18 public class RegisterServlet extends HttpServlet {
19 private static final String query = "INSERT INTO BOOKDATA(BOOKNAME,BOOKEDITION,BOOKPRICE) VALUES(?,?,?)";
20 @Override
21 protected void doGet(HttpServletRequest req, HttpServletResponse res) throws ServletException, IOException {
22 //get PrintWriter
23 PrintWriter pw = res.getWriter();
24 //set content type
25 res.setContentType("text/html");
26 //GET THE book info
27 String bookName = req.getParameter("bookName");
28 String bookEdition = req.getParameter("bookEdition");
29 float bookPrice = Float.parseFloat(req.getParameter("bookPrice"));
30 //LOAD jdbc driver
31 try {
32 Class.forName("com.mysql.cj.jdbc.Driver");
33 }catch(ClassNotFoundException cnf) {
34 cnf.printStackTrace();
35 }
36 //generate the connection
37 try(Connection con = DriverManager.getConnection("jdbc:mysql:///book","root","Sowmiya@22");
38 PreparedStatement ps = con.prepareStatement(query);){
39 ps.setString(1, bookName);
40 ps.setString(2, bookEdition);
41 ps.setFloat(3, bookPrice);
42 int count = ps.executeUpdate();
43 if(count==1) {
44 pw.println("<h2>Record Is Registered Sucessfully</h2>");
45 }else {
46 pw.println("<h2>Record not Registered Sucessfully");
47 }
48 }catch(SQLException se) {
49 se.printStackTrace();
50 pw.println("<h1>"+se.getMessage()+"</h2>");
Writable
Smart Insert
59 : 1 : 2071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build
src
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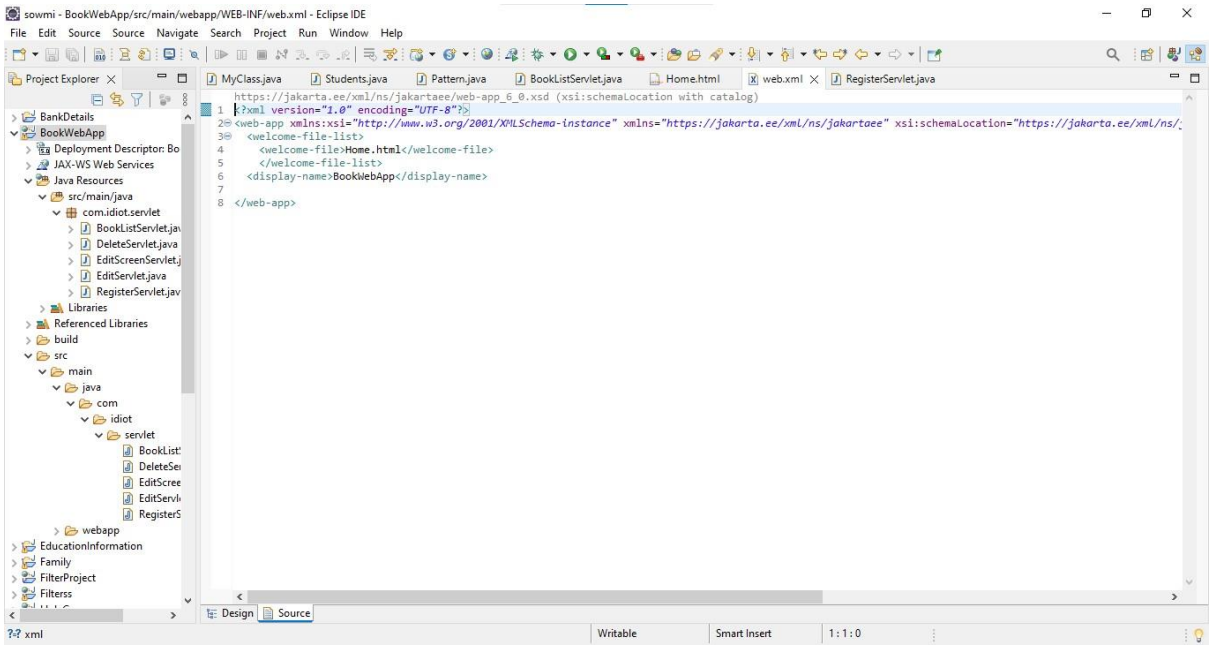
java
com
idiot
servlet
webapp
EducationInformation
Family
FilterProject
Filterss
res.setContentType("text/html");
//GET THE book info
String bookName = req.getParameter("bookName");
String bookEdition = req.getParameter("bookEdition");
float bookPrice = Float.parseFloat(req.getParameter("bookPrice"));
//LOAD jdbc driver
try {
Class.forName("com.mysql.cj.jdbc.Driver");
}catch(ClassNotFoundException cnf) {
cnf.printStackTrace();
}
//generate the connection
try(Connection con = DriverManager.getConnection("jdbc:mysql:///book","root","Sowmiya@22");
PreparedStatement ps = con.prepareStatement(query);){
ps.setString(1, bookName);
ps.setString(2, bookEdition);
ps.setFloat(3, bookPrice);
int count = ps.executeUpdate();
if(count==1) {
pw.println("<h2>Record Is Registered Sucessfully</h2>");
}else {
pw.println("<h2>Record not Registered Sucessfully");
}
}catch(SQLException se) {
se.printStackTrace();
pw.println("<h1>"+se.getMessage()+"</h2>");
}catch(Exception e) {
e.printStackTrace();
pw.println("<h1>"+e.getMessage()+"</h2>");
}
pw.println("<a href='home.html'>Home</a>");
pw.println("<br>");
pw.println("<a href='bookList'>Book List</a>");
}
@Override
protected void doPost(HttpServletRequest req, HttpServletResponse res) throws ServletException, IOException {
doGet(req,res);
}
}
Writable
Smart Insert
59 : 1 : 2071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web.xml
RegisterServlet.java
https://jakarta.ee/xml/ns/jakartaee/web-app_6_0.xsd (xsi:schemaLocation with catalog)
<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="https://jakarta.ee/xml/ns/jakartaee" xsi:schemaLocation="https://jakarta.ee/xml/ns/
<welcome-file-list>
<welcome-file>Home.html</welcome-file>
</welcome-file-list>
<display-name>BookWebApp</display-name>
</web-app>
Design
Source
xml
Writable
Smart Insert
1 : 1 : 0

## SOURCE CODE:

### HOME.HTML

```
<!DOCTYPE html>
<html>
<head>

<meta charset="ISO-8859-1">
<title>Book Shop Application</title>
<link rel="stylesheet" href="css/bootstrap.css">
  </head>

  <body class="container-fluid card" style="width:40rem;">
    <h2 class="bg-danger text-white text-center">Book Registration</h2>
    <form action="register" method="post">
      <table class="table table-hover">

        <tr>
          <td>Book Name</td>
          <td><input type="text" name="bookName"></td>
        </tr>

        <tr>
          <td>Book Edition</td>
          <td><input type="text" name="bookEdition"></td>
        </tr>


        <tr>
          <td>Book Price</td>
          <td><input type="text" name="bookPrice"></td>
```

```
        </tr>

        <tr>
          <td><input type="submit" value="register"></td>
          <td><input type="reset" value="cancel"></td>
        </tr>


      </table>
    </form>

</body>
</html>
```

**REGISTERSERVLET.JAVA**

```
package com.idiot.servlet;

import java.io.IOException;
import java.io.PrintWriter;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.SQLException;

import jakarta.servlet.ServletException;
import jakarta.servlet.annotation.WebServlet;
import jakarta.servlet.http.HttpServlet;
import jakarta.servlet.http.HttpServletRequest;
import jakarta.servlet.http.HttpServletResponse;


	@WebServlet("/register")
	public class RegisterServlet extends HttpServlet {
		private static final String query = "INSERT INTO
BOOKDATA(BOOKNAME,BOOKEDITION,BOOKPRICE) VALUES(?,?,?)";

		@Override
		protected void doGet(HttpServletRequest req, HttpServletResponse res)
throws ServletException, IOException {
			//get PrintWriter
			PrintWriter pw = res.getWriter();
			//set content type
			res.setContentType("text/html");
			//GET THE book info
			String bookName = req.getParameter("bookName");
			String bookEdition = req.getParameter("bookEdition");
```

```
                    float bookPrice = Float.parseFloat(req.getParameter("bookPrice"));

//LOAD jdbc driver
                    try {
                    Class.forName("com.mysql.cj.jdbc.Driver");
                    }catch(ClassNotFoundException cnf) {
                            cnf.printStackTrace();
                    }

                    //generate the connection
                    try(Connection con =
DriverManager.getConnection("jdbc:mysql:///book","root","Sowmiya@22");
                                    PreparedStatement ps = con.prepareStatement(query);){
                            ps.setString(1, bookName);
                            ps.setString(2, bookEdition);
                            ps.setFloat(3, bookPrice);
                            int count = ps.executeUpdate();
                            if(count==1) {
                                    pw.println("<h2>Record Is Registered
Sucessfully</h2>");
                            }else {
                                    pw.println("<h2>Record not Registered Sucessfully");
                            }
                    }catch(SQLException se) {
                            se.printStackTrace();
                            pw.println("<h1>"+se.getMessage()+"</h2>");
                    }catch(Exception e) {
                            e.printStackTrace();
                            pw.println("<h1>"+e.getMessage()+"</h2>");
                    }
                    pw.println("<a href='home.html'>Home</a>");
                    pw.println("<br>");
                    pw.println("<a href='bookList'>Book List</a>");
            }
```

```
		@Override
		protected void doPost(HttpServletRequest req, HttpServletResponse res)
throws ServletException, IOException {
			doGet(req,res);
		}
	}
```

# CONCLUSION

The bookshop application revolutionizes the way readers access and engage with literature. By offering a user-friendly interface, personalized recommendations, and anytime access, the platform caters to the evolving preferences of modern consumers. This digital transformation not only enhances the convenience of book browsing and purchasing but also opens new avenues for targeted marketing and customer retention. The application fosters a sense of community through virtual events, book clubs, and author interactions, bridging the gap between writers and readers. As technology continues to reshape the literary landscape, the bookshop application stands as a testament and commitment to providing a seamless, enriching experience for book enthusiasts. Overall, this innovation not only boosts the efficiency of book retail but also contributes to a more connected and dynamic literary ecosystem.