

ASSIGNMENT NO. 5

JSP Experiments: Write a JSP application to input book information and store in the database. Application must provide facility to search book based on title of book or author or ISBN number.

```
mysql> create database bookdb;  
Query OK, 1 row affected (0.01 sec)
```

```
mysql> use bookdb;  
Database changed
```

```
mysql> CREATE TABLE books (  
-> id INT AUTO_INCREMENT PRIMARY KEY,  
-> title VARCHAR(255),  
-> author VARCHAR(255),  
-> isbn VARCHAR(50),  
-> pub_year INT  
-> );  
Query OK, 0 rows affected (0.05 sec)
```

```
mysql> desc books;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
title	varchar(255)	YES		NULL	
author	varchar(255)	YES		NULL	
isbn	varchar(50)	YES		NULL	
pub_year	int	YES		NULL	

```
5 rows in set (0.02 sec)
```

BookApp.jsp

```
<%@ page import="java.sql.*" %>  
<html>  
<head>  
  <title>Book Management Application</title>  
</head>  
<body>  
  <h1> Book Management System</h1>  
  
  <!-- Menu -->  
  <a href="BookApp.jsp?action=add">Add Book</a> |  
  <a href="BookApp.jsp?action=search">Search Book</a>  
  <hr>  
  
  <%  
    String action = request.getParameter("action");  
  
    // Database connection variables  
    String url = "jdbc:mysql://localhost:3306/bookdb";  
    String user = "root"; // change if needed
```

```

String pass = "root"; // change if needed
Class.forName("com.mysql.cj.jdbc.Driver");
Connection conn = DriverManager.getConnection(url, user, pass);

if("add".equals(action)) {
%>
<!-- Add Book Form -->
<h2>Add a New Book</h2>
<form method="post" action="BookApp.jsp?action=add">
    Title: <input type="text" name="title" required><br><br>
    Author: <input type="text" name="author" required><br><br>
    ISBN: <input type="text" name="isbn" required><br><br>
    Publication Year: <input type="number" name="pub_year" required><br><br>
    <input type="submit" value="Add Book">
</form>

<%
    String title = request.getParameter("title");
    String author = request.getParameter("author");
    String isbn = request.getParameter("isbn");
    String pub_year = request.getParameter("pub_year");

    if(title != null && author != null && isbn != null && pub_year != null) {
        try {
            String sql = "INSERT INTO books (title, author, isbn, pub_year) VALUES (?, ?,
?, ?)";

            PreparedStatement ps = conn.prepareStatement(sql);
            ps.setString(1, title);
            ps.setString(2, author);
            ps.setString(3, isbn);
            ps.setInt(4, Integer.parseInt(pub_year));

            int i = ps.executeUpdate();
            if(i > 0) {
                out.println("<p style='color:green;'>✅ Book successfully added!</p>");
            }
        } catch(Exception e) {
            out.println("<p style='color:red;'>Error: " + e.getMessage() + "</p>");
        }
    }
%>

<%
    } else if("search".equals(action)) {
%>
<!-- Search Form -->
<h2>Search Book</h2>

```

```

<form method="get" action="BookApp.jsp">
  <input type="hidden" name="action" value="search">
  Enter keyword (Title / Author / ISBN):
  <input type="text" name="keyword" required>
  <input type="submit" value="Search">
</form>

<%
String keyword = request.getParameter("keyword");
if(keyword != null && !keyword.trim().equals("")) {
    try {
        String sql = "SELECT * FROM books WHERE title LIKE ? OR author LIKE ? OR
isbn LIKE ?";
        PreparedStatement ps = conn.prepareStatement(sql);
        String likeKeyword = "%" + keyword + "%";
        ps.setString(1, likeKeyword);
        ps.setString(2, likeKeyword);
        ps.setString(3, likeKeyword);

        ResultSet rs = ps.executeQuery();

        if(rs.isBeforeFirst()) {
            out.println("<h3>Search Results:</h3>");
            out.println("<table border='1' cellpadding='5'>");
            out.println("<tr><th>Title</th><th>Author</th><th>ISBN</th><th>Publication
Year</th></tr>");
            while(rs.next()) {
                out.println("<tr>");
                out.println("<td>" + rs.getString("title") + "</td>");
                out.println("<td>" + rs.getString("author") + "</td>");
                out.println("<td>" + rs.getString("isbn") + "</td>");
                out.println("<td>" + rs.getInt("pub_year") + "</td>");
                out.println("</tr>");
            }
            out.println("</table>");
        } else {
            out.println("<p style='color:red;'> ❌ No books found matching your
search.</p>");
        }
    } catch(Exception e) {
        out.println("<p style='color:red;'>Error: " + e.getMessage() + "</p>");
    }
}
%>

<%
} else {

```

```
        out.println("<p>👉 Choose an option above to proceed.</p>");
    }

    conn.close();
%>
</body>
</html>
```

[←](#) [→](#) [🔄](#) [📄](#) localhost:8085/EXP5/BookApp.jsp?action=add

Book Management System

[Add Book](#) | [Search Book](#)

Add a New Book

Title:

Author:

ISBN:

Publication Year:

[←](#) [→](#) [🔄](#) [📄](#) localhost:8085/EXP5/BookApp.jsp?action=add

Book Management System

[Add Book](#) | [Search Book](#)

Add a New Book

Title:

Author:

ISBN:

Publication Year:

â€¦ Book successfully added!

← → ↻ ⓘ localhost:8085/EXP5/BookApp.jsp?action=search

Book Management System

[Add Book](#) | [Search Book](#)

Search Book

Enter keyword (Title / Author / ISBN):

← → ↻ ⓘ localhost:8085/EXP5/BookApp.jsp?action=search&keyword=101

Book Management System

[Add Book](#) | [Search Book](#)

Search Book

Enter keyword (Title / Author / ISBN):

Search Results:

Title	Author	ISBN	Publication Year
wings of fire	A P J Abdul Kalam	101	1999