

Exp No: 8 Date: 22.04.25	LIBRARY MANAGEMENT SYSTEM
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AIM:

Write a program to implement a library management system

PROGRAM:

LIBRARYMANAGEMENT.JSP

```

<html>
<head>
  <title>Library Management - Add Book</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      background-color: #f3f3f3;
      margin: 20px;
      padding: 20px;
    }

    h2 {
      color: #333;
    }

    form {
      background-color: #fff;
      padding: 20px;
      border-radius: 8px;
      box-shadow: 0 2px 5px rgba(0,0,0,0.1);
      width: 400px;
    }

    input[type="text"],
    input[type="number"],
    select {
      width: 100%;
      padding: 8px;
      margin: 6px 0 12px 0;
      border: 1px solid #ccc;
      border-radius: 4px;
    }

    input[type="submit"] {
      background-color: #4CAF50;
      color: white;
      border: none;
      padding: 10px 16px;
      cursor

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: pointer;
  border-radius: 4px;
}

input[type="submit"]:hover {
  background-color: #45a049;
}

p {
  font-size: 16px;
}

a {
  color: #007BFF;
  text-decoration: none;
}

a:hover {
  text-decoration: underline;
}
</style>

<script>

function validateForm() {
  const bookId = document.getElementById("bookId").value.trim();
  const title = document.getElementById("title").value.trim();
  const author = document.getElementById("author").value.trim();
  const year = document.getElementById("year").value.trim();
  const category = document.getElementById("category").value;
  const copies = document.getElementById("copies").value.trim();
  const currentYear = new Date().getFullYear();

  if (!/^[a-zA-Z0-9]+$/.test(bookId)) {
    alert("Book ID must be alphanumeric.");
    return false;
  }
  if (!/^[A-Za-z ]+$/.test(title)) {
    alert("Title must contain only letters.");
    return false;
  }
  if (!/^[A-Za-z ]+$/.test(author)) {
    alert("Author name must contain only letters.");
    return false;
  }
  if (!/^\d{4}$/.test(year) || parseInt(year) > currentYear) {
    alert("Year must be a valid 4-digit year.");
    return false;
  }
}

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        if (category === "") {
            alert("Please select a category.");
            return false;
        }
        if (isNaN(copies) || parseInt(copies) <= 0) {
            alert("Copies must be a positive number.");
            return false;
        }

        return true;
    }
</script>
</head>
<body>
    <h2>Add Book to Library</h2>
    <form method="post" onsubmit="return validateForm()">
        Book ID: <input type="text" name="bookId" id="bookId"/><br/>
        Title: <input type="text" name="title" id="title"/><br/>
        Author: <input type="text" name="author" id="author"/><br/>
        Year: <input type="text" name="year" id="year"/><br/>
        Category:
        <select name="category" id="category">
            <option value="">--Select--</option>
            <option value="Science">Science</option>
            <option value="Fiction">Fiction</option>
            <option value="History">History</option>
        </select><br/>
        Copies: <input type="number" name="copies"
id="copies"/><br/><br/>
        <input type="submit" value="Add Book"/>

        <p>
            <label>Book Details:-</label>
            <a href="./display_books.jsp">Click Here</a>
        </p>
    </form>

    <%

        // JSP Database logic

        // TODO:Change password before run the code
        // TODO: CREATE THE TABLE IN MYSQL
        /**
CREATE TABLE books (
    book_id VARCHAR(20) PRIMARY KEY,
    title VARCHAR(100),
    author VARCHAR(100),

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    year INT,
    category VARCHAR(50),
    copies INT
);
**/

String bookId = request.getParameter("bookId");
if (bookId != null) {
    String title = request.getParameter("title");
    String author = request.getParameter("author");
    String year = request.getParameter("year");
    String isbn = request.getParameter("isbn");
    String category = request.getParameter("category");
    String copies = request.getParameter("copies");

    try {
        Class.forName("com.mysql.cj.jdbc.Driver");
        Connection conn = DriverManager.getConnection(
            "jdbc:mysql://localhost:3306/library_management_akshayaas", "root",
            "");
        PreparedStatement ps = conn.prepareStatement(
            "INSERT INTO books (book_id, title, author, year,
category, copies) VALUES (?, ?, ?, ?, ?, ?)");
        ps.setString(1, bookId);
        ps.setString(2, title);
        ps.setString(3, author);
        ps.setInt(4, Integer.parseInt(year));
        ps.setString(5, category);
        ps.setInt(6, Integer.parseInt(copies));

        int result = ps.executeUpdate();
        if (result > 0) {
            %>
            <script>alert("Book Added Successfully!!")</script>
            <%
        } else {
            %>
            <script>alert("Failed to add book!!")</script>
            <%
            out.println("<p style='color:red;'>Failed to add
book.</p>");
        }

        ps.close();
        conn.close();
    } catch (Exception e) {
        out.println("<p style='color:red;'>Error: " + e.getMessage()
+ "</p>");
    }
}

```

```
    }  
  }  
  %>  
</body>  
</html>
```

DISPLAY_BOOKS.JSP

```
<html>  
  
<head>  
  
  <title>Library Books List</title>  
  
  <style>  
  
    table {  
  
      border-collapse: collapse;  
  
      width: 90%;  
  
      margin: 20px auto;  
  
    }  
  
    th, td {  
  
      border: 1px solid #333;  
  
      padding: 10px;  
  
      text-align: center;  
  
    }  
  
    th {  
  
      background-color: #f2f2f2;  
  
    }  
  
    h2 {  
  
      text-align: center;  
  
    }  
  
  </style>
```

```

</head>

<body>

    <h2>All Books in Library</h2>

    <%

        try {

            Class.forName("com.mysql.cj.jdbc.Driver");

            Connection conn = DriverManager.getConnection(

                "jdbc:mysql://localhost:3306/library_management_akshayaas",
                "root", "");

            Statement stmt = conn.createStatement();

            ResultSet rs = stmt.executeQuery("SELECT * FROM books");

            out.println("<table>");

            out.println("<tr><th>Book
ID</th><th>Title</th><th>Author</th><th>Year</th><th>Category</th><th>Copies</th></tr>");

            while (rs.next()) {

                out.println("<tr>");

                out.println("<td>" + rs.getString("book_id") + "</td>");

                out.println("<td>" + rs.getString("title") + "</td>");

                out.println("<td>" + rs.getString("author") + "</td>");

                out.println("<td>" + rs.getInt("year") + "</td>");

                out.println("<td>" + rs.getString("category") + "</td>");

                out.println("<td>" + rs.getInt("copies") + "</td>");

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        out.println("</tr>");
    }

    out.println("</table>");

    rs.close();

    stmt.close();

    conn.close();

} catch (Exception e) {

    out.println("<p style='color:red;text-align:center;'>Error: "
+ e.getMessage() + "</p>");

}

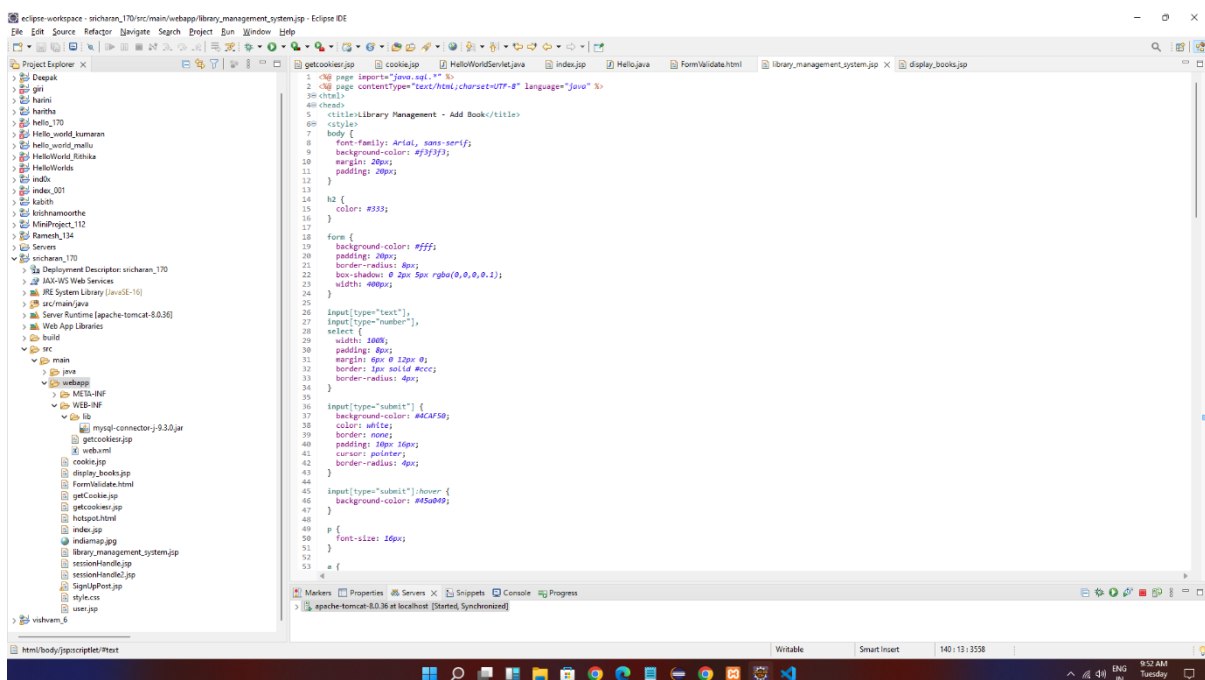
%>

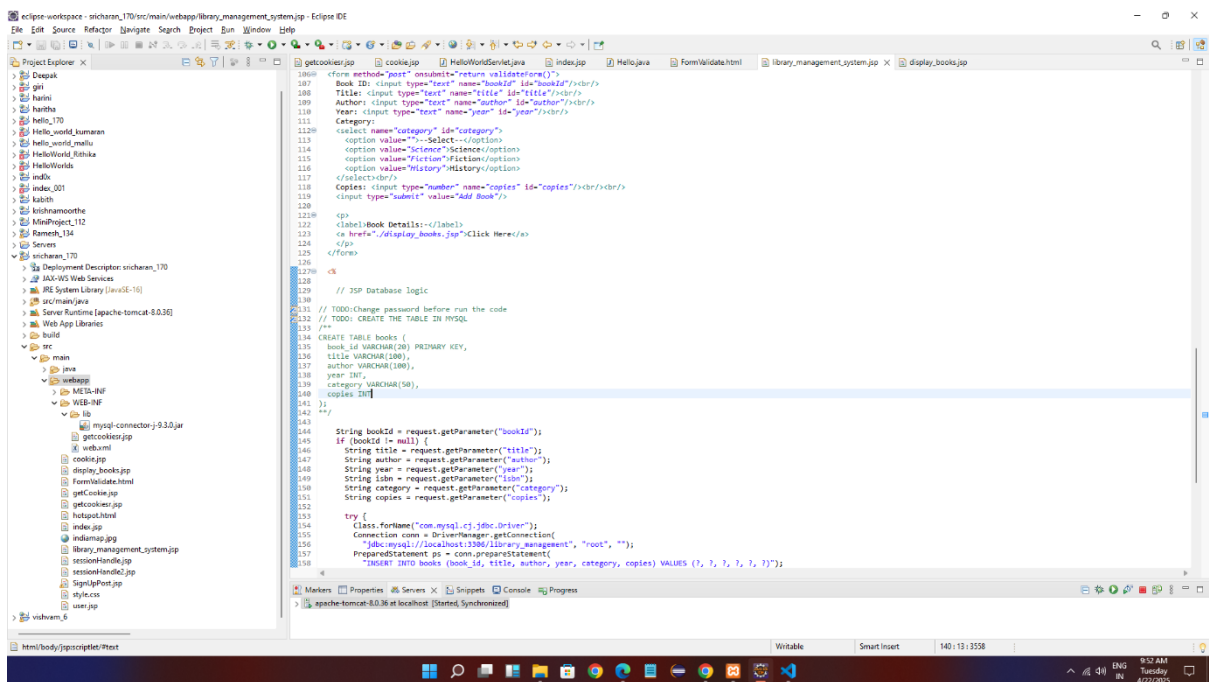
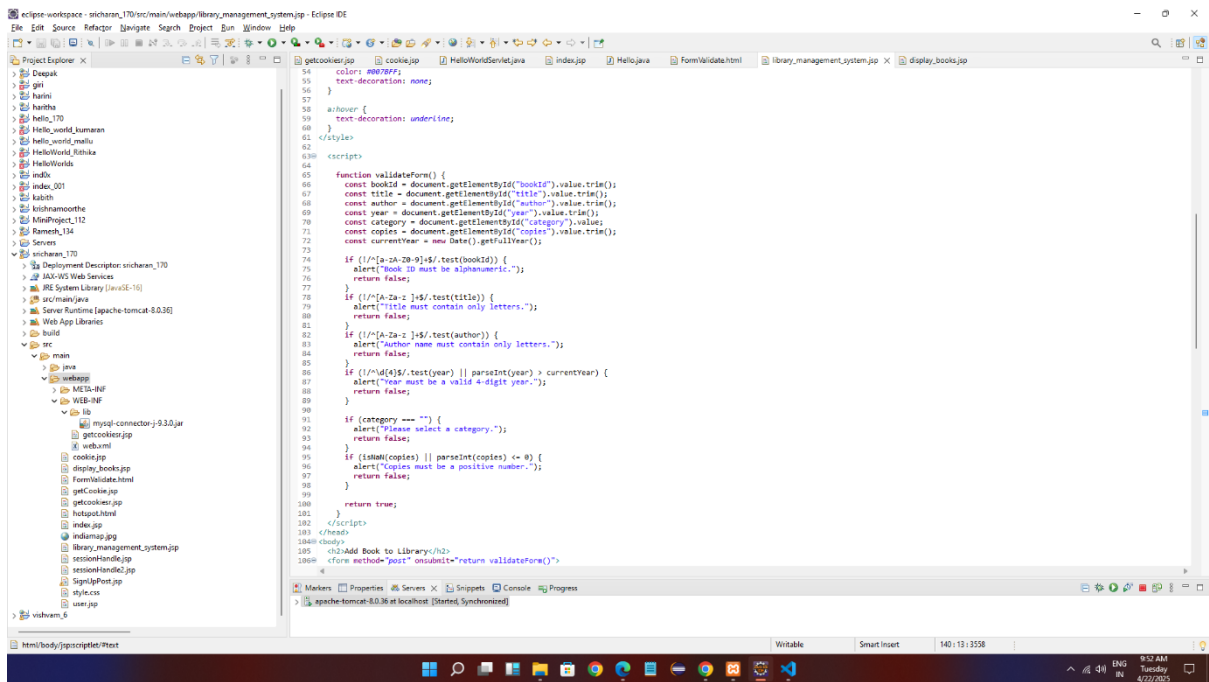
</body>

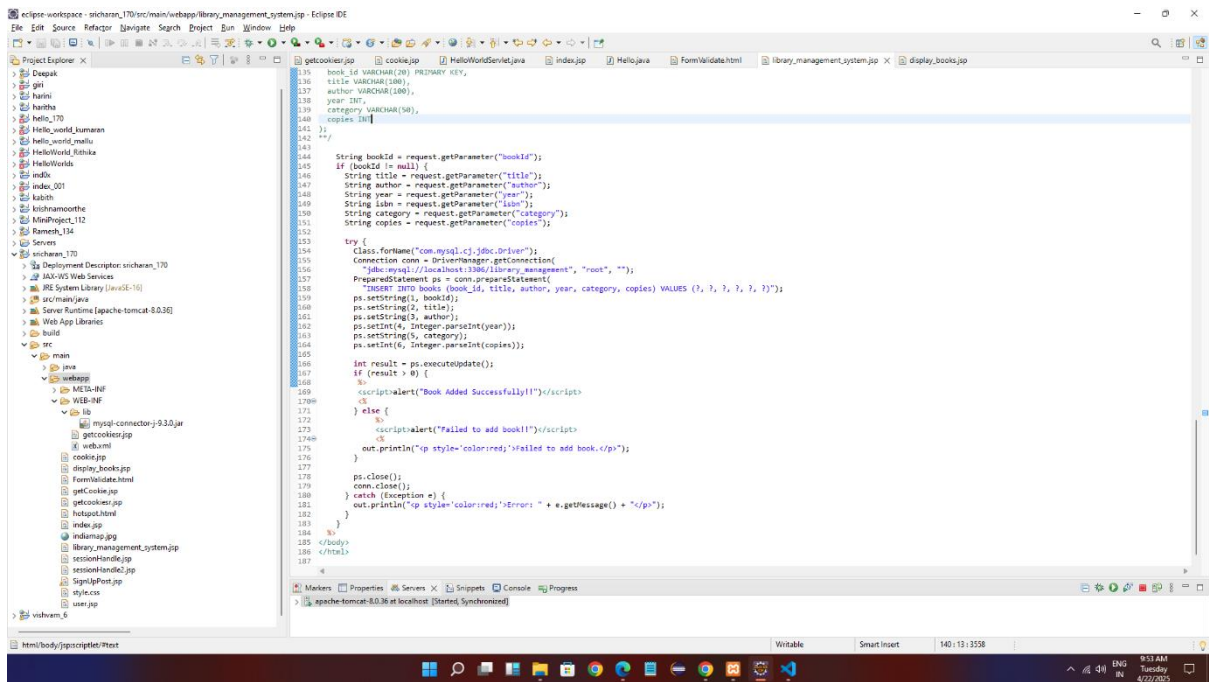
</html>

```

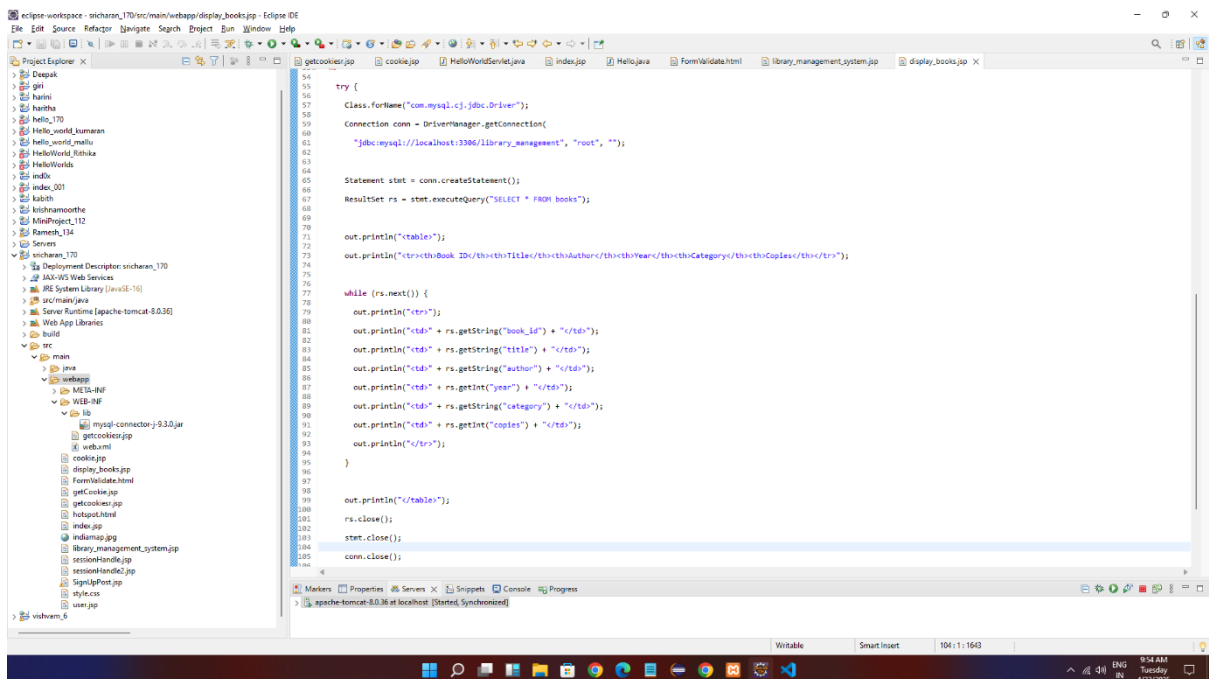
library_management_system.jsp:

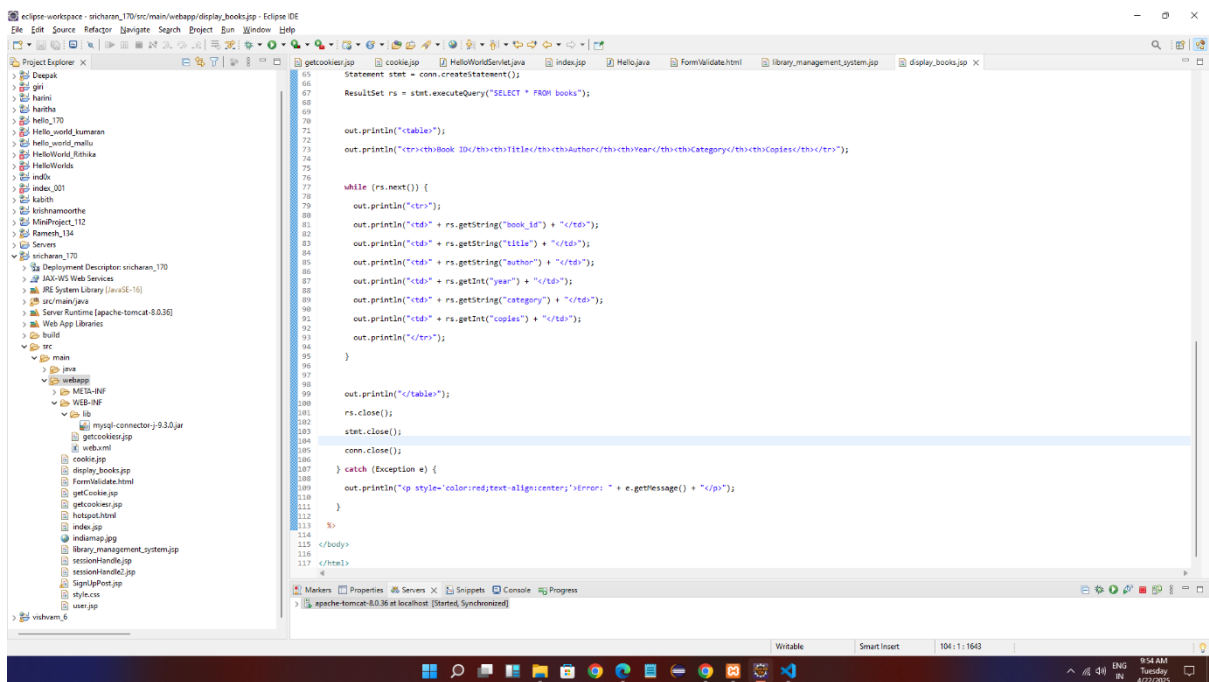
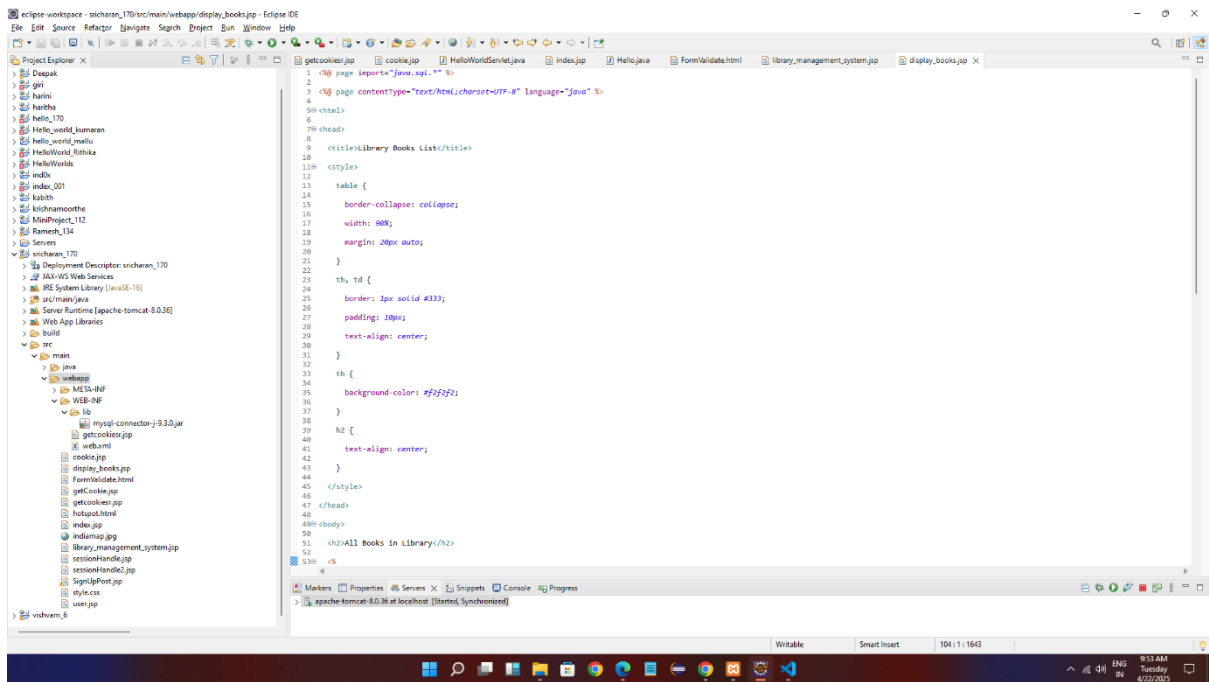






display_book.jsp:





OUTPUT:

Library Management - Add Book

localhost:7750/sricharan_170/library_management_system.jsp

Add Book to Library

Book ID:
2

Title:
History of India

Author:
JP Arun

Year:
2002

Category:
History

Copies:
1250

Add Book

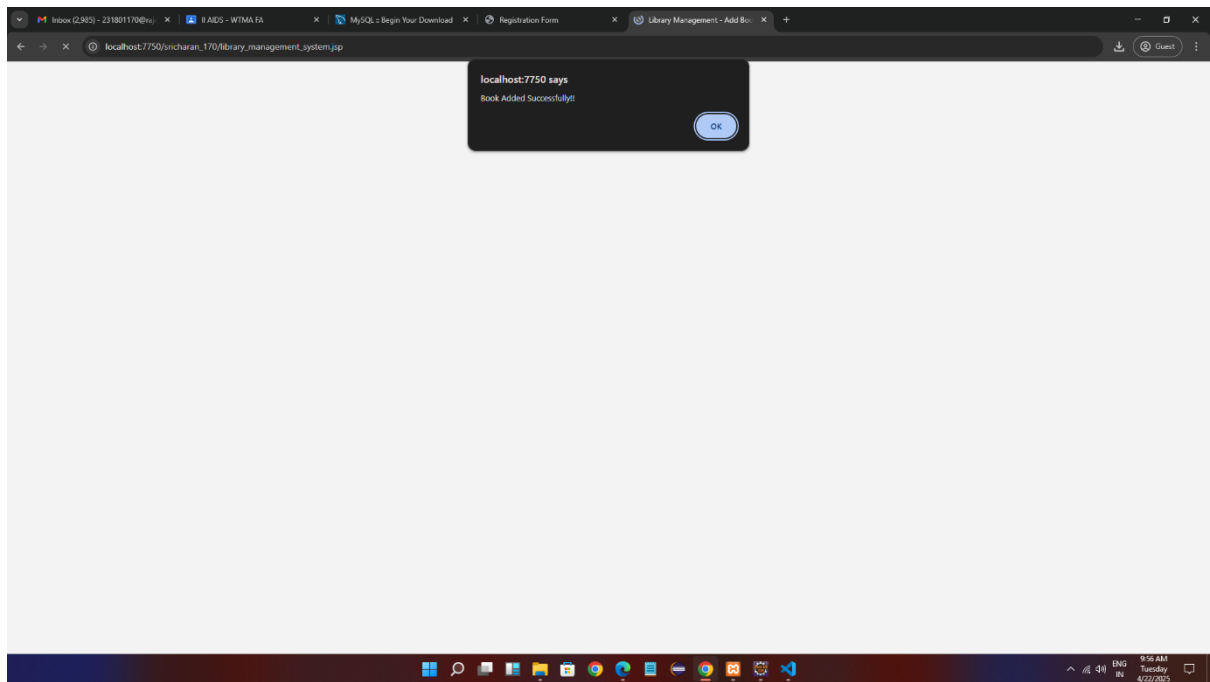
Book Details- [Click Here](#)

Library Books List

localhost:7750/sricharan_170/display_books.jsp

All Books in Library

Book ID	Title	Author	Year	Category	Copies
1	WebTechnology	Morgan	2010	Science	520
2	History of India	JP Arun	2002	History	1250



All Books in Library

Book ID	Title	Author	Year	Category	Copies
1	WebTechnology	Morgan	2010	Science	520
2	History of India	JP Arun	2002	History	1250