

**Ex.no:8**

**Date:23/4/25**

**8. Consider a Library Management System. Develop a JavaScript program that will validate the controls in the forms you have created for the application. State the assumptions you make (business logic you are taking into consideration). Note: Your application must access a database using Servlet/JSP.**

**Aim:**

To develop a JavaScript-based client-side validation system for a Library Management System that ensures all user inputs in forms (such as registration, book entry, and issue/return transactions) are valid before submission. The application will integrate with a backend implemented using Servlet/JSP to perform server-side operations and database access, ensuring data consistency and integrity across the system.

**Display\_books.jsp:**

```
<%@ page import="java.sql.*" %>
<%@ page contentType="text/html; charset=UTF-8" language="java" %>
<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>
    <%
```

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```

try {
    Class.forName("com.mysql.cj.jdbc.Driver");
    Connection conn = DriverManager.getConnection(
        "jdbc:mysql://localhost:3306/library_management_ramya", "root", "");
    Statement stmt = conn.createStatement();
    ResultSet rs = stmt.executeQuery("SELECT * FROM aswin");
    out.println("<table>");
    out.println("<tr><th>ID</th><th>name</th><th>dept</th></tr>");
    while (rs.next()) {
        out.println("<tr>");
        out.println("<td>" + rs.getString("id") + "</td>");
        out.println("<td>" + rs.getString("name") + "</td>");
        out.println("<td>" + rs.getString("dept") + "</td>");
        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>

```

```

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2  <%@ page contentType="text/html; charset=UTF-8" language="java" %>
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18     background-color: #f2f2f2;
19 }
20 h2 {
21     text-align: center;
22 }
23 </style>
24 </head>
25 <body>
26 <h2>All Books in Library</h2>
27 <%
28     try {
29         Class.forName("com.mysql.cj.jdbc.Driver");
30         Connection conn = DriverManager.getConnection(
31             "jdbc:mysql://localhost:3306/library_management_ramya", "root", "");
32         Statement stmt = conn.createStatement();
33         ResultSet rs = stmt.executeQuery("SELECT * FROM books");
34         out.println("<table>");
35         out.println("<tr><th>Book ID</th><th>Title</th><th>Author</th><th>Year</th><th>Category</th><th>Copies</th></tr>");
36         while (rs.next()) {
37             out.println("<tr>");
38             out.println("<td>" + rs.getString("book_id") + "</td>");
39             out.println("<td>" + rs.getString("title") + "</td>");
40             out.println("<td>" + rs.getString("author") + "</td>");
41             out.println("<td>" + rs.getInt("year") + "</td>");
42             out.println("<td>" + rs.getString("category") + "</td>");
43             out.println("<td>" + rs.getInt("copies") + "</td>");
44             out.println("</tr>");
45         }
46         out.println("</table>");
47         rs.close();
48         stmt.close();
49         conn.close();
50     } catch (Exception e) {
51         out.println("<p style='color:red;text-align:center;'>Error: " + e.getMessage() + "</p>");
52     }
53 }
54 %>
55 </body>
56 </html>

```

## Library\_management\_system.jsp:

```

<%@ page import="java.sql.*" %>
<%@ page contentType="text/html; charset=UTF-8" language="java" %>
<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;

```

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```

    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: 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("id").value.trim();
        const title = document.getElementById("name").value.trim();
        const author = document.getElementById("dept").value.trim();
        if (!/^[a-zA-Z0-9]+$/.test(bookId)) {
            alert("Book ID must be alphanumeric.");
            return false;
        }
        if (!/^[A-Za-z ]+$/.test(title)) {
            alert("Name must contain only letters.");
            return false;
        }
        if (!/^[A-Za-z ]+$/.test(author)) {
            alert("Dept name must contain only letters.");
            return false;
        }
        return true;
    }
</script>
</head>

```

```

<body>
  <h2>Add Book to Aswin</h2>
  <form method="post" onsubmit="return validateForm()">
    ID: <input type="text" name="id" id="id"/><br/>
    Name: <input type="text" name="name" id="name"/><br/>
    Dept: <input type="text" name="dept" id="dept"/><br/>
  <p>
    <input type="submit" value="Add Book"/>
    <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),
    year INT,
    category VARCHAR(50),
    copies INT
  );
  **/

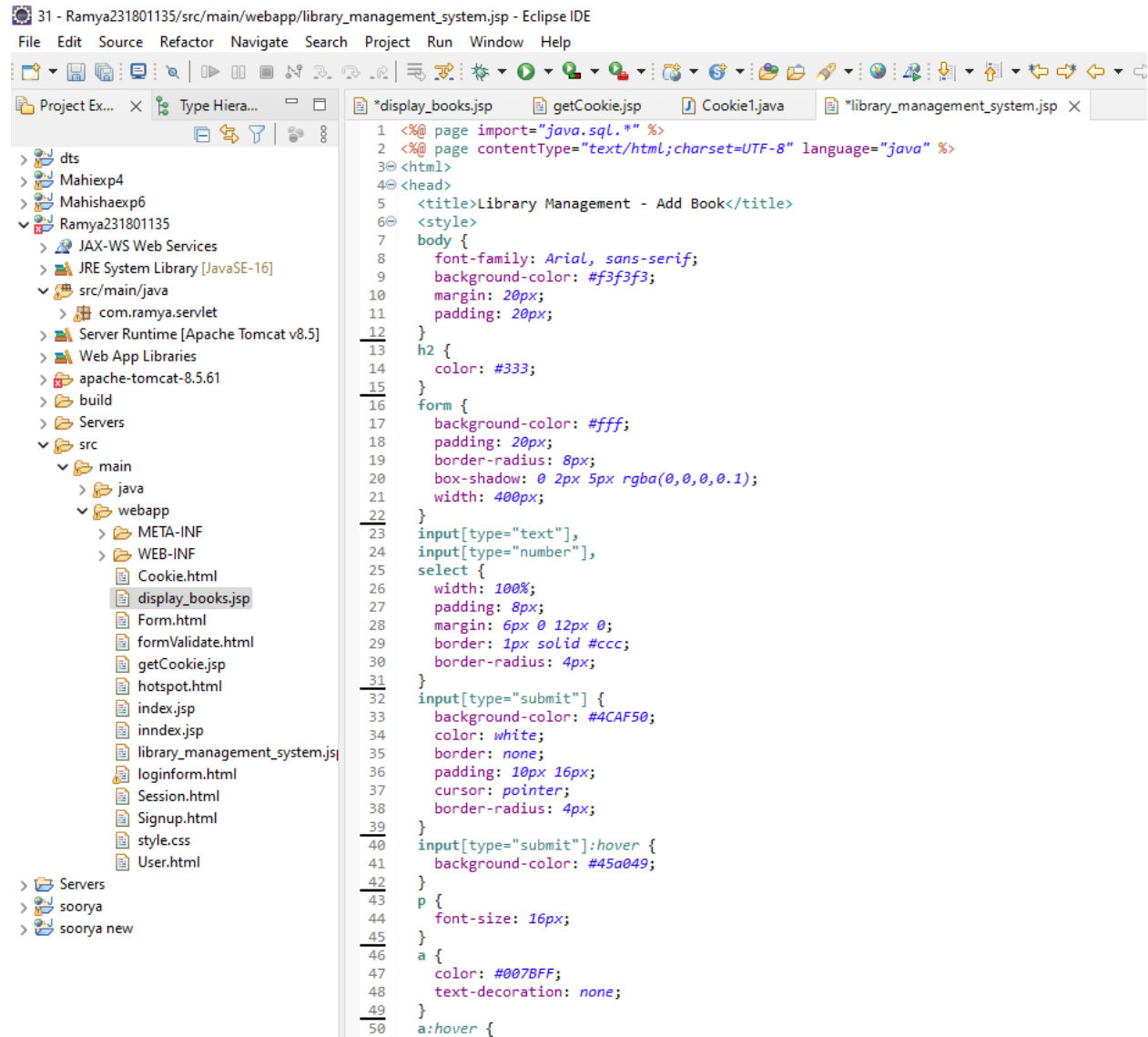
  String bookId = request.getParameter("id");
  if (bookId != null) {
    String title = request.getParameter("name");
    String author = request.getParameter("dept");
    try {
      Class.forName("com.mysql.cj.jdbc.Driver");
      Connection conn = DriverManager.getConnection(
        "jdbc:mysql://localhost:3306/library_management_dhanush", "root", "");
      PreparedStatement ps = conn.prepareStatement(
        "INSERT INTO aswin (id, name, dept) VALUES (?, ?, ?)");
      ps.setString(1, bookId);
      ps.setString(2, title);
      ps.setString(3, author);
      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>

```



localhost:7705/Ramya231801135/library\_management\_system.jsp

## Add Book to Library

Book ID:

Title:

Author:

Year:

Category:

Copies:

[Add Book](#)

Book Details:- [Click Here](#)

