

EXP:08	Library Management System
DATE:	

AIM:

To create a library management system using JSP and SQL Connector.

CODE:

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;
    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("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;
    }

    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),
```

```
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_gaurav", "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>");

}

}

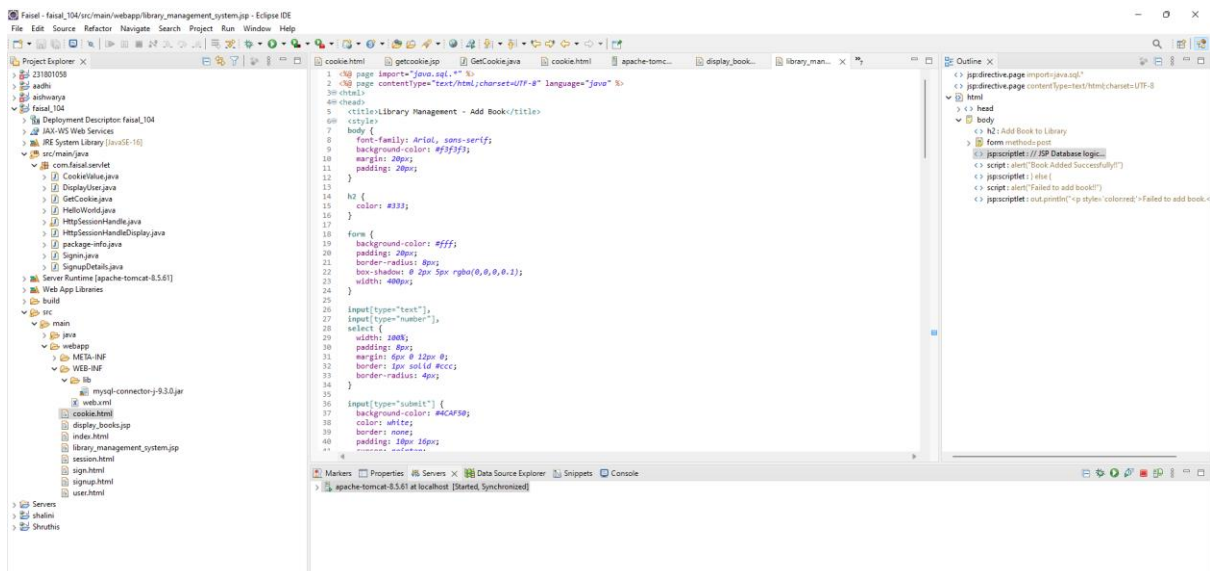
}%>

</body>

</html>

```

OUTPUT:



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localhost:7750/faial_104/library_management_system.jsp

Add Book to Library

Book ID:

Title:

Author:

Year:

Category:

Copies:

Book Details:- [Click Here](#)

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localhost:7750/faial_104/display_books.jsp

All Books in Library

Book ID	Title	Author	Year	Category	Copies
12	harry	rail	2004	Fiction	1
13	Mysterious Island	Faisal	2000	Science	5

RESULT:

creation a library management system using JSP and SQL Connector is done successfully.