Lab 9

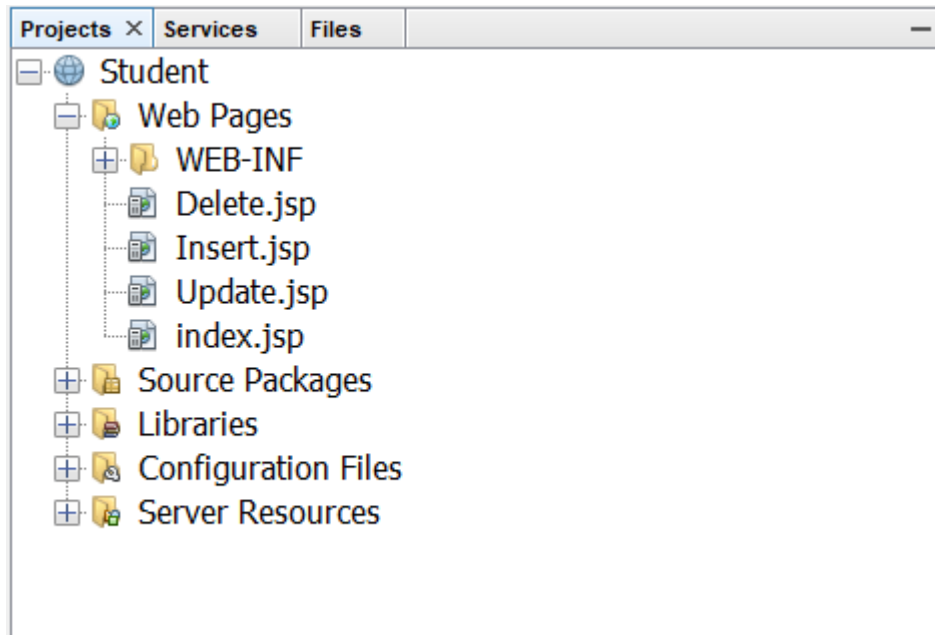**Exercise 1: Creating a new Java web application**

Task 1: Create a new project for Java web application

Exercise 2: Creating database and database connection

Exercise 3: Creating Database Connection pool in application

General	Servlets	Security	Web Services	Messaging	Environment	XML	History	🔲 📖 ▾

```xml
1    <?xml version="1.0" encoding="UTF-8"?>
2    <!DOCTYPE glassfish-web-app PUBLIC "-//GlassFish.org//DTD GlassFish Application Server 3.1 Ser
3    <glassfish-web-app error-url="">
4        <class-loader delegate="true"/>
5        <jsp-config>
6            <resource-ref>
7                <res-ref-name>jdbc/myDatasource</res-ref-name>
8                <jndi-name>jdbc/myDatasource</jndi-name>
9            </resource-ref>
10       <property name="keepgenerated" value="true">
11           <description>Keep a copy of the generated servlet class' java code.</description>
12       </property>
13       </jsp-config>
14   </glassfish-web-app>
15
```

Exercise 4: Creating Insert Page

📄 Insert.jsp ✕

| Source | History | 🔲 📖 ▾ 📖 ▾ | 🔍 👍 🖶 📋 | 🔗 🖊 🖊 | 🔲 🔲 | ⬤ ■ |

```jsp
1    <%@page contentType="text/html" pageEncoding="UTF-8"%>
2    <%@taglib prefix="sql" uri="http://java.sun.com/jsp/jstl/sql" %>
3    <%@taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"%>
4
5    <sql:setDataSource var="myDatasource"
6        driver="org.apache.derby.jdbc.ClientDriver"
7        url="jdbc:derby://localhost:1527/StudentDB" user="app"
8        password="app"/>
9
10   <!DOCTYPE html>
11   <html>
12       <head>
13           <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
14           <title>Add Student</title>
15       </head>
16       <body>
17           <h1 style="font-weight: bold;">Add Student Data</h1>
18           <c:set var="id" value="${param.id}"/>
19           <c:set var="name" value="${param.name}"/>
20           <c:set var="branch" value="${param.branch}"/>
21           <!-- Form to Add Student -->
22           <form method="post" action="Insert.jsp">
23               <p>
24                   <label for="id">ID:</label>
25                   <input type="text" id="id" name="id" required>
26               </p>
27               <p>
28                   <label for="name">NAME:</label>
29                   <input type="text" id="name" name="name" required>
30               </p>
31               <p>
32                   <label for="branch">BRANCH:</label>
33                   <input type="text" id="branch" name="branch" required>
34               </p>
35               <br>
36               <input type="submit" value="Submit">
37           </form>
```

```
39      <c:if test="${(id!=null)&&(name!=null)&&(branch!=null)}">
40          <sql:update var="result" dataSource="${myDatasource}">
41              INSERT INTO STUDENT (ID, NAME, BRANCH)
42              VALUES (?, ?, ?)
43              <sql:param value="${param.id}" />
44              <sql:param value="${param.name}" />
45              <sql:param value="${param.branch}" />
46          </sql:update>
47          <p style="color: green;">Student data has been successfully added!</p>
48      </c:if>
49
50      <sql:query var="result" dataSource="${myDatasource}">
51          SELECT ID, NAME, BRANCH FROM STUDENT
52          ORDER BY ID ASC
53      </sql:query>
54      <table>
55
56          <tr>
57              <c:forEach var="columnName" items="${result.columnNames}">
58                  <th><c:out value="${columnName}" /></th>
59              </c:forEach>
60          </tr>
61
62          <c:forEach var="row" items="${result.rows}">
63              <tr>
64                  <c:forEach var="column" items="${row}">
65                      <td><c:out value="${column}" /></td>
66                  </c:forEach>
67              </tr>
68          </c:forEach>
        </table>
```

Add Student Data

ID: [   ]

NAME: [   ]

BRANCH: [   ]

[Submit]

ID NAME BRANCH

Add Student Data

ID: [   ]

NAME: [   ]

BRANCH: [   ]

[Submit]

Student data has been successfully added!

ID	NAME	BRANCH

BRANCH=Griffindor ID=1   NAME=Grodfic

Exercise 5: Creating Update Page

Update Student Data

SELECT ID: [1 ▽]

NAME: [Salazar   ]

BRANCH: [Slytherin   ]

[Submit]

ID	NAME	BRANCH

BRANCH=Griffindor ID=1   NAME=Grodfic

Update Student Data

SELECT ID: [1 ▾]

NAME: [_____]

BRANCH: [_____]

[Submit]

ID	NAME	BRANCH

BRANCH=Slytherin ID=1   NAME=Salazar

Exercise 6: Creating Delete Page

Delete Student Data

SELECT ID: [1 ▾]

[Submit]

ID	NAME	BRANCH

BRANCH=Slytherin ID=1   NAME=Salazar

BRANCH=Griffindor ID=2   NAME=Grodfic

BRANCH=Ravenclaw ID=3   NAME=Rowenda

BRANCH=Hufflepuff ID=4   NAME=Helga

Delete Student Data

SELECT ID: [1 ▼]

[Submit]

ID	NAME	BRANCH
BRANCH=Griffindor	ID=2	NAME=Grodfic
BRANCH=Ravenclaw	ID=3	NAME=Rowenda
BRANCH=Hufflepuff	ID=4	NAME=Helga

Exercise 7: Creating Navigation Between Each Page
    a) Create a simple menu in each page to link one page to another page (use hyperlink).

CRUD Example

INSERT STUDENT

UPDATE STUDENT

DELETE STUDENT

Add Student Data

ID: [_____]

NAME: [_____]

BRANCH: [_____]

[Submit]

ID	NAME	BRANCH
BRANCH=Griffindor	ID=2	NAME=Grodfic
BRANCH=Ravenclaw	ID=3	NAME=Rowenda
BRANCH=Hufflepuff	ID=4	NAME=Helga

HOME

UPDATE STUDENT

DELETE STUDENT

Delete Student Data

SELECT ID: [2 ▼]

[Submit]

ID	NAME	BRANCH
BRANCH=Griffindor	ID=2	NAME=Grodfic
BRANCH=Ravenclaw	ID=3	NAME=Rowenda
BRANCH=Hufflepuff	ID=4	NAME=Helga

HOME

INSERT STUDENT

UPDATE STUDENT

Update Student Data

SELECT ID: [2 ▼]

NAME: [_____]

BRANCH: [_____]

[Submit]

ID	NAME	BRANCH
BRANCH=Griffindor	ID=2	NAME=Grodfic
BRANCH=Ravenclaw	ID=3	NAME=Rowenda
BRANCH=Hufflepuff	ID=4	NAME=Helga

HOME

INSERT STUDENT

DELETE STUDENT