JSP-CRUD OPERATIONS

**C-CREATE**

R-READ

U-UPDATE

D-DELETE

JSP CRUD With Pagination Here we will make an project of CRUD (Create, Read, Update and Delete) with JSP and also we are going to use Pagination in this project. If records are too many so on single page it takes time so it is better to break the page into parts so that loading time of page become reduce, The Pagination do work for this theory. First we need to create a database for CRUD and Pagination.

Server: ApacheTomcat

Database: Oracle11gXE (or) mysql

Create a Java EE Project in Eclipse:

Directory Structure
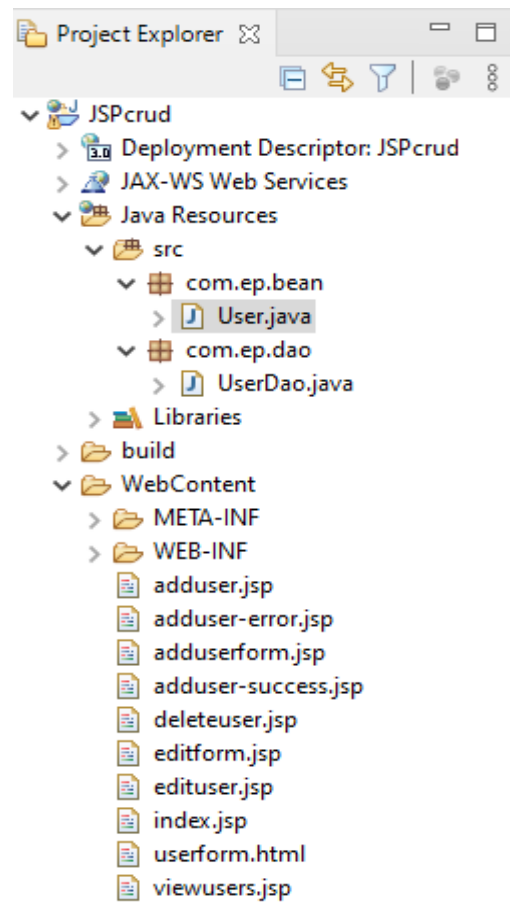
index.jsp

```html
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>JSP CRUD Example</title>
</head>
<body>
<h1>JSP CRUD Example</h1>
<a href="adduserform.jsp">Add User</a>
<a href="viewusers.jsp">View Users</a>


</body>
</html>
```

adduserform.jsp

```html
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Add User Form</title>
</head>
<body>

<jsp:include page="userform.html"></jsp:include>


</body>
</html>
```

userform.html

```html
<a href="viewusers.jsp">View All Records</a><br/>

<h1>Add New User</h1>
<form action="adduser.jsp" method="post">
<table>
<tr><td>Name:</td><td><input type="text" name="name"/></td></tr>
<tr><td>Password:</td><td>
<input type="password" name="password"/></td></tr>
<tr><td>Email:</td><td><input type="email" name="email"/></td></tr>
<tr><td>Sex:</td><td>
<input type="radio" name="sex" value="male"/>Male
```

```html
<input type="radio" name="sex" value="female"/>Female </td></tr>
<tr><td>Country:</td><td>
<select name="country" style="width:155px">
<option>India</option>
<option>Pakistan</option>
<option>Afghanistan</option>
<option>Berma</option>
<option>Other</option>
</select>
</td></tr>
<tr><td colspan="2"><input type="submit" value="Add User"/></td></tr>
</table>
</form>
```

adduser.jsp

```jsp
<%@page import="com.ep.dao.UserDao"%>
<jsp:useBean id="u" class="com.ep.bean.User"></jsp:useBean>
<jsp:setProperty property="*" name="u"/>

<%
int i=UserDao.save(u);
if(i>0){
response.sendRedirect("adduser-success.jsp");
}else{
response.sendRedirect("adduser-error.jsp");
}
%>
```

User.java

```java
package com.ep.bean;
public class User {
private int id;
private String name,password,email,sex,country;
//generate getters and setters
}
```

UserDao.java

```java
package com.ep.dao;
import java.sql.*;
import java.util.ArrayList;
```

```java
import java.util.List;
import com.ep.bean.User;
public class UserDao {

public static Connection getConnection(){
   Connection con=null;
   try{
      Class.forName("com.mysql.jdbc.Driver");
      con=DriverManager.getConnection("jdbc:mysql://localhost:3306/test","","");

   }catch(Exception e){System.out.println(e);}
   return con;
}
public static int save(User u){
   int status=0;
   try{
      Connection con=getConnection();
      PreparedStatement ps=con.prepareStatement(
"insert into register(name,password,email,sex,country) values(?,?,?,?,?)");
      ps.setString(1,u.getName());
      ps.setString(2,u.getPassword());
      ps.setString(3,u.getEmail());
      ps.setString(4,u.getSex());
      ps.setString(5,u.getCountry());
      status=ps.executeUpdate();
   }catch(Exception e){System.out.println(e);}
   return status;
}
public static int update(User u){
   int status=0;
   try{
      Connection con=getConnection();
      PreparedStatement ps=con.prepareStatement(
"update register set name=?,password=?,email=?,sex=?,country=? where id=?");
      ps.setString(1,u.getName());
      ps.setString(2,u.getPassword());
      ps.setString(3,u.getEmail());
      ps.setString(4,u.getSex());
      ps.setString(5,u.getCountry());
      ps.setInt(6,u.getId());
      status=ps.executeUpdate();
   }catch(Exception e){System.out.println(e);}
   return status;
}
```

```java
    public static int delete(User u){
       int status=0;
       try{
          Connection con=getConnection();
          PreparedStatement ps=con.prepareStatement("delete from register where id
=?");
          ps.setInt(1,u.getId());
          status=ps.executeUpdate();
       }catch(Exception e){System.out.println(e);}

       return status;
    }
    public static List<User> getAllRecords(){
       List<User> list=new ArrayList<User>();

       try{
          Connection con=getConnection();
          PreparedStatement ps=con.prepareStatement("select * from register");
          ResultSet rs=ps.executeQuery();
          while(rs.next()){
             User u=new User();
             u.setId(rs.getInt("id"));
             u.setName(rs.getString("name"));
             u.setPassword(rs.getString("password"));
             u.setEmail(rs.getString("email"));
             u.setSex(rs.getString("sex"));
             u.setCountry(rs.getString("country"));
             list.add(u);
          }
       }catch(Exception e){System.out.println(e);}
       return list;
    }
    public static User getRecordById(int id){
       User u=null;
       try{
          Connection con=getConnection();
          PreparedStatement ps=con.prepareStatement("select * from register where i
d=?");
          ps.setInt(1,id);
          ResultSet rs=ps.executeQuery();
          while(rs.next()){
             u=new User();
             u.setId(rs.getInt("id"));
             u.setName(rs.getString("name"));
```

```
                u.setPassword(rs.getString("password"));
                u.setEmail(rs.getString("email"));
                u.setSex(rs.getString("sex"));
                u.setCountry(rs.getString("country"));
            }
        }catch(Exception e){System.out.println(e);}
        return u;
    }
}
```

adduser-success.jsp

```
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Add User Success</title>
</head>
<body>

<p>Record successfully saved!</p>
<jsp:include page="userform.html"></jsp:include>

</body>
</html>
```

adduser-error.jsp

```
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Add User Error</title>
</head>
<body>

<p>Sorry, an error occurred!</p>
<jsp:include page="userform.html"></jsp:include>

</body>
</html>
```

viewusers.jsp

```jsp
<!DOCTYPE html>

<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>View Users</title>
</head>
<body>

<%@page import="com.ep.dao.UserDao,com.ep.bean.*,java.util.*"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c"%>

<h1>Users List</h1>

<%
List<User> list=UserDao.getAllRecords();
request.setAttribute("list",list);
%>

<table border="1" width="90%">
<tr><th>Id</th><th>Name</th><th>Password</th><th>Email</th>
<th>Sex</th><th>Country</th><th>Edit</th><th>Delete</th></tr>
<c:forEach items="${list}" var="u">
<tr><td>${u.getId()}</td><td>${u.getName()}</td><td>${u.getPassword()}</td>
<td>${u.getEmail()}</td><td>${u.getSex()}</td><td>${u.getCountry()}</td>
<td><a href="editform.jsp?id=${u.getId()}">Edit</a></td>
<td><a href="deleteuser.jsp?id=${u.getId()}">Delete</a></td></tr>
</c:forEach>
</table>
<br/><a href="adduserform.jsp">Add New User</a>

</body>
</html>
```

editform.jsp

```jsp
<!DOCTYPE html>
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-1">
<title>Edit Form</title>
</head>
```

```
<body>
<%@page import="com.ep.dao.UserDao,com.ep.bean.User"%>

<%
String id=request.getParameter("id");
User u=UserDao.getRecordById(Integer.parseInt(id));
%>

<h1>Edit Form</h1>
<form action="edituser.jsp" method="post">
<input type="hidden" name="id" value="<%=u.getId() %>"/>
<table>
<tr><td>Name:</td><td>
<input type="text" name="name" value="<%= u.getName()%>"/></td></tr>
<tr><td>Password:</td><td>
<input type="password" name="password" value="<%= u.getPassword()%>"/></td></tr>
<tr><td>Email:</td><td>
<input type="email" name="email" value="<%= u.getEmail()%>"/></td></tr>
<tr><td>Sex:</td><td>
<input type="radio" name="sex" value="male"/>Male
<input type="radio" name="sex" value="female"/>Female </td></tr>
<tr><td>Country:</td><td>
<select name="country">
<option>India</option>
<option>Pakistan</option>
<option>Afghanistan</option>
<option>Berma</option>
<option>Other</option>
</select>
</td></tr>
<tr><td colspan="2"><input type="submit" value="Edit User"/></td></tr>
</table>
</form>

</body>
</html>
```

edituser.jsp

```
<%@page import="com.ep.dao.UserDao"%>
<jsp:useBean id="u" class="com.ep.bean.User"></jsp:useBean>
<jsp:setProperty property="*" name="u"/>
<%
```

```
        int i=UserDao.update(u);
        response.sendRedirect("viewusers.jsp");
        %>
```

deleteuser.jsp

```
<%@page import="com.ep.dao.UserDao"%>
<jsp:useBean id="u" class="com.ep.bean.User"></jsp:useBean>
<jsp:setProperty property="*" name="u"/>
<%
UserDao.delete(u);
response.sendRedirect("viewusers.jsp");
%>
```

Download the required jars for your Project
1)jstl1.2.jar file
2) mysql-connector.jar

Database:

CREATE DATABASE `test`

TABLE:

```
CREATE TABLE IF NOT EXISTS `register` (
  `id` int(10) NOT NULL AUTO_INCREMENT,
  `name` varchar(100) NOT NULL,
  `password` varchar(100) NOT NULL,
  `email` varchar(100) NOT NULL,
  `sex` varchar(100) NOT NULL,
  `country` varchar(100) NOT NULL,
  PRIMARY KEY (`id`)
) ENGINE=InnoDB  DEFAULT CHARSET=latin1 AUTO_INCREMENT=21 ;
```

Create a JSP application using Http Cookies and Http Session to perform CRUD Operations