# 实验七 EL的应用

## 实验目的与要求

1. 理解并掌握EL的数据访问技术以及JSP+JDBC+JavaBean+Servlet+EL模式的Web应用开发技术。
2. 参考教材的有关内容与示例，按要求编写并调试相应的程序。

## 实验内容

参见教材P338～339实验7的实验内容之1～4。

## 实验代码

Web.xml

*<*servlet*>  
 <*servlet-name*>*computedServlet*</*servlet-name*>  
 <*servlet-class*>*com.shf.mvc.servlet.computedServlet*</*servlet-class*>  
</*servlet*>  
<*servlet-mapping*>  
 <*servlet-name*>*computedServlet*</*servlet-name*>  
 <*url-pattern*>*/computedServlet*</*url-pattern*>  
</*servlet-mapping*>  
<*servlet*>  
 <*servlet-name*>*SysInfoServlet*</*servlet-name*>  
 <*servlet-class*>*com.shf.mvc.servlet.SysInfoServlet*</*servlet-class*>  
</*servlet*>  
<*servlet-mapping*>  
 <*servlet-name*>*SysInfoServlet*</*servlet-name*>  
 <*url-pattern*>*/SysInfoServlet*</*url-pattern*>  
</*servlet-mapping*>  
<*servlet*>  
 <*servlet-name*>*registerServlet*</*servlet-name*>  
 <*servlet-class*>*com.shf.mvc.servlet.registerServlet*</*servlet-class*>  
</*servlet*>  
<*servlet-mapping*>  
 <*servlet-name*>*registerServlet*</*servlet-name*>  
 <*url-pattern*>*/registerServlet*</*url-pattern*>  
</*servlet-mapping*>*

computed.jsp

*<%--  
 Created by IntelliJ IDEA.  
 User: SHF  
 Date: 2021/11/8  
 Time: 17:03  
 To change this template use File | Settings | File Templates.  
--%>  
<%@* page contentType="text/html;charset=UTF-8" language="java" *%>  
<%@*taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core"*%>  
<*html*>  
<*head*>  
 <*title*>*Title*</*title*>  
</*head*>  
<*body*>  
<*form action="/computedServlet" method="post"*>* 整数1： *<*input type="text" name="n1"*><*br*>* 整数2： *<*input type="text" name="n2"*><*br*>  
 <*input type="submit" value="提交"*>  
</*form*>  
<*c:if test="${not empty requestScope.sum}"*>  
 <*h3*>*n1=${requestScope.n1}*</*h3*>  
 <*h3*>*n2=${requestScope.n2}*</*h3*>  
 <*h3*>*sum=${requestScope.sum}*</*h3*>  
 <*h3*>*sub=${requestScope.sub}*</*h3*>  
 <*h3*>*div=${requestScope.divv}*</*h3*>  
 <*h3*>*mul=${requestScope.mul}*</*h3*>  
 <*h3*>*mod=${requestScope.modd}*</*h3*>  
</*c:if*>  
</*body*>  
</*html*>*

computedServlet.java

package com.shf.mvc.servlet;  
  
import javax.servlet.ServletException;  
import javax.servlet.http.HttpServlet;  
import javax.servlet.http.HttpServletRequest;  
import javax.servlet.http.HttpServletResponse;  
import java.io.IOException;  
  
public class computedServlet extends HttpServlet *{* @Override  
 protected void doGet*(*HttpServletRequest req, HttpServletResponse resp*)* throws ServletException, IOException *{* doPost*(*req, resp*)*;  
 *}* @Override  
 protected void doPost*(*HttpServletRequest req, HttpServletResponse resp*)* throws ServletException, IOException *{* Double n1 = Double.*valueOf(*req.getParameter*(*"n1"*))*;  
 Double n2 = Double.*valueOf(*req.getParameter*(*"n2"*))*;  
 Double sum = n1 + n2;  
 Double sub = n1 - n2;  
 Double div = n1 / n2;  
 Double mul = n1 \* n2;  
 Double mod = n1 % n2;  
 req.setAttribute*(*"n1",n1*)*;  
 req.setAttribute*(*"n2",n2*)*;  
 req.setAttribute*(*"sum",sum*)*;  
 req.setAttribute*(*"sub",sub*)*;  
 req.setAttribute*(*"divv",div*)*;  
 req.setAttribute*(*"mul",mul*)*;  
 req.setAttribute*(*"modd",mod*)*;  
 req.getRequestDispatcher*(*"/demo7/computed.jsp"*)*.forward*(*req,resp*)*;  
 *}  
}*

SysInfo.jsp

*<%--  
 Created by IntelliJ IDEA.  
 User: SHF  
 Date: 2021/11/8  
 Time: 18:24  
 To change this template use File | Settings | File Templates.  
--%>  
<%@* page contentType="text/html;charset=UTF-8" language="java" *%>  
<*html*>  
<*head*>  
 <*title*>*Title*</*title*>  
</*head*>  
<*body*>  
<*h1*>*系统名称：${sysName}*</*h1*>  
<*h1*>*用户名称：${username}*</*h1*>  
</*body*>  
</*html*>*

SysInfoServlet.java

package com.shf.mvc.servlet;  
  
import javax.servlet.ServletException;  
import javax.servlet.http.HttpServlet;  
import javax.servlet.http.HttpServletRequest;  
import javax.servlet.http.HttpServletResponse;  
import java.io.IOException;  
  
public class SysInfoServlet extends HttpServlet *{* @Override  
 protected void doGet*(*HttpServletRequest req, HttpServletResponse resp*)* throws ServletException, IOException *{* doPost*(*req, resp*)*;  
 *}* @Override  
 protected void doPost*(*HttpServletRequest req, HttpServletResponse resp*)* throws ServletException, IOException *{* req.setAttribute*(*"sysName","教务管理系统"*)*;  
 req.setAttribute*(*"username","广西财经学院"*)*;  
 req.getRequestDispatcher*(*"/demo7/SysInfo.jsp"*)*.forward*(*req, resp*)*;  
 *}  
}*

regist.jsp

*<%@* taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" *%>  
<%--  
 Created by IntelliJ IDEA.  
 User: SHF  
 Date: 2021/11/8  
 Time: 18:29  
 To change this template use File | Settings | File Templates.  
--%>  
<%@* page contentType="text/html;charset=UTF-8" language="java" *%>  
<*html*>  
<*head*>  
 <*title*>*Title*</*title*>  
</*head*>  
<*body*>  
<*c:if test="${empty username}"*>  
<*form action="/registerServlet" method="post"*>* 用户昵称： *<*input type="text" name="username"*> <*br*>* 密码： *<*input type="text" name="password"*> <*br*>* 确认密码： *<*input type="text" name="rpassword"*> <*br*>* 性别： *<*input type="radio" name="gender" value="1"*>* 男  
 *<*input type="radio" name="gender" value="0"*>* 女 *<*br*>* 爱好： *<*input type="checkbox" name="hobby" value="体育"*>* 体育  
 *<*input type="checkbox" name="hobby" value="美术"*>* 美术  
 *<*input type="checkbox" name="hobby" value="音乐"*>* 音乐  
 *<*input type="checkbox" name="hobby" value="旅游"*>* 旅游 *<*br*>  
 <*input type="submit" value="提交"*>  
</*form*>  
</*c:if*>  
  
<*c:if test="${not empty username}"*>  
 <*h3*>*username=${username}*</*h3*>  
 <*h3*>*password=${password}*</*h3*>  
 <*h3*>*gender=${gender==1?"男":"女"}*</*h3*>  
 <*h3*>* hobby=  
 *<*c:forEach var="val" items="${hobby}"*>  
 <*span*>*${val}*</*span*>  
 </*c:forEach*>  
 </*h3*>  
</*c:if*>  
  
</*body*>  
</*html*>*

User.java

package com.shf.mvc.beans;  
  
import java.util.List;  
  
public class User *{* private String username;  
 private String password;  
 private String gender;  
 private List*<*String*>* hobby;  
  
 public User*() {  
 }* public User*(*String username, String password, String gender, List*<*String*>* hobby*) {* this.username = username;  
 this.password = password;  
 this.gender = gender;  
 this.hobby = hobby;  
 *}* public String getUsername*() {* return username;  
 *}* public void setUsername*(*String username*) {* this.username = username;  
 *}* public String getPassword*() {* return password;  
 *}* public void setPassword*(*String password*) {* this.password = password;  
 *}* public String getGender*() {* return gender;  
 *}* public void setGender*(*String gender*) {* this.gender = gender;  
 *}* public List*<*String*>* getHobby*() {* return hobby;  
 *}* public void setHobby*(*List*<*String*>* hobby*) {* this.hobby = hobby;  
 *}* @Override  
 public String toString*() {* return "User{" +  
 "username='" + username + '\'' +  
 ", password='" + password + '\'' +  
 ", gender=" + gender +  
 ", hobby=" + hobby +  
 '}';  
 *}  
}*

registerServlet.java

package com.shf.mvc.servlet;  
  
import com.shf.mvc.beans.User;  
  
import javax.servlet.ServletException;  
import javax.servlet.http.HttpServlet;  
import javax.servlet.http.HttpServletRequest;  
import javax.servlet.http.HttpServletResponse;  
import java.io.IOException;  
import java.util.Arrays;  
import java.util.Collections;  
  
public class registerServlet extends HttpServlet *{* @Override  
 protected void doGet*(*HttpServletRequest req, HttpServletResponse resp*)* throws ServletException, IOException *{* doPost*(*req, resp*)*;  
 *}* @Override  
 protected void doPost*(*HttpServletRequest req, HttpServletResponse resp*)* throws ServletException, IOException *{* req.setCharacterEncoding*(*"utf-8"*)*;  
 String username = req.getParameter*(*"username"*)*;  
 String password = req.getParameter*(*"password"*)*;  
 String gender = req.getParameter*(*"gender"*)*;  
 String*[]* hobbies = req.getParameterValues*(*"hobby"*)*;  
 User user = new User*(*username, password, gender, Arrays.*asList(*hobbies*))*;  
 System.*out*.println*(*user*)*;  
 req.setAttribute*(*"username",username*)*;  
 req.setAttribute*(*"password",password*)*;  
 req.setAttribute*(*"gender",gender*)*;  
 req.setAttribute*(*"hobby",hobbies*)*;  
 req.getRequestDispatcher*(*"/demo7/regist.jsp"*)*.forward*(*req,resp*)*;  
 *}  
}*

Login.jsp

*<%--  
 Created by IntelliJ IDEA.  
 User: SHF  
 Date: 2021/11/8  
 Time: 15:23  
 To change this template use File | Settings | File Templates.  
--%>  
<%@* page contentType="text/html;charset=UTF-8" language="java" *%>  
<*html*>  
<*head*>  
 <*title*>*Title*</*title*>  
</*head*>  
<*body*>  
<*form action="/loginSerVlet" method="post"*>* 用户名： *<*input type="text" name="username"*> <*br*>* 密码： *<*input type="password" name="password"*><*br*>  
 <*input type="submit" value="登录"*>  
</*form*>  
<*h1*>*${info}*</*h1*>  
</*body*>  
</*html*>*

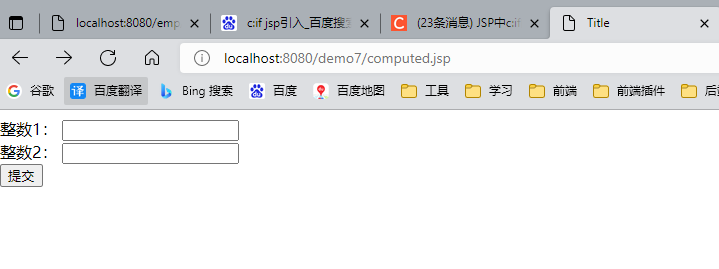
loginSerVlet.java

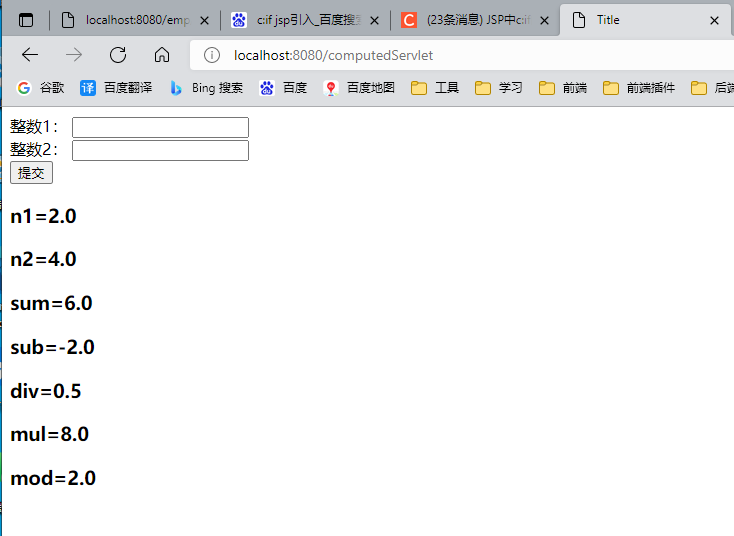
package com.shf.mvc.servlet;  
  
import javax.servlet.ServletException;  
import javax.servlet.http.HttpServlet;  
import javax.servlet.http.HttpServletRequest;  
import javax.servlet.http.HttpServletResponse;  
import javax.servlet.http.HttpSession;  
import java.io.IOException;  
  
public class loginSerVlet extends HttpServlet *{* @Override  
 protected void doGet*(*HttpServletRequest req, HttpServletResponse resp*)* throws ServletException, IOException *{* doPost*(*req, resp*)*;  
 *}* @Override  
 protected void doPost*(*HttpServletRequest req, HttpServletResponse resp*)* throws ServletException, IOException *{* String username = req.getParameter*(*"username"*)*;  
 String password = req.getParameter*(*"password"*)*;  
 System.*out*.println*(*"username="+username*)*;  
 System.*out*.println*(*"password="+password*)*;  
 System.*out*.println*(*username.equals*(*"abc"*)* && password.equals*(*"123"*))*;  
 if *(*username.equals*(*"abc"*)* && password.equals*(*"123"*)){* HttpSession session = req.getSession*()*;  
 session.setAttribute*(*"username",username*)*;  
 resp.sendRedirect*(*"/demo6/protect/success.jsp"*)*;  
 *}* else *{* req.setAttribute*(*"info","用户名或密码错错误"*)*;  
 req.getRequestDispatcher*(*"/demo6/login.jsp"*)*.forward*(*req,resp*)*;  
 *}  
 }  
}*

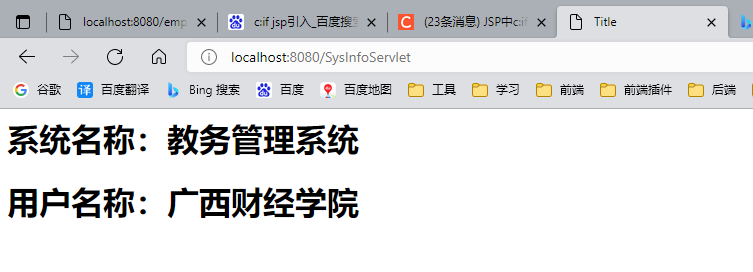
success.jsp

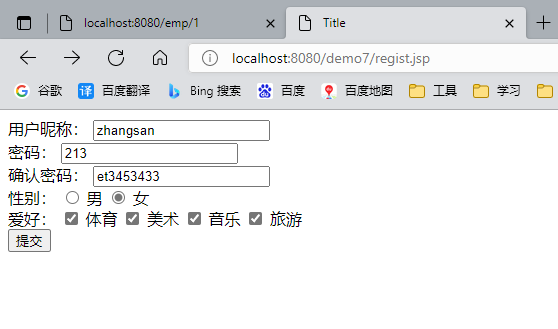
*<%--  
 Created by IntelliJ IDEA.  
 User: SHF  
 Date: 2021/11/8  
 Time: 15:10  
 To change this template use File | Settings | File Templates.  
--%>  
<%@* page contentType="text/html;charset=UTF-8" language="java" *%>  
<*html*>  
<*head*>  
 <*title*>*Title*</*title*>  
</*head*>  
<*body*>  
<*h1*>*您好! <%=request.getSession*()*.getAttribute*(*"username"*)*%>! 欢迎进入我们的网站！！！*</*h1*>  
<*a href="/demo6/protect/addUser.jsp"*>*添加用户*</*a*>  
<*h1*>*<%=request.getParameter*(*"xm"*)*==null?"":request.getParameter*(*"xm"*)*+" 添加成功！！！"%> *</*h1*>  
</*body*>  
</*html*>*

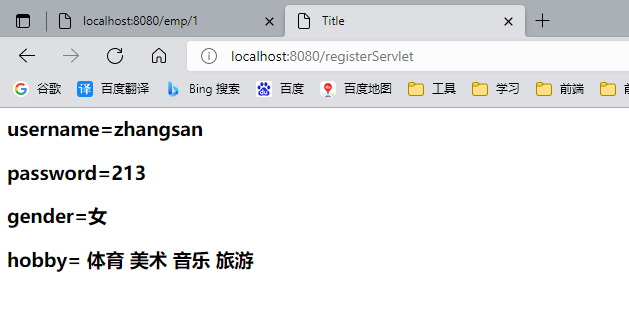
## 实验截图

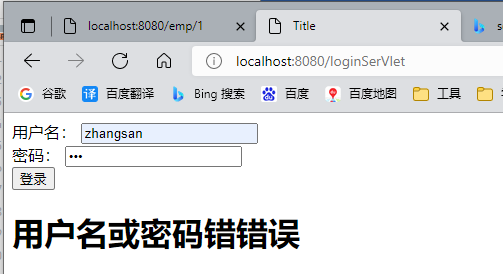


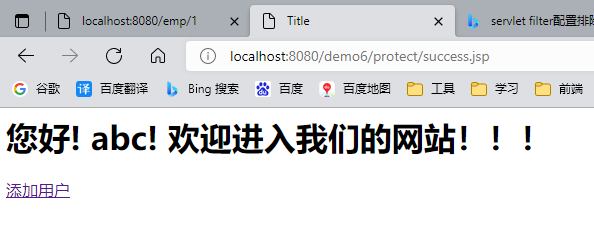












## 实验小结

通过本次实验我学会使用EL表达式的使用，掌握EL表达式的语法，变量的定义，EL的隐含对象，El表达式的条件标签、迭代标签，并且能够开发JSP + JDBC + JavaBean + Servlet + EL模式的Web应用。