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**实 验 报 告**

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| **课程名称**： WEB应用开发技术 | **任课教师：** 雷 宇 | **实验日期**： 2021.5.20 |
| **班 级**： 信1901-4 | **姓 名**： 闫竞存 | **学 号**： 20194127 |

# 实验项目名称：实验二 服务器端简单程序设计

一、实验目的

通过若干编程题目，加深对session，request，response，application等对象的理解，掌握其使用方法，初步掌握javascript客户端验证方法。

二、实验内容和基本要求

1) 编写login.htm文件，要求用户输入用户名和密码两个文本框，客户端使用javascript验证输入不能为空。编写judge.jsp文件接受login.htm的输入信息并进行判断。如果用户不等于jsj，密码不等于123，则使用JSP动作跳转到fail.htm页面，该页面显示错误信息；如果输入正确，则使用response的重定向方法跳转到success.jsp页面，该页面使用application对象显示用户jsj登录的次数。

2) 编写如下三个文件：a.htm至少显示一个文本框和一个提交按钮；b.jsp将a.htm表单传递的信息存入一个名为flag的session变量中；c.jsp取出flag变量的值并显示。注意：a.htm的输入可以是中文。

3) 将网页源代码和浏览器截图写入实验报告。

三、实验步骤

**本次实验程序已部署到服务器。**

**实验一：**[**http://39.103.184.190:8888/learn/weblabs/lab2-1/**](http://39.103.184.190:8888/learn/weblabs/lab2-1/)

**实验二：**[**http://39.103.184.190:8888/learn/weblabs/lab2-2/**](http://39.103.184.190:8888/learn/weblabs/lab2-2/)

**实验2-1**

**本实验使用了前端框架 BootStrap 5.0**

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| *<!--  Author: Yan Jingcun  Date: 2021.05.21 -->* <!DOCTYPE html> <html> <head>  <title>登录</title>  <meta charset="UTF-8">  <link href="https://cdn.bootcdn.net/ajax/libs/twitter-bootstrap/5.0.1/css/bootstrap.min.css" rel="stylesheet">  <script src="https://cdn.bootcdn.net/ajax/libs/twitter-bootstrap/5.0.1/js/bootstrap.min.js"></script> </head> <style>  #main{  margin: 10% auto;  border: 1px solid gray;  border-radius: 5px;  padding: 40px;  } </style> <body>  <div id="main" class="col-3">  <form method="post" action="judge.jsp" onsubmit="return *validate*(this)">  <div class="mb-3">  <label for="userName" class="form-label">用户名</label>  <input name="userName" type="text" class="form-control" id="userName">  <div id="emailHelp" class="form-text">输入用来登录的用户名</div>  </div>  <div class="mb-3">  <label for="userPwd" class="form-label">密码</label>  <input name="userPwd" type="password" class="form-control" id="userPwd">  </div>  <input type="submit" id="login" class="btn btn-primary" value="登录">  </form> </div> <script>   function *validate*(form) {  var userName = $("#userName").val();  var userPwd = $("#userPwd").val();  if("" === userName){  *alert*("用户名不能为空");  return false;  } else if("" === userPwd){  *alert*("密码不能为空");  return false;  }else return true;  }   </script> </body> </html>  *<%--  Created by Jancoyan.  User: Jancoyan  Date: 2021/5/21  Time: 14:50 --%>* <%@ page contentType="text/html;charset=UTF-8" language="java" pageEncoding="UTF-8" %>  <%  String basePath = request.getScheme() + "://" +  request.getServerName() + ":" + request.getServerPort() +  request.getContextPath() + "/"; %>  <!DOCTYPE html> <html> <head>  <meta charset="UTF-8">  <title>登录状态</title>  <base href="<%=basePath%>"/>  <link href="https://cdn.bootcdn.net/ajax/libs/twitter-bootstrap/5.0.1/css/bootstrap.min.css" rel="stylesheet">  <script src="https://cdn.bootcdn.net/ajax/libs/twitter-bootstrap/5.0.1/js/bootstrap.min.js"></script> </head> <body> <%  response.setCharacterEncoding("utf-8");   String userName = request.getParameter("userName");  String userPwd = request.getParameter("userPwd");   if("jsj".equals(userName) && "123".equals(userPwd)){  Integer count = (Integer) application.getAttribute("loginCount");  if( null == count){  application.setAttribute("loginCount", 1);  } else {  application.setAttribute("loginCount", count + 1);  }  response.sendRedirect("success.jsp");  }else{ %>  <jsp:forward page="fail.html"></jsp:forward>  <%  } %>  </body> </html>  *<%--  Created by Jancoyan.  User: Jancoyan  Date: 2021/5/21  Time: 14:57  --%>* <%@ page contentType="text/html;charset=UTF-8" language="java" pageEncoding="UTF-8" %> <%  String basePath = request.getScheme() + "://" +  request.getServerName() + ":" + request.getServerPort() +  request.getContextPath() + "/"; %>  <!DOCTYPE html> <html> <head>  <meta charset="UTF-8">  <title>Title</title>  <base href="<%=basePath%>"/>  <link href="https://cdn.bootcdn.net/ajax/libs/twitter-bootstrap/5.0.1/css/bootstrap.min.css" rel="stylesheet">  <script src="https://cdn.bootcdn.net/ajax/libs/twitter-bootstrap/5.0.1/js/bootstrap.min.js"></script> </head> <body>  <div class="col-4" style="margin: 100px auto">  <div class="card">  <div class="card-header">  Note:  </div>  <div class="card-body">  <blockquote class="blockquote mb-0">  登录成功，当前的登录次数为：<%=application.getAttribute("loginCount")%>  </blockquote>  </div>  </div> </div>  </body> </html>  *<!--  Author: Yan Jingcun  Date: 2021.05.21 -->* <!DOCTYPE html> <html lang="en"> <head>  <meta charset="UTF-8">  <title>登陆失败</title>  <link href="https://cdn.bootcdn.net/ajax/libs/twitter-bootstrap/5.0.1/css/bootstrap.min.css" rel="stylesheet">  <script src="https://cdn.bootcdn.net/ajax/libs/twitter-bootstrap/5.0.1/js/bootstrap.min.js"></script> </head> <body>  <div class="col-4">  <div class="card" style="margin: 100px auto;">  <div class="card-header">  Note:  </div>  <div class="card-body">  <blockquote class="blockquote mb-0">  登录失败  </blockquote>  </div>  </div> </div> </body> </html> |

[**http://39.103.184.190:8888/learn/weblabs/lab2-1/**](http://39.103.184.190:8888/learn/weblabs/lab2-1/)

程序截图：

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| 登录页面：    登录成功：    登录失败：    再次登录： |

**实验2-2**

**本实验使用了前端框架 LayUI 2.6.7**

源代码：

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| *<!—index.html-->*  *<!--  Created by Jancoyan.  User: Jancoyan  Date: 2021/5/21  Time: 18:12 -->* <!DOCTYPE html> <html> <head>  <meta charset="UTF-8">  <title>Title</title>  <script src="https://cdnjs.cloudflare.com/ajax/libs/layui/2.6.5/layui.min.js" integrity="sha512-oXOXRWbCoIxnjpKGxUYbZ5DC0pQJzgKV72sC/F+vCZXpz63NNAVDUGkzxuTVdx7cLwUz6Bt3DjcHviQwNqoHNw==" crossorigin="anonymous" referrerpolicy="no-referrer"></script>  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/layui/2.6.5/css/layui.min.css" integrity="sha512-e3/5WX6u9vRRITzzgruZq1yspUQr1jUc/wdzsw2gKzU7ibNQWZYv1OX+w/9fqeZWjapWTJNaFtMxZqrfs4UKmw==" crossorigin="anonymous" referrerpolicy="no-referrer" /> </head>  <style type="text/css">  html{  width: 100%;  height: 100%;  }   body{  background-image: url(./static/img/personal-form-bg.png);  background-position: 100% 100%;  }   .personal-info-container{  width: 50%;  margin: 3% auto;  background-color: white;  padding: 2rem;  border-radius: 10px;  opacity: 0.9;  }   .title{  text-align: center;  margin-bottom: 30px;  }   #btn-group{  float: right;  margin-right: 30px;  } </style>  <body>  <div class="personal-info-container">  <h1 class="title">个人信息填写</h1>  <form class="layui-form layui-form-pane" action="saveData.jsp" method="post">  <div class="layui-form-item">  <label class="layui-form-label">用户名</label>  <div class="layui-input-block">  <input type="text" name="userName" required lay-verify="required"  placeholder="请输入用户名" autocomplete="off" class="layui-input">  </div>  </div>  <div class="layui-form-item">  <label class="layui-form-label">邮箱</label>  <div class="layui-input-block">  <input type="email" name="userEmail" lay-verify="email" autocomplete="off" placeholder="请输入邮箱"  class="layui-input">  </div>  </div>  <div class="layui-form-item">  <label class="layui-form-label">真实姓名</label>  <div class="layui-input-block">  <input type="text" name="realName" required lay-verify="required"  placeholder="请输入真实姓名" autocomplete="off" class="layui-input">  </div>  </div>  <div class="layui-form-item">  <label class="layui-form-label">性别</label>  <div class="layui-input-block">  <input type="radio" name="sex" value="1" title="男" checked>  <input type="radio" name="sex" value="0" title="女" >  </div>  </div>  <div class="layui-form-item">  <label class="layui-form-label">居住地</label>  <div class="layui-input-block">  <select name="city" lay-verify="required">  <option value=""></option>  <option value="0">北京</option>  <option value="1">上海</option>  <option value="2">广州</option>  <option value="3">深圳</option>  <option value="4">杭州</option>  </select>  </div>  </div>  <div class="layui-form-item">  <div class="layui-inline">  <label class="layui-form-label">出生日期</label>  <div class="layui-input-inline">  <input name="birthdate" type="text" class="layui-input" id="birthdate"  placeholder="yyyy-MM-dd">  </div>  </div>  </div>  <div class="layui-form-item layui-form-text">  <label class="layui-form-label">个人简介</label>  <div class="layui-input-block">  <textarea name="personal-info" placeholder="请输入内容"  class="layui-textarea"></textarea>  </div>  </div>  <div class="layui-form-item">  <div class="layui-input-block" id="btn-group">  <button type="submit" class="layui-btn" lay-submit="" lay-filter="\*">立即提交</button>  <button type="reset" class="layui-btn layui-btn-primary">重置</button>  </div>  </div>  </form> </div>  <script>   layui.use('form', function(){  var form = layui.form;   form.on('submit(\*)', function(data){  *// console.log(data.field);* });  });   layui.use('laydate', function(){  var laydate = layui.laydate;  laydate.render({  elem: '#birthdate'  });  }) </script>  </body> </html>  <%@ page import="com.jancoyan.lab2\_2.pojo.\*" %> <%@ page import="com.jancoyan.lab2\_2.utils.\*" %> <%@ page import="java.nio.charset.StandardCharsets" %>  *<%-- Created by Jancoyan.  User: Jancoyan  Date: 2021/5/23  Time: 19:28  --%>* <%@ page contentType="text/html;charset=UTF-8" language="java" %> <%  String basePath = request.getScheme() + "://" +  request.getServerName() + ":" + request.getServerPort() +  request.getContextPath() + "/";  response.setCharacterEncoding("utf-8"); *// 进行信息的存放* User user = new User();  String name = request.getParameter("userName");  String email = request.getParameter("userEmail");  String sex = request.getParameter("sex");  String realName = request.getParameter("realName");  String location = request.getParameter("city");  String date = request.getParameter("birthdate");  String info = request.getParameter("personal-info");  user.setUserName(new String(name.getBytes(StandardCharsets.*ISO\_8859\_1*)));  user.setUserEmail(new String(name.getBytes(StandardCharsets.*ISO\_8859\_1*)));  user.setUserSex(Integer.*parseInt*(sex));  user.setUserEmail(new String(email.getBytes(StandardCharsets.*ISO\_8859\_1*)));  user.setUserRealName(new String(realName.getBytes(StandardCharsets.*ISO\_8859\_1*)));  user.setUserLocation(UserLocationUtil.*getLocation*(Integer.*parseInt*(location)));  user.setPersonalInfo(new String(info.getBytes(StandardCharsets.*ISO\_8859\_1*)));  user.setBirthDate(DateUtils.*castDateStringToDateTypeYMD*(date)); *// 将信息存入变量* session.setAttribute("flag", user);  %>  <!DOCTYPE html> <html> <head>  <meta charset="UTF-8">  <title>信息存放</title>  <script src="https://cdnjs.cloudflare.com/ajax/libs/layui/2.6.5/layui.min.js" integrity="sha512-oXOXRWbCoIxnjpKGxUYbZ5DC0pQJzgKV72sC/F+vCZXpz63NNAVDUGkzxuTVdx7cLwUz6Bt3DjcHviQwNqoHNw==" crossorigin="anonymous" referrerpolicy="no-referrer"></script>  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/layui/2.6.5/css/layui.min.css" integrity="sha512-e3/5WX6u9vRRITzzgruZq1yspUQr1jUc/wdzsw2gKzU7ibNQWZYv1OX+w/9fqeZWjapWTJNaFtMxZqrfs4UKmw==" crossorigin="anonymous" referrerpolicy="no-referrer" />  <base href="<%=basePath%>"/> </head> <style>   #notice-card{  margin: 10% auto;  text-align: center;  width: 30%;  }   button{  margin-bottom: 10px;  }  </style> <body>  <div id="notice-card" class="layui-bg-gray" style="padding: 30px;">  <div class="layui-row layui-col-space15">  <div class="layui-col-md">  <div class="layui-card">  <div class="layui-card-header">提示</div>  <div class="layui-card-body">  信息已经保存，点击按钮跳转到信息查看页面  </div>  <a href="./showData.jsp"><button type="button" class="layui-btn layui-btn-primary">查看信息</button></a>  <a href="./index.html"><button type="button" class="layui-btn">重新提交</button></a>  </div>  </div>  </div>  </div> </body> </html>  <%@ page import="com.jancoyan.lab2\_2.pojo.\*" %> <%@ page import="com.jancoyan.lab2\_2.utils.\*" %> *<%--  Created by Jancoyan.  User: Jancoyan  Date: 2021/5/23  Time: 19:32  --%>* <%@ page contentType="text/html;charset=UTF-8" language="java" %> <%  String basePath = request.getScheme() + "://" +  request.getServerName() + ":" + request.getServerPort() +  request.getContextPath() + "/"; %>  <!DOCTYPE html> <html> <head>  <meta charset="UTF-8">  <title>信息展示</title>  <base href="<%=basePath%>"/>  <script src="https://cdnjs.cloudflare.com/ajax/libs/layui/2.6.5/layui.min.js" integrity="sha512-oXOXRWbCoIxnjpKGxUYbZ5DC0pQJzgKV72sC/F+vCZXpz63NNAVDUGkzxuTVdx7cLwUz6Bt3DjcHviQwNqoHNw==" crossorigin="anonymous" referrerpolicy="no-referrer"></script>  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/layui/2.6.5/css/layui.min.css" integrity="sha512-e3/5WX6u9vRRITzzgruZq1yspUQr1jUc/wdzsw2gKzU7ibNQWZYv1OX+w/9fqeZWjapWTJNaFtMxZqrfs4UKmw==" crossorigin="anonymous" referrerpolicy="no-referrer" /> </head> <style type="text/css">   #main-container{  width: 60%;  margin: 5% auto;  }   .show-info-title{  text-align: center;  margin: 20px 0;  }   table{  text-align: center;  }   #personal-info-panel{  padding-left:5%;  padding-right:5%;  } </style> <body> <%  User user = (User) session.getAttribute("flag"); %> <div id="main-container" class="layui-row layui-col-space15">  <div class="layui-col-md">  <div id="personal-info-panel" class="layui-panel">  <h1 class="show-info-title">个人信息展示</h1>  <table class="layui-table">  <colgroup>  <col width="150">  <col>  </colgroup>  <tbody>  <tr>  <td>用户名</td>  <td><%=user.getUserName()%></td>  </tr>  <tr>  <td>邮箱</td>  <td><%=user.getUserEmail()%></td>  </tr>  <tr>  <td>性别</td>  <td><%=user.getUserSex() == 1 ? "男" : "女"%></td>  </tr>  <tr>  <td>真实姓名</td>  <td><%=user.getUserRealName()%></td>  </tr>  <tr>  <td>居住地</td>  <td><%=user.getUserLocation()%></td>  </tr>  <tr>  <td>出生日期</td>  <td><%=DateUtils.*castDateTypeToDateString*(user.getBirthDate())%></td>  </tr>  <tr>  <td>个人简介</td>  <td><%=user.getPersonalInfo()%></td>  </tr>  </tbody>  </table>  </div>  </div> </div> </body> </html>  后端代码：  package com.jancoyan.lab2\_2.pojo;  import lombok.AllArgsConstructor; import lombok.Data; import lombok.NoArgsConstructor;  import java.util.Date; import java.util.List;  @Data @AllArgsConstructor @NoArgsConstructor public class User {   private String userName;  private String userEmail;  private Integer userSex;  private String userRealName;  private String userLocation;  private Date birthDate;  private List<String> searchDirection;  private String personalInfo;  }  */\*\*  \* @Author: Yan Jingcun  \* @Date: 2021/5/21  \* @Description:  \* @Version: 1.0  \*/* package com.jancoyan.lab2\_2.utils;  import java.text.ParseException; import java.text.SimpleDateFormat; import java.util.Date;  public class DateUtils {   */\*\*  \* 把日期字符串 yyyy-MM-dd 转化为日期形式  \* @param dateStr 字符串类型  \* @return date对象  \*/* public static Date castDateStringToDateTypeYMD(String dateStr){  Date date = null;  SimpleDateFormat sdf = new SimpleDateFormat("yyyy-MM-dd");  try {  date = sdf.parse(dateStr);  } catch (ParseException e) {  e.printStackTrace();  }  return date;  }   */\*\*  \* 将java Date 将对象转化为日期字符串形式  \* @param date  \* @return  \*/* public static String castDateTypeToDateString(Date date){  SimpleDateFormat simpleDateFormat = new SimpleDateFormat("yyyy-MM-dd");  return simpleDateFormat.format(date);  }  }  */\*\*  \* @Author: Yan Jingcun  \* @Date: 2021/5/21  \* @Description:  \* @Version: 1.0  \*/* package com.jancoyan.lab2\_2.utils;  public class UserLocationUtil {   public static String getLocation(Integer locationId){  String location = "null";  if (locationId == 0){  location = "北京";  } else if (locationId == 1){  location = "上海";  }else if (locationId == 2){  location = "广州";  }else if (locationId == 3){  location = "深圳";  }else if (locationId == 4){  location = "杭州";  }   return location;  }  } |

程序演示：

**项目地址：**[**http://39.103.184.190:8888/learn/weblabs/lab2-2/**](http://39.103.184.190:8888/learn/weblabs/lab2-2/)

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| 界面展示：    邮箱校验：    日期选择：    信息填写：    中转页面：    查看信息： |

四、心得体会

以前做web的时候我都是自己手写html、css和js，本次实验使用了两种不同的前端框架，Bootstrap和Layui。体会到了框架的便捷，也体会了两种框架的一些区别。

Bootstrap的时间比较长，内容比较完善，可以说是“即写即用”，适合后端开发人员快速写出不太丑的页面，Layui是近几年刚出的，在使用的时候一些元素应该事先渲染，使用也比较方便，我觉得Layui的界面风格比较好看。

为了方便数据传输，我没有选择用map的方式传输用户提交的数据，而是创建了一个User实例来存放相关数据，并且使用了lombok简化了代码行数。

五、自我评价

**分数自评**

|  |  |  |  |
| --- | --- | --- | --- |
| **序号** | **评分标准** | **总分** | **自评分** |
| 1 | 完成上述两个题目的基本功能，javascript程序正确 | 6 | 6 |
| 2 | 对题目1的每个页面增加图片，表格，列表，段落等多种HTML元素，并应用CSS，页面美观 | 2 | 2 |
| 3 | 对题目2输入页面的表单内容进行扩充，增加单选框，复选框，列表等多种元素，使用javascript做一些必要的验证，页面美观，并将其存入session变量并显示 | 2 | 2 |
| 合计 |  | 10 | 10 |