

# 实验3 JSP与JavaBean

## 实验目的

1. 掌握 JavaBean相关概念
2. 熟悉 JavaBean的使用
3. 在JSP及Servlet中引入JavaBean对象，设置与读取JavaBean属性的方法，以及讨论JavaBean对象的范围。

## 实验内容

1. 完成教材【例6-1】Eclipse中编写JavaBean对象的示例。 ::

### ● 源代码 ::

```
java

1  package com.xlf.school.bean;
2
3  import java.io.Serial;
4  import java.io.Serializable;
5
6  /**
7   * Goods
8   * <p>
9   * 商品类, 用于存储商品信息
10  *
11  * @version v1.0.0
12  * @since v1.0.0
13  * @author xiao_lfeng
14  */
15  public class Goods implements Serializable {
16      @Serial
17      private static final long serialVersionUID = 0;
18      private int gid;
19      private String gname;
20      private double gprice;
```

```

21     private int count;
22
23     public int getGid() {
24         return gid;
25     }
26
27     public void setGid(int gid) {
28         this.gid = gid;
29     }
30
31     public String getGname() {
32         return gname;
33     }
34
35     public void setGname(String gname) {
36         this.gname = gname;
37     }
38
39     public double getGprice() {
40         return gprice;
41     }
42
43     public void setGprice(double gprice) {
44         this.gprice = gprice;
45     }
46
47     public int getCount() {
48         return count;
49     }
50
51     public void setCount(int count) {
52         this.count = count;
53     }
54 }

```

## 2. 完成教材的例6-2scope属性使用示例。 ..

<jsp:useBean>标签属性scope，表示JavaBean的作用范围，scope属性的候选值可以是以下四个。

- (1) page：表示JavaBean对象作用范围仅限于本页面，在别的页面无法识别。

新建两个JSP页面，分别命名为page1.jsp和page2.jsp。

在page1.jsp的body标签内编写代码，设置1个page范围内的JavaBean对象goods，并设置属性值gname，然后在该页面直接读取，如图6-3所示。

(2) request：表示JavaBean对象除了当前页面可识别外，还可以被request范围内的页面所读取，例如通过forward方式跳转的页面。

(3) session：表示JavaBean对象可以在同一session下所有页面识别。

(4) application：表示只要Web服务器不重启，JavaBean对象能够一直被识别。

## ● 源代码 ::

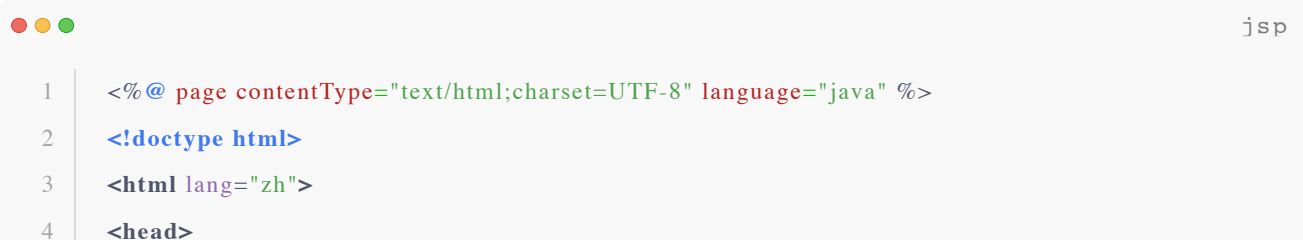
```
jsp
1  <%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8" %>
2  <!doctype html>
3  <html lang="zh">
4  <head>
5      <meta charset="UTF-8">
6      <meta name="viewport"
7          content="width=device-width, user-scalable=no, initial-scale=1.0, maximum-scale=1.0,
8          minimum-scale=1.0">
9      <meta http-equiv="X-UA-Compatible" content="ie=edge">
10     <title>Document</title>
11 </head>
12 <body>
13     <jsp:useBean id="goods" class="com.xlf.school.bean.Goods" scope="page">
14
15     </jsp:useBean>
16
17     <jsp:setProperty property="gname" name="goods" value="小米 10"/>
18     <jsp:getProperty name="goods" property="gname"/>
19 </body>
20 </html>
```

```
jsp
1  <%@ page contentType="text/html; charset=UTF-8" pageEncoding="UTF-8" %>
2  <!doctype html>
3  <html lang="zh">
4  <head>
5      <meta charset="UTF-8">
6      <meta name="viewport"
```

```
7         content="width=device-width, user-scalable=no, initial-scale=1.0, maximum-scale=1.0,
minimum-scale=1.0">
8     <meta http-equiv="X-UA-Compatible" content="ie=edge">
9     <title>Document</title>
10 </head>
11 <body>
12 <jsp:useBean id="goods" class="com.xlf.school.bean.Goods" scope="page">
13
14 </jsp:useBean>
15
16 <jsp:getProperty name="goods" property="gname"/>
17 </body>
18 </html>
```



```
1 <%@ page contentType="text/html; charset=UTF-8" language="java" %>
2 <!doctype html>
3 <html lang="zh">
4 <head>
5     <meta charset="UTF-8">
6     <meta name="viewport"
7         content="width=device-width, user-scalable=no, initial-scale=1.0, maximum-scale=1.0,
minimum-scale=1.0">
8     <meta http-equiv="X-UA-Compatible" content="ie=edge">
9     <title>Document</title>
10 </head>
11 <body>
12 <jsp:useBean id="goods" class="com.xlf.school.bean.Goods" scope="request">
13
14 </jsp:useBean>
15
16 <jsp:setProperty property="gname" name="goods" value="小米 10"/>
17 <jsp:forward page="request2.jsp?gid=1001"/>
18 </body>
19 </html>
```



```
1 <%@ page contentType="text/html; charset=UTF-8" language="java" %>
2 <!doctype html>
3 <html lang="zh">
4 <head>
```

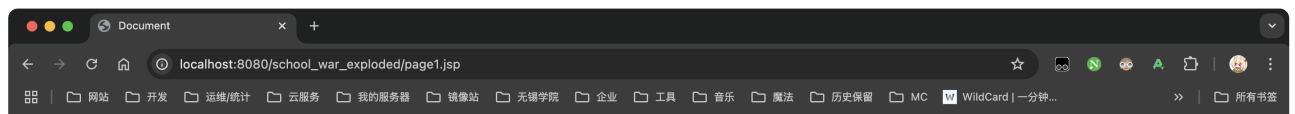
```
5     <meta charset="UTF-8">
6     <meta name="viewport"
7         content="width=device-width, user-scalable=no, initial-scale=1.0, maximum-scale=1.0,
minimum-scale=1.0">
8     <meta http-equiv="X-UA-Compatible" content="ie=edge">
9     <title>Document</title>
10 </head>
11 <body>
12 <jsp:useBean id="goods" class="com.xlf.school.bean.Goods" scope="request">
13
14 </jsp:useBean>
15
16 <jsp:setProperty name="goods" property="gid" param="gid"/>
17 <jsp:getProperty name="goods" property="gid"/>
18
19 <jsp:getProperty name="goods" property="gname"/>
20 </body>
21 </html>
```

```
jsp
1 <%@ page contentType="text/html;charset=UTF-8" language="java" %>
2 <!doctype html>
3 <html lang="zh">
4 <head>
5     <meta charset="UTF-8">
6     <meta name="viewport"
7         content="width=device-width, user-scalable=no, initial-scale=1.0, maximum-scale=1.0,
minimum-scale=1.0">
8     <meta http-equiv="X-UA-Compatible" content="ie=edge">
9     <title>Document</title>
10 </head>
11 <body>
12 <jsp:useBean id="goods" class="com.xlf.school.bean.Goods" scope="session"/>
13 <jsp:setProperty property="gname" name="goods" value="小米 10"/>
14 </body>
15 </html>
```

```
jsp
1 <%@ page contentType="text/html;charset=UTF-8" language="java" %>
2 <!doctype html>
3 <html lang="zh">
```

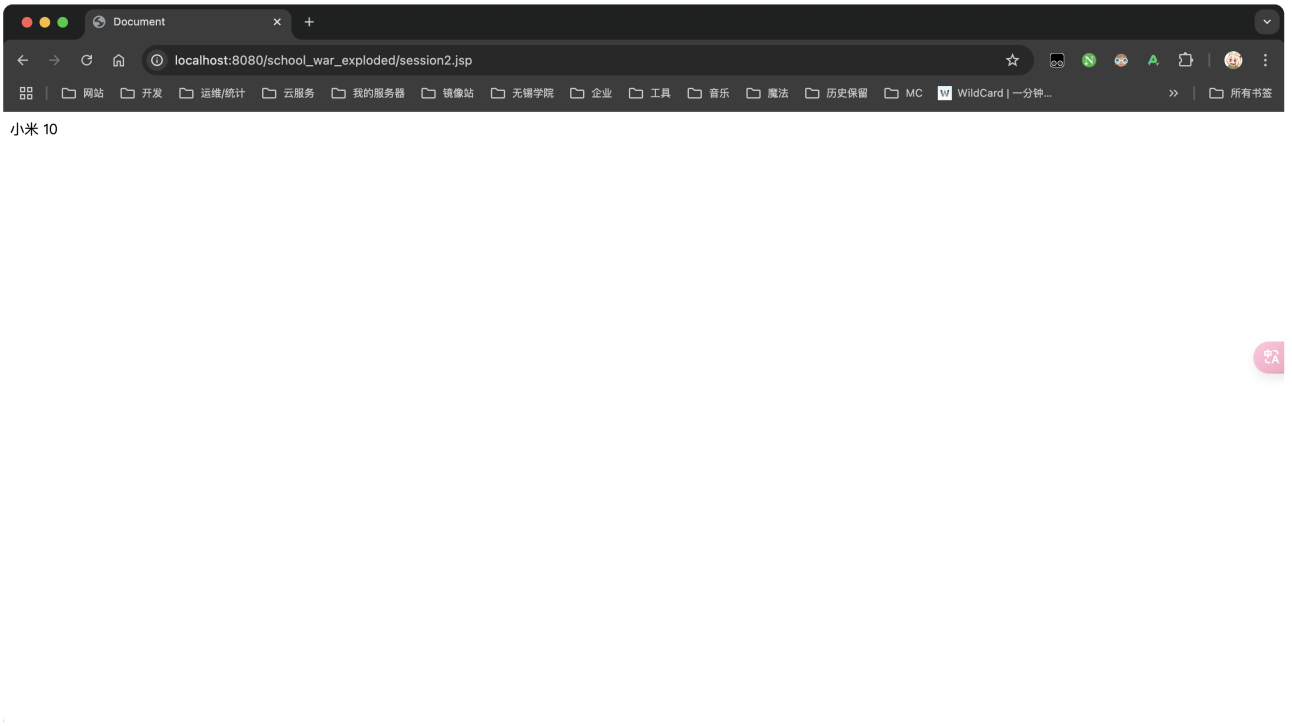
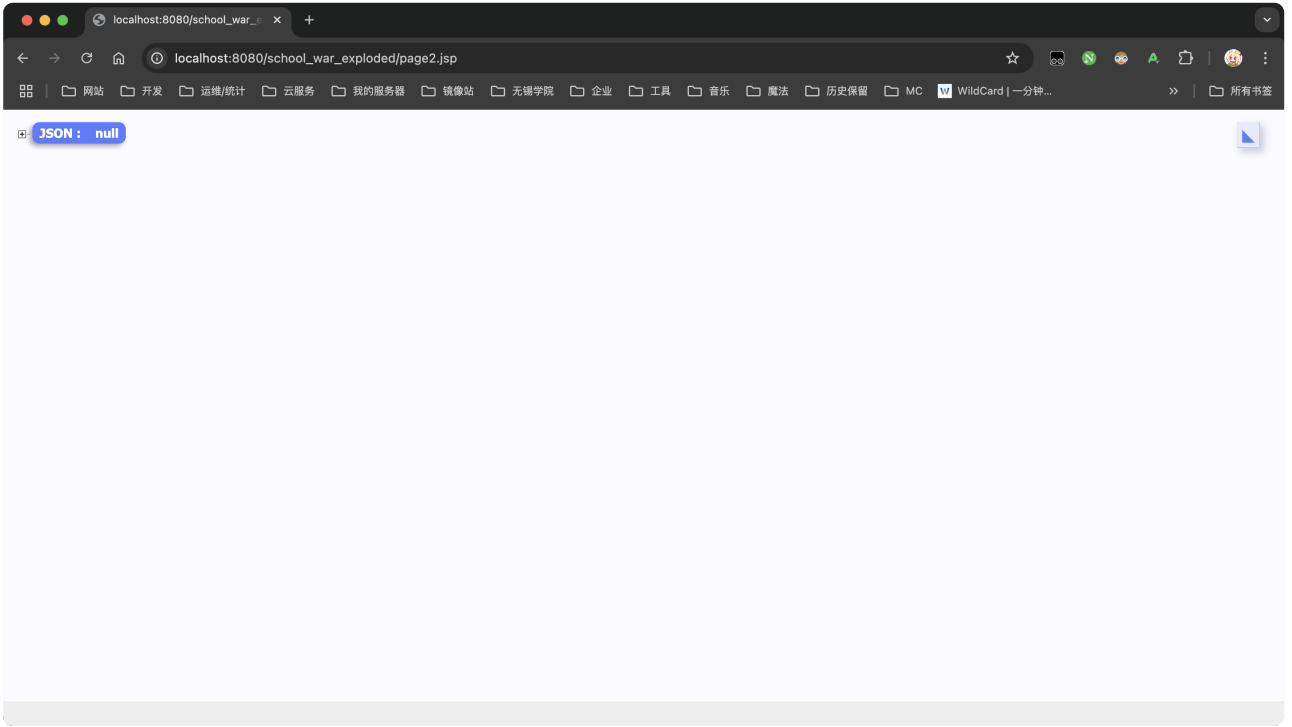
```
4  <head>
5      <meta charset="UTF-8">
6      <meta name="viewport"
7          content="width=device-width, user-scalable=no, initial-scale=1.0, maximum-scale=1.0,
minimum-scale=1.0">
8      <meta http-equiv="X-UA-Compatible" content="ie=edge">
9      <title>Document</title>
10 </head>
11 <body>
12 <jsp:useBean id="goods" class="com.xlf.school.bean.Goods" scope="session">
13
14 </jsp:useBean>
15
16 <jsp:getProperty name="goods" property="gname"/>
17 </body>
18 </html>
```

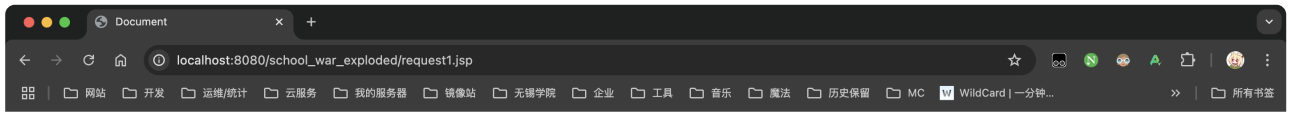
## ● 截图



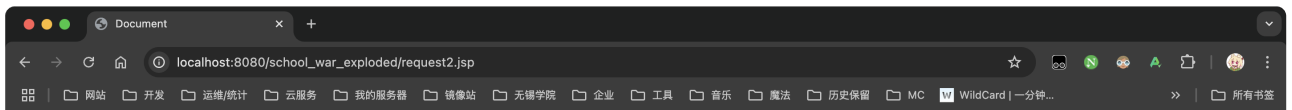
小米 10

🔍





1001 小米 10



0 null

### 3. 下面要求完成JSP项目开发，具体如下 ..

- (1) 按照JavaBean的编写规范，编写一个User.java的类，含有用户序号userid、用户名username、性别gender、年龄age，并编写对应属性的getter/setter方法。
- (2) 在上一题编写的User类中，增加一个Boolean类型的属性member，该属性用于判断是否用户为会员，利用Eclipse代码生成编写对应的getter/setter方法。然后在JSP页面中引入User对象，对所有属性进行设置，并利用标签语句输出所有属性值。



(3) 在第一个JSP页面中引入User对象，对所有属性进行设置，并将scope取值为application，然后新建第二个JSP页面访问User对象。注意：首先使用一种浏览器访问第一个页面，然后使用另外一种浏览器访问第二个JSP页面，查看其效果。

## ● 源代码 ::

```
java

1  package com.xlf.school.bean;
2
3  /**
4   * User
5   * <p>
6   * 用户实体类，用于存储用户信息
7   *
8   * @version v1.0.0
9   * @since v1.0.0
10  * @author xiao_lfeng
11  */
12  public class User {
13      private int userid;
14      private String username;
15      private String gender;
16      private int age;
17      private Boolean member;
18
19      public int getUserid() {
20          return userid;
21      }
22
23      public void setUserid(int userid) {
24          this.userid = userid;
25      }
26
27      public String getUsername() {
28          return username;
29      }
30
31      public void setUsername(String username) {
32          this.username = username;
33      }
34
35      public String getGender() {
```

```

36         return gender;
37     }
38
39     public void setGender(String gender) {
40         this.gender = gender;
41     }
42
43     public int getAge() {
44         return age;
45     }
46
47     public void setAge(int age) {
48         this.age = age;
49     }
50
51     public Boolean getMember() {
52         return member;
53     }
54
55     public void setMember(Boolean member) {
56         this.member = member;
57     }
58 }

```

```

jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
2  <%@ page import="com.xlf.school.bean.User" %>
3  <html>
4  <head>
5      <title>User Information</title>
6  </head>
7  <body>
8  <%
9      User user = new User();
10     user.setUserid(1);
11     user.setUsername("筱锋");
12     user.setGender("男");
13     user.setAge(21);
14     user.setMember(true);
15
16     application.setAttribute("user", user);
17 %>

```

```

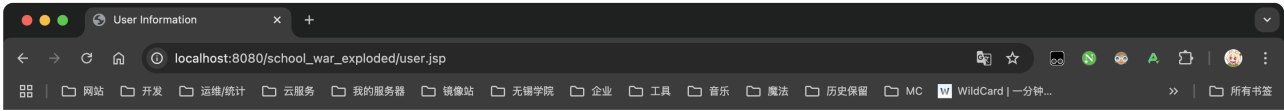
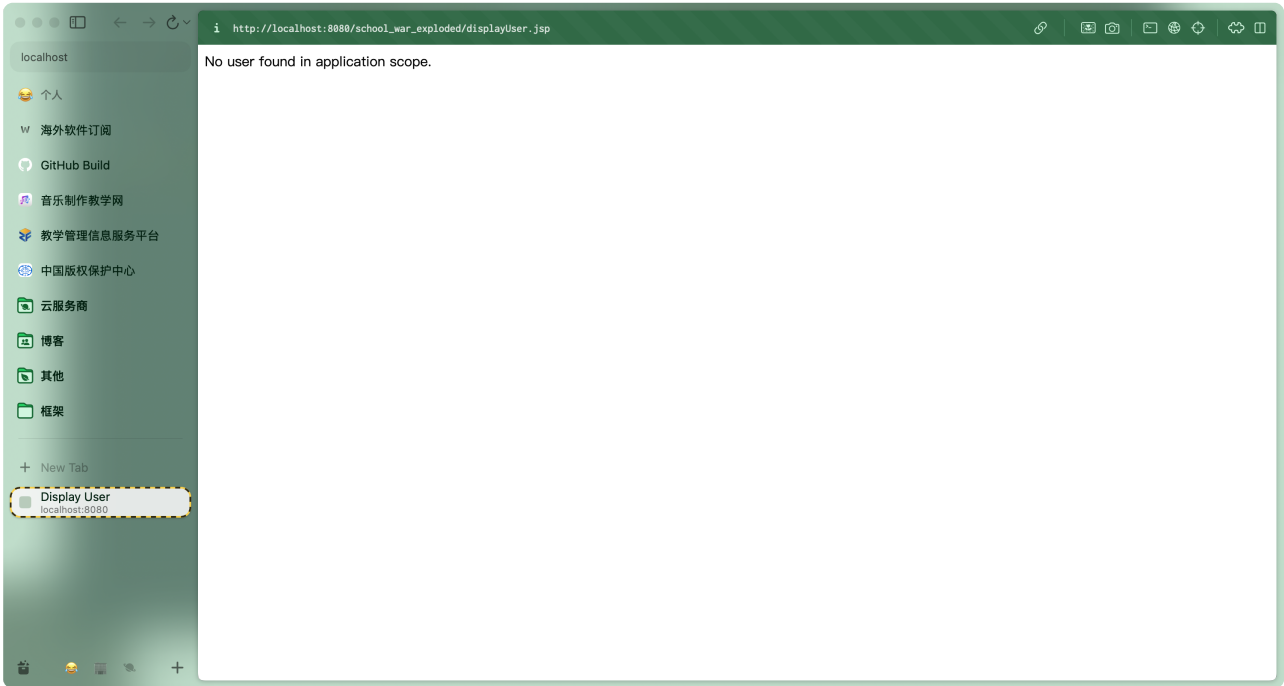
18
19 <h2>User Information:</h2>
20 <p>UserID: <%= user.getUserid() %></p>
21 <p>Username: <%= user.getUsername() %></p>
22 <p>Gender: <%= user.getGender() %></p>
23 <p>Age: <%= user.getAge() %></p>
24 <p>Member: <%= user.getMember() ? "是" : "否" %></p>
25 </body>
26 </html>

```

```

jsp
1 <%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
2 <%@ page import="com.xlf.school.bean.User" %>
3 <html>
4 <head>
5 <title>Display User</title>
6 </head>
7 <body>
8 <%
9     User user = (User) application.getAttribute("user");
10
11     if (user != null) {
12         %>
13         <h2>User Information from Application Scope:</h2>
14         <p>UserID: <%= user.getUserid() %></p>
15         <p>Username: <%= user.getUsername() %></p>
16         <p>Gender: <%= user.getGender() %></p>
17         <p>Age: <%= user.getAge() %></p>
18         <p>Member: <%= user.getMember() ? "是" : "否" %></p>
19         <%
20     } else {
21         %>
22         <p>No user found in application scope.</p>
23         <%
24     }
25     %>
26 </body>
27 </html>

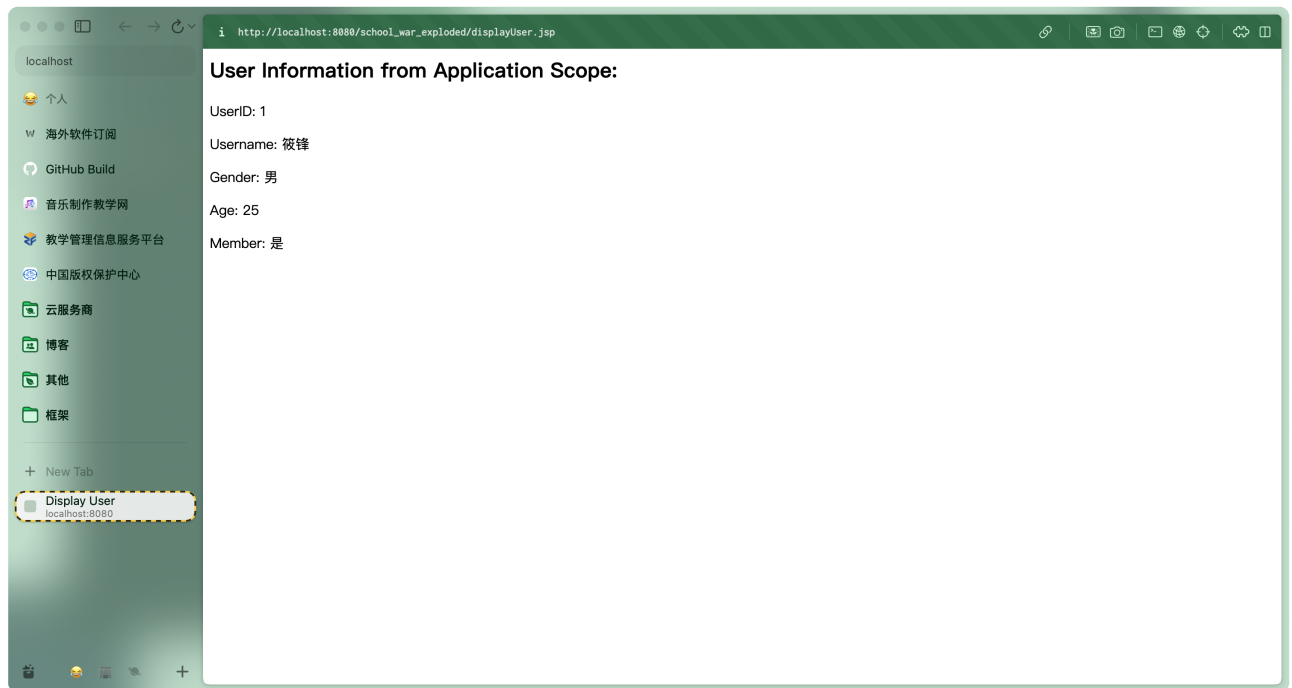
```



**User Information:**

UserID: 1  
Username: 筱锋  
Gender: 男  
Age: 25  
Member: 是





#### 4. 完成【例6-3】利用JavaBean开发简易购物车的示例

简易购物车的要求是：网站可以购买不同品牌的手机商品，每个品牌的页面中显示不同型号手机的名称和价格，在商品后面可以选择购买的数量，并显示购买的超链接，单击超链接，可以将商品加入用户的购物车中。在不同的页面下，可以自由挑选商品加入购物车，最终显示购物车内手机商品的数量，每种型号手机的个数、小计价格以及整个购物车商品的价格。

```
java
1 package com.xlf.school.bean;
2
3 import java.io.Serializable;
4 import java.io.Serializable;
5
6 /**
7  * Goods
8  * <p>
9  * 商品类, 用于存储商品信息
10  *
11  * @version v1.0.0
12  * @since v1.0.0
13  * @author xiao_lfeng
14  */
15 public class Goods implements Serializable {
16     @Serial
```

```
17     private static final long serialVersionUID = 0;
18     private int gid;
19     private String gname;
20     private double gprice;
21     private int gcount;
22
23     public int getGid() {
24         return gid;
25     }
26
27     public void setGid(int gid) {
28         this.gid = gid;
29     }
30
31     public String getGname() {
32         return gname;
33     }
34
35     public void setGname(String gname) {
36         this.gname = gname;
37     }
38
39     public double getGprice() {
40         return gprice;
41     }
42
43     public void setGprice(double gprice) {
44         this.gprice = gprice;
45     }
46
47     public int getGcount() {
48         return gcount;
49     }
50
51     public void setGcount(int gcount) {
52         this.gcount = gcount;
53     }
54 }
```



java

```
1     package com.xlf.school;
2
```

```
3  import com.xlf.school.bean.Goods;
4  import jakarta.servlet.ServletException;
5  import jakarta.servlet.annotation.WebServlet;
6  import jakarta.servlet.http.HttpServlet;
7  import jakarta.servlet.http.HttpServletRequest;
8  import jakarta.servlet.http.HttpServletResponse;
9  import jakarta.servlet.http.HttpSession;
10
11  import java.io.IOException;
12
13  /**
14   * 添加购物车 Servlet
15   * <p>
16   * 用于处理添加购物车请求
17   *
18   * @author xiao_lfeng
19   * @version v1.0.0
20   * @since v1.0.0
21   */
22  @WebServlet(name = "AddCartServlet", urlPatterns = "/AddCartServlet")
23  public class AddCartServlet extends HttpServlet {
24      @Override
25      protected void doGet(HttpServletRequest request, HttpServletResponse response)
26          throws ServletException, IOException {
27          response.setCharacterEncoding("UTF-8");
28          response.setHeader("Content-type", "text/html; charset=UTF-8");
29
30          String gid = request.getParameter("gid");
31          String gcount = request.getParameter("gcount");
32
33          if (gid != null && gcount != null) {
34              Goods goods;
35              GoodsDao goodsDao = new GoodsDao();
36
37              goods = goodsDao.setGoods(Integer.parseInt(gid));
38              goods.setGcount(Integer.parseInt(gcount));
39
40              HttpSession session = request.getSession();
41              Cart cart = (Cart) session.getAttribute("cart");
42
43              if (cart != null) {
44                  cart.addGoods(goods);
45              } else {
```

```

46         cart = new Cart();
47         cart.addGoods(goods);
48     }
49
50     session.setAttribute("cart", cart);
51     response.getWriter().println("添加成功！");
52     response.getWriter().println("<a href='cart.jsp'>查看购物车</a>");
53     response.getWriter().println("<a href='javascript:history.back(-1)'>返回上一页</a>");
54 } else {
55     response.getWriter().println("参数不正确");
56     response.getWriter().println("<a href='javascript:history.back(-1)'>返回上一页</a>");
57 }
58 }
59 }

```

```

1 package com.xlf.school;
2
3 import com.xlf.school.bean.Goods;
4
5 import java.io.Serializable;
6 import java.util.ArrayList;
7 import java.io.Serializable;
8
9 /**
10  * 购物车类
11  * <p>
12  * 用于存储用户购物车信息
13  *
14  * @version v1.0.0
15  * @since v1.0.0
16  * @author xiao_lfeng
17  */
18 public class Cart implements Serializable {
19     @Serial
20     private static final long serialVersionUID = 44256950914898900L;
21     private ArrayList<Goods> goodslist = new ArrayList<>();
22
23     public ArrayList<Goods> getGoodslist() {
24         return goodslist;
25     }
26

```



```

27     public void setGoodslist(ArrayList<Goods> goodslist) {
28         this.goodslist = goodslist;
29     }
30
31     public int getGcount() {
32         int count = 0;
33         for (Goods g : goodslist) {
34             count += g.getGcount();
35         }
36         return count;
37     }
38
39     public double getTotal() {
40         double sum = 0;
41         for (Goods g : goodslist) {
42             sum += g.getGprice() * g.getGcount();
43         }
44         return sum;
45     }
46
47     public int check(int gid) {
48         for (int i = 0; i < goodslist.size(); i++) {
49             if (goodslist.get(i).getGid() == gid) {
50                 return i;
51             }
52         }
53         return -1;
54     }
55
56     public void addGoods(Goods goods) {
57         int index = check(goods.getGid());
58         if (index == -1) {
59             goodslist.add(goods);
60         } else {
61             Goods g = goodslist.get(index);
62             g.setGcount(g.getGcount() + goods.getGcount());
63         }
64     }
65 }

```



java

```
1 package com.xlf.school;
```

```
2
3 import com.xlf.school.bean.Goods;
4
5 /**
6  * 商品信息 Dao
7  * <p>
8  * 用于获取商品信息
9  *
10 * @version v1.0.0
11 * @since v1.0.0
12 * @author xiao_lfeng
13 */
14 public class GoodsDao {
15     public Goods setGoods(int gid) {
16         Goods goods = new Goods();
17
18         switch (gid) {
19             case 1001:
20                 goods.setGid(1001);
21                 goods.setGname("小米10");
22                 goods.setGprice(3999.00);
23                 break;
24             case 1002:
25                 goods.setGid(1002);
26                 goods.setGname("红米K30");
27                 goods.setGprice(1999.00);
28                 break;
29             case 1003:
30                 goods.setGid(1003);
31                 goods.setGname("红米Note8");
32                 goods.setGprice(999.00);
33                 break;
34             case 1004:
35                 goods.setGid(1004);
36                 goods.setGname("华为Mate30");
37                 goods.setGprice(3699.00);
38                 break;
39             case 1005:
40                 goods.setGid(1005);
41                 goods.setGname("华为P40");
42                 goods.setGprice(4188.00);
43                 break;
44             case 1006:
```

```

45         goods.setGid(1006);
46         goods.setGname("华为Nova6");
47         goods.setGprice(3499.00);
48         break;
49     default:
50         // 可以添加默认处理
51         break;
52     }
53
54     return goods;
55 }
56 }

```

```

jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
2  <%@ include file="header.jsp" %>
3  <%@ page import="com.xlf.school.Cart, com.xlf.school.bean.Goods, java.util.ArrayList" %>
4  <%@ page import="com.xlf.school.bean.Goods" %>
5  <jsp:useBean id="cart" class="com.xlf.school.Cart" scope="session"/>
6  <%
7      if (cart == null || cart.getGoodslist().size() == 0) {
8  %>
9  <p>您的购物车空空如也...</p>
10 <%
11 } else {
12     ArrayList<Goods> goodslist = cart.getGoodslist();
13     double total = cart.getTotal();
14 %>
15 <table>
16     <tr>
17         <td>商品编号</td>
18         <td>商品名称</td>
19         <td>商品价格</td>
20         <td>数量</td>
21         <td>小计</td>
22     </tr>
23 <%
24     for (Goods goods : goodslist) {
25 %>
26 <tr>
27     <td><%= goods.getGid() %></td>
28     <td><%= goods.getGname() %></td>

```

```

29     <td><%= goods.getGprice() %></td>
30     <td><%= goods.getGcount() %></td>
31     <td><%= goods.getGprice() * goods.getGcount() %></td>
32 </tr>
33 <% } %>
34 <tr>
35     <td colspan="5">总计: <%= total %></td>
36 </tr>
37 </table>
38 <% } %>

```

```

jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
2  <%@ include file="header.jsp" %>
3  <table>
4      <tr><td>商品号</td><td>商品名称</td><td>商品价格</td><td>数量</td></tr>
5      <tr>
6          <td>1004</td><td>华为Mate30</td><td>3699.00</td>
7          <td><input type="number" name="1004" min="1" value="1" size="5"/></td>
8          <td><a class="link" id="1004">加入购物车</a></td>
9      </tr>
10     <tr>
11         <td>1005</td><td>华为P40</td><td>4188.00</td>
12         <td><input type="number" name="1005" min="1" value="1" size="5"/></td>
13         <td><a class="link" id="1005">加入购物车</a></td>
14     </tr>
15     <tr>
16         <td>1006</td><td>华为Nova6</td><td>3499.00</td>
17         <td><input type="number" name="1006" min="1" value="1" size="5"/></td>
18         <td><a class="link" id="1006">加入购物车</a></td>
19     </tr>
20 </table>
21 <script src="addcart.js"></script>

```

```

jsp
1  <%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
2  <%@ include file="header.jsp" %>
3  <table>
4      <tr><td>商品号</td><td>商品名称</td><td>商品价格</td><td>数量</td></tr>
5      <tr>
6          <td>1001</td><td>小米10</td><td>3999.00</td>

```

```

7      <td><input type="number" name="1001" min="1" value="1" size="5"/></td>
8      <td><a class="link" id="1001">加入购物车</a></td>
9  </tr>
10 <tr>
11     <td>1002</td><td>红米K30</td><td>1999.00</td>
12     <td><input type="number" name="1002" min="1" value="1" size="5"/></td>
13     <td><a class="link" id="1002">加入购物车</a></td>
14 </tr>
15 <tr>
16     <td>1003</td><td>红米Note8</td><td>999.00</td>
17     <td><input type="number" name="1003" min="1" value="1" size="5"/></td>
18     <td><a class="link" id="1003">加入购物车</a></td>
19 </tr>
20 </table>
21 <script src="addcart.js"></script>

```

```

1  <%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
2  <a href="xiaomi.jsp">小米手机</a> | <a href="huawei.jsp">华为手机</a> | <a href="cart.jsp">查看购
   物车</a>
3  <hr>

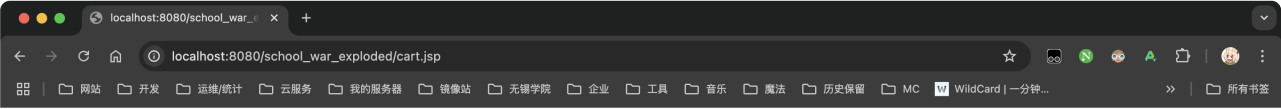
```

```

1  var links = document.getElementsByClassName("link");
2  for (var i = 0; i < links.length; i++) {
3      links[i].onclick = function() {
4          var gid = this.id;
5          var num = document.getElementsByName(gid)[0].value;
6          window.location.href = "AddCartServlet?gid=" + gid + "&gcount=" + num;
7      };
8  }

```

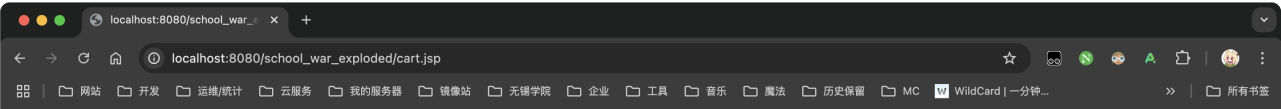
● 截图 。



[小米手机](#) | [华为手机](#) | [查看购物车](#)

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localhost:8080/school\_war\_exploded/huawei.jsp



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商品编号	商品名称	商品价格	数量	小计
1004	华为Mate30	3699.0	1	3699.0
1002	红米K30	1999.0	1	1999.0
1006	华为Nova6	3499.0	1	3499.0
总计:				9197.0