

# TRƯỜNG ĐẠI HỌC KHOA HỌC TỰ NHIÊN KHOA CÔNG NGHỆ THÔNG TIN

## MVC 2 & JSTL 1.2

**Nguyễn Hoàng Anh**  
**[nhanh@fit.hcmus.edu.vn](mailto:nhanh@fit.hcmus.edu.vn)**

# Nội dung trình bày

- JSTL - Core
- JSTL - Formatting

# JSTL 1.2 – CORE

# Cấu hình

- Thư viện cần sử dụng

jstl-api-1.2.jar

jstl-impl-1.2.jar

- Đặt các thư viện này vào trong thư mục

WEB-INF/lib

- Khai báo khi sử dụng trong trang JSP

```
<%@ taglib prefix="c"
```

```
uri="http://java.sun.com/jsp/jstl/core"%>
```

# JSTL – c:out

- Cú pháp

1	<c:out	value="expression"
2		default="expression"
3		escapeXml="true false"/>

- **value : required**
- default : optional
- escapeXml : optional

# JSTL – c:out

## ■ Servlet

```
1  DanhMuc dm=new DanhMuc("DM001", "Java");  
2  request.setAttribute("danhMuc", dm);  
3  rd.forward(request, response);
```

## ■ JSP

```
1  <c:out value="${1+2+3}"/>  
2  <c:out value="${danhMuc.maDanhMuc}"/>  
3  <c:out value="${danhMuc.tenDanhMuc}"/>
```

# JSTL – c:set

## ■ Cú pháp

1	<c:set var="tenBien" value="expression"
2	scope="page request session application"/>
3	scope default : page

## ■ Ví dụ

1	<c:set var="n" value="10"/>
2	<c:set var="n" value="\${ds.size()}" />
3	<c:set var="n" value="\${param.soLuong}" />

# JSTL – c:remove

## ■ Cú pháp

1	<c:remove var="tenBien"
2	scope="page request session application"/>
3	scope default : any

## ■ Ví dụ

1	<c:remove var="n"/>
2	<c:remove var="ds1" scope="request"/>
3	<c:remove var="ds2" scope="session"/>



# JSTL – c:if

- Cú pháp

1	<code>&lt;c:if test="expression" var="name"</code>
2	<code>scope="page request session application"&gt;</code>
3	<code>&lt;/c:if&gt;</code>

- `test` : required
- `var`: optional
- `scope` : optional (giá trị mặc định là `page`)

# JSTL - c:if

## ■ Servlet

```
1  DanhMuc dm=new DanhMuc("DM001", "Java");  
2  request.setAttribute("danhMuc", dm);  
3  rd.forward(request, response);
```

## ■ JSP

```
1  <c:if test="${danhMuc.maDanhMuc != 'DM002'}">  
2      <c:out value="${danhMuc.maDanhMuc}"/>  
3  </c:if>
```

# JSTL - c:if

## ■ JSP

```
1 <c:if test="$${danhMuc.maDanhMuc} != 'DM002' ">
2     var="bt1" scope="page">
3     <c:out value="$${danhMuc.maDanhMuc}"/>
4 </c:if>
5 <c:if test="$${bt1}' ">
6     <c:out value="$${danhMuc.tenDanhMuc}"/>
7 </c:if>
```

## JSTL - c:if

```
1 <c:if test="${danhMuc.maDanhMuc != 'DM002'}">
2   <font color="blue">
3     <c:out value="${danhMuc.maDanhMuc}"/>
4   </font>
5 <c:if/>
6 <c:if test="${danhMuc.maDanhMuc != 'DM002'}">
7   <font color="blue">
8     ${danhMuc.maDanhMuc}
9   </font>
10 <c:if/>
```

## JSTL - c:if

```
1 <form name="frm" action="TimKiem.do" method="get">
2   <label for="tenSach">Tên sách</label>
3   <input name="tenSach"
4     <c:if test="${param.tenSach != null}">
5       value="${param.tenSach}"
6     </c:if>
7   />
8   <input name="btTim" type="submit" value="Tìm"/>
9 </form>
```

# JSTL - **c:choose** – **c:when** – **c:otherwise**

## ■ Cú pháp

```
1  <c:choose>
2    <c:when test="expression">
3      ...
4    </c:when>
5    <c:when test="expression">
6      ...
7    </c:when>
8    <c:otherwise>
9      ...
10   </c:otherwise>
11 </c:choose>
```

# JSTL - **c:choose** – **c:when** – **c:otherwise**

## ■ Cú pháp

```
1  <c:choose>
2    <c:when test="${thang == 1}">
3      <c:out value="Tháng giêng"/>
4    </c:when>
5    <c:when test="${thang == 2}">
6      <c:out value="Tháng hai"/>
7    </c:when>
8    . . .
9    <c:otherwise>
10     <c:out value="Tháng không hợp lệ"/>
11   </c:otherwise>
12 </c:choose>
```

# JSTL – c:forEach

## ■ Cú pháp

```
1 <c:forEach var="name"
2           items="array or collection"
3           begin="?"    <!--Default:0--%>
4           end="?"      <!--Default:size - 1 --%>
5           step="?"     <!--Default:1 --%>
6           varStatus="name">
7           . . .
8 </c:forEach>
```



# JSTL – c:forEach

```
1 <ul>
2   <c:forEach var="i" begin="0" end="100">
3     <li>
4       <c:out value="${i}"/>
5     </li>
6   </c:forEach>
7 </ul>
```

# JSTL – c:forEach

```
1 <ul>
2   <c:forEach var="i" begin="1" end="100"
3             step="2" >
4     <li>
5       <c:out value="${i}"/>
6     </li>
7   </c:forEach>
8 </ul>
```

# JSTL – c:forEach

## ■ Servlet

```
1 int [] a = {1,6,4,7,8,2};
2 request.setAttribute("arr", a);
3 rd.forward(request, response);
```

## ■ JSP

```
1 <ul>
2     <c:forEach var="pt" items="${arr}">
3         <li>
4             <c:out value="${pt}"/>
5         </li>
6     </c:forEach>
7 </ul>
```

# JSTL – c:forEach

## ■ Servlet

```
1  int [][] a = {  
2      {1,6,4,7,8,2},  
3      {3,8,2,2,4,7},  
4      {5,9,3,1,7,9},  
5      };  
6  request.setAttribute("arr", a);  
7  rd.forward(request, response);
```

# JSTL – c:forEach

## ■ JSP

```
1 <table border="1">
2   <c:forEach var="row" items="${arr}">
3     <tr>
4       <c:forEach var="cell" items="${row}">
5         <td>
6           <c:out value="${cell}"/>
7         </td>
8       </c:forEach>
9     </tr>
10  </c:forEach>
11 </table>
```

# JSTL – c:forEach

## ■ Servlet

```
1  DanhMuc [] ds = ... // hoặc
2  ArrayList<DanhMuc> ds = ...
3  request.setAttribute("arr", a);
4  rd.forward(request, response);
```

## ■ JSP

```
1  <ul>
2      <c:forEach var="dm" items="${arr}">
3          <li> <a href="Xem.do?mdm=${dm.maDanhMuc}">
4              <c:out value="${dm.tenDanhMuc}"/>
5          </a> </li>
6      </c:forEach>
7  </ul>
```

# JSTL – c:forEach

- Servlet

1	DanhMuc [][] a = ... //hoặc
2	ArrayList<ArrayList<DanhMuc>> list = . . .
3	request.setAttribute("arr", a);
4	rd.forward(request, response);

# JSTL – c:forEach

## ■ JSP

```
1 <table border="1">
2   <c:forEach var="row" items="${arr}">
3     <tr>
4       <c:forEach var="cell" items="${row}">
5         <td>
6           <c:out value="${cell.tenDanhMuc}"/>
7         </td>
8       </c:forEach>
9     </tr>
10  </c:forEach>
11 </table>
```



# JSTL – c:forEach

```
1 <c:forEach ...  
2     varStatus="name">  
3     . . .  
4 </c:forEach>
```

- name.count (int) : bắt đầu là 1
- name.index (int) : bắt đầu là 0
- name.first (boolean)
- name.last (boolean)
- name.step, name.begin, name.end

# JSTL – c:forEach

- Servlet

```
1  DanhMuc [] ds = ... // hoặc
2  ArrayList<DanhMuc> ds = ...
3  request.setAttribute("arr", a);
4  rd.forward(request, response);
```

# JSTL – c:forEach

## ■ JSP

```
1 <table border="1">
2   <c:forEach var="dm" items="${danhMucs}"
3     varStatus="status">
4     <tr><td>
5       <c:out value="${status.count}"/>
6     </td>
7     <td>
8       <a href="Xem.do?mdm=${dm.maDanhMuc}">
9         ${dm.tenDanhMuc}
10      </a>
11    </td>
12  </tr>
13 </c:forEach>
14 </table>
```

# JSTL 1.2 – FORMATTING

# Cấu hình

- Thư viện cần sử dụng

`jstl-api-1.2.jar`

`jstl-impl-1.2.jar`

- Đặt các thư viện này vào trong thư mục

`WEB-INF/lib`

- Khai báo khi sử dụng trong trang JSP

`<%@ taglib prefix="fmt"`

`uri="http://java.sun.com/jsp/jstl/fmt"%>`

# JSTL – fmt:formatNumber - number

- JSP

```
<fmt:formatNumber type="number"
    value="5000000" />
```

```
<fmt:formatNumber type="number"
    value="5000000"
    groupingUsed="true" />
```

- Kết quả

5,000,000

# JSTL – fmt:formatNumber - **number**

- JSP

```
<fmt:formatNumber    type="number"  
                      value="5000000"  
                      groupingUsed="false"  
  
/>
```

- Kết quả

5000000

# JSTL – fmt:formatNumber - **number**

- JSP

```
<fmt:formatNumber type="number"  
value="5000000.7"  
maxFractionDigits="2"  
minFractionDigits="2"/>
```

- Kết quả

5,000,000.70



# JSTL – fmt:formatNumber - **number**

- JSP

```
<fmt:formatNumber type="number"  
value="5000000.0567"  
maxFractionDigits="2"  
minFractionDigits="2"/>
```

- Kết quả

5,000,000.06

# JSTL – fmt:formatNumber - **number**

- JSP

```
<fmt:formatNumber type="number"  
value="422.7"  
maxFractionDigits="2"  
minFractionDigits="2"  
minIntegerDigits="4" />
```

- Kết quả

0,442.70

# JSTL – fmt:formatNumber – percent

- JSP

```
<fmt:formatNumber type="percent"  
value="0.24"/>
```

- Kết quả

24%

# JSTL – fmt:formatNumber – **currency**

- JSP

```
<fmt:formatNumber type="currency"  
value="2000"/>
```

- Kết quả

**\$2000**

# JSTL – fmt:formatNumber – **currency**

- JSP

```
<fmt:formatNumber type="currency"  
                  value="2000"  
                  currencyCode="VND" />
```

- Kết quả

VND2000

- Currency Code

<http://www.xe.com/iso4217.php>

# JSTL – fmt:formatDate

- JSP

```
<jsp:useBean id="current"  
             class="java.util.Date"/>  
  
<fmt:formatDate value="${current}"/>
```

- Kết quả

Oct 12, 2011

# JSTL – fmt:formatDate

- JSP

```
<jsp:useBean id="current"  
             class="java.util.Date"/>  
  
<fmt:formatDate value="${current}"  
                type="date"/>
```

- Kết quả

Oct 12, 2011

# JSTL – fmt:formatDate

- JSP

```
<jsp:useBean id="current"  
             class="java.util.Date"/>  
  
<fmt:formatDate value="${current}"  
                type="time"/>
```

- Kết quả

5:22:37 PM



# JSTL – fmt:formatDate

- JSP

```
<jsp:useBean id="current"  
             class="java.util.Date"/>  
  
<fmt:formatDate value="${current}"  
                type="both"/>
```

- Kết quả

Oct 12, 2011 5:23:08 PM

# JSTL – fmt:formatDate

- JSP

```
<jsp:useBean id="current"  
             class="java.util.Date"/>  
  
<fmt:formatDate value="${current}"  
                pattern="dd/MM/yyyy"/>
```

- Kết quả

12/10/2011

# JSTL – fmt:formatDate

- JSP

```
<jsp:useBean id="current"  
             class="java.util.Date"/>  
  
<fmt:formatDate value="${current}"  
                pattern="MM/dd/yyyy"/>
```

- Kết quả

10/12/2011

# JSTL – fmt:formatDate

- JSP

```
<jsp:useBean id="current"  
             class="java.util.Date"/>  
  
<fmt:formatDate value="${current}"  
                pattern="yyyy-MM-dd"/>
```

- Kết quả

2011-10-12

# JSTL – fmt:formatDate

- JSP

```
<jsp:useBean id="current"  
             class="java.util.Date"/>  
  
<fmt:formatDate value="${current}"  
                pattern="dd/MM/yyyy HH:mm:ss.S"/>
```

- Kết quả

12/10/2011 17:28:08.891

- Pattern

<http://download.oracle.com/javase/1.4.2/docs/api/java/text/SimpleDateFormat.html>





# HỎI VÀ ĐÁP

# Reference

- [1] Marty Hall; Larry Brown; Yaakov Chaikin. (2007). Core Servlets and Javaserver Pages: Advanced Technologies, Vol. 2, 2<sup>nd</sup> Edition. Prentice Hall.
- [2] Joel Murach; Michael Urban. (2014). Murach's Java Servlets and JSP, 3<sup>rd</sup> Edition. Mike Murach & Associate.