

CS320 Web and Internet Programming JSP Standard Tag Library (JSTL)

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Simple JSTL Example

```
<%@ page contentType="text/html" %>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>

<html><head><title>JSTL Hello</title></head>
<body>

<c:out value="Hello World in JSTL." />

</body>
</html>
```

taglib Directive

◆ URI

- A unique identifier for the tag library
- NOT a real URL

◆ Prefix

- A short name for the tag library
- Could be an arbitrary name

JSP Standard Tag Library (JSTL)

Library	URI	Prefix
Core	http://java.sun.com/jsp/jstl/core	c
XML Processing	http://java.sun.com/jsp/jstl/xml	x
I18N Formatting	http://java.sun.com/jsp/jstl/fmt	fmt
Database Access	http://java.sun.com/jsp/jstl/sql	sql
Functions	http://java.sun.com/jsp/jstl/functions	fn

http://download.oracle.com/docs/cd/E17802_01/products/products/jsp/jstl/1.1/docs/tldocs/index.html

JSTL Core

◆ Flow control

- <c:if>
- <c:choose>
 - <c:when>
 - <c:otherwise>
- <c:forEach>
- <c:forEachToken>

◆ Variable support

- <c:set>
- <c:remove>

◆ URL

- <c:url>
- <c:redirect>
- <c:import>
- <c:param>

◆ Output

- <c:out>

◆ Exception handling

- <c:catch>

JSTL Usage Examples

◆ Users.jsp

- UserManager.java
- User.java

◆ Login.jsp, Members.jsp, Logout.jsp

Example: User Management

Users			
	Username	Password	Account Created
1	cysun	abcd	4/9/2011 3:50PM
2	jdoe	1234	4/10/2011 8:11AM

Username:

Password:

Example: Login and Logout

Username:

Password:

Login

Members Only!

[Logout](#)

Members

Branch Tags

```
<c:if test="\${um.size == 0}">No user yet.</c:if>
```

```
<c:choose>
```

```
  <c:when test="\${um.size == 0}">
```

```
    No user yet.
```

```
  </c:when>
```

```
  <c:otherwise>
```

```
    <%-- display the users --%>
```

```
  </c:otherwise>
```

```
</c:choose>
```

Loop Tags

```
<%-- iterator style --%>
```

```
<c:forEach items="\${um.users}" var="user">
```

```
  \${user.username} <br />
```

```
</c:forEach>
```

```
<%-- for loop style --%>
```

```
<c:forEach begin="0" end="\${um.size}" step="1" var="i">
```

```
  \${um.users[i].username} <br />
```

```
</c:forEach>
```

<forToken> → Exercise

Set and Remove Scope Variables

In Login.jsp

```
<c:set var="authorized" value="true" scope="session"/>
```

In CheckLogin.jsp

```
<c:if test="\${empty sessionScope.authorized}">
```

```
  <c:redirect url="Login.jsp" />
```

```
</c:if>
```

In Logout.jsp

```
<c:remove var="authorized" scope="session" />
```

Set Bean Property

◆ <jsp:setProperty>

- name attribute must be a bean declared by <jsp:useBean>

◆ <c:set>

- target attribute can be any object with a setter
- Example:

```
<c:set target="\${bb.a}" property="a" value="\${param.a}" />
```

URL Tags

```
<c:import url="/books.xml" var="something" />
<x:parse doc="{something}"
  var="booklist"
  scope="application" />

<c:url var="url" value="/catalog" >
  <c:param name="Add" value="{bookId}" />
</c:url>
<a href="{url}">Get book</a>
```

Output

```
<c:out value="100" />           ⇒  ${100}
<c:out value="{price}" />     ⇒  ${price}
```

- ◆ You want to use `<c:out>` if
 - `escapeXML=true`
 - `value` is a `Java.io.Reader` object

Character Conversion

- ◆ When `escapeXML=true`

<	<
>	>
&	&
'	'
"	"

Format Date and Time

```
<fmt:formatDate value="{date}" type="date" />
<fmt:formatDate value="{date}" type="time" />
<fmt:formatDate value="{date}" type="both" />

<fmt:formatDate value="{date}"
  pattern="yyyy-MM-dd hh:mm:ss a" />
```

See <http://download.oracle.com/javase/6/docs/api/java/text/SimpleDateFormat.html> for the date formatting patterns.

JSTL Functions

- ◆ `fn:length()`
- ◆ `fn:contains()`
- ◆ `fn:containsIgnoreCase()`
- ◆ `fn:startsWith()`
- ◆ `fn:endsWith()`
- ◆ `fn:indexOf()`
- ◆ `fn:replace()`
- ◆ `fn:trim()`
- ◆ `fn:toUpperCase()`
- ◆ `fn:toLowerCase()`
- ◆ `fn:substring()`
- ◆ `fn:substringAfter()`
- ◆ `fn:substringBefore()`
- ◆ `fn:split()`
- ◆ `fn:join()`
- ◆ `fn:escapeXML()`

Function Example

- ◆ Exercise