

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

Chengyu Sun
California State University, Los Angeles

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://java.sun.com/products/jsp/jstl/1.1/docs/tldocs/index.html>

JSTL Core

- ◆ Flow control
 - <c:if>
 - <c:choose>
 - <c:when>
 - <c:otherwise>
 - <c:forEach>
 - <c:forToken>
- ◆ Variable support
 - <c:set>
 - <c:remove>
- ◆ URL
 - <c:param>
 - <c:redirect>
 - <c:import>
 - <c:url>
- ◆ Output
 - <c:out>
- ◆ Exception handling
 - <c:catch>

JSTL Usage Examples

- ◆ ShoppingCart.jsp
- ◆ Login.jsp and Members.jsp

Branch Tags

```
<c:if test="${!cart.notEmpty}"> The cart is empty.</c:if>

<c:choose>
  <c:when test="${!cart.notEmpty}">
    The cart is empty.
  </c:when>
  <c:otherwise>
    <%-- do something --%>
  </c:otherwise>
</c:choose>
```

Loop Tags

```
<%-- iterator style --%>
<c:forEach items="${cart.items}" var="i">
  ${i} <br>
</c:forEach>

<%-- for loop style --%>
<c:forEach begin="0" end="${cart.size}" step="1" var="i">
  ${cart.items[i]}
</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

<	<
>	>
&	&
'	'
"	"

Exception Handling

◆ <c:catch>

◆ see Error Page and Exception Handling

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