

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://java.sun.com/products/jsp/jstl/1.1/docs/tlddocs/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>`

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> 2 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>

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

◆ <c:set>

- n target attribute can be any object with a setter
- n 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

- n escapeXML=true
- n 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