

Organization name

Subject :: Advance Java

JSTL

(Jsp standard tag library)

:: Presented by ::

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Overview

- Introduction to JSTL
- Categories
 - JSTL Core
 - JSTL Formatting
 - JSTL SQL
 - JSTL XML
 - JSTL functions

Reference :: The Complete Reference JSP 2.0 by -Phil Hanna

What is JSTL?

- JSP Standard Tag Library(JSTL) is a standard library of custom tags. The JSTL contain several tag that can remove scriplet code from a JSP page.

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- JSP Standard Tag Library (JSTL) is the standard tag library that provides tags to control the JSP page behavior, iteration and control statements, internationalization tags, and SQL tags.
- To use JSTL the jar files like Jstl.jar , standard.jar files are necessary.

5 categories

- **JSTL Core.**
- **JSTL Formatting.**
- **JSTL SQL.**
- **JSTL XML.**
- **JSTL functions.**

JSTL core

- Core tags provide support for iteration, conditional logic, catch exception, url, forward or redirect response etc. To use JSTL core tags, we should include it in the JSP page like below.
- ```
<%@ taglib
uri="http://java.sun.com/jsp/jstl/core"
prefix="c" %>
```

# JSTL Formatting

- These tags are provided for formatting of Numbers, Dates and i18n support through locales and resource bundles. We can include these tags in JSP with below syntax
- `<%@ taglib  
uri="http://java.sun.com/jsp/jstl/fmt"  
prefix="fmt" %>`

# JSTL SQL

- JSTL SQL Tags provide support for interaction with relational databases such as Oracle, MySQL etc. Using SQL tags we can run database queries, we include it in JSP with below syntax
- ```
<%@ taglib  
uri="http://java.sun.com/jsp/jstl/sql"  
prefix="sql" %>
```


JSTL XML

- XML tags are used to work with XML documents such as parsing XML, transforming XML data and XPath expressions evaluation. Syntax to include XML tags in JSP page
- `<%@ taglib
uri="http://java.sun.com/jsp/jstl/xml"
prefix="x" %>`

JSTL Functions

- JSTL tags provide a number of functions that we can use to perform common operation, most of them are for String manipulation such as String Concatenation, Split String etc. Syntax to include JSTL functions in JSP page
- `<%@ taglib
uri="http://java.sun.com/jsp/jstl/fu
nctions" prefix="fn" %>`

JSTL URIs and Default Prefixes

Library	URI	Prefix
Core	http://java.sun.com/jsp/jstl/core	c
XML Processing	http://java.sun.com/jsp/jstl/xml	x
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

JSTL Core Tags

Tags	Description
<c:out>	To write something in JSP page, we can use EL also with this tag
<c:import>	Same as <jsp:include> or include directive
<c:redirect>	redirect request to another resource
<c:set>	To set the variable value in given scope.
<c:remove>	To remove the variable from given scope
<c:catch>	To catch the exception and wrap it into an object.
<c:if>	Simple conditional logic, used with EL and we can use it to process the exception from <c:catch>
<c:choose>	Simple conditional tag that establishes a context for mutually exclusive conditional operations, marked by <c:when> and <c:otherwise>

Core Tags Library

Tag	Descriptor
<code><c:when></code>	Sub tags of <code><c:choose></code> that includes its body if its condition evaluates to 'true'.
<code><c:otherwise></code>	Sub tags of <code><c:choose></code> that includes its body if its condition evaluates to 'false'.
<code><c:forEach></code>	for iteration over a collection
<code><c:forEachTokens></code>	for iteration over tokens separated by a delimiter.
<code><c:param></code>	used with <code><c:import></code> to pass parameters
<code><c:url></code>	to create a URL with optional query string parameters

Format Tags

Tags	Description
<u><fmt:formatNumber></u>	To render numerical value with specific precision or format.
<u><fmt:parseNumber></u>	Parses the string representation of a number, currency, or percentage.
<u><fmt:formatDate></u>	Formats a date and/or time using the supplied styles and pattern
<u><fmt:parseDate></u>	Parses the string representation of a date and/or time
<u><fmt:bundle></u>	Loads a resource bundle to be used by its tag body.
<u><fmt:setLocale></u>	Stores the given locale in the locale configuration variable.

Format Tags

Tags	Description
<u><fmt:setBundle></u>	Loads a resource bundle and stores it in the named scoped variable or the bundle configuration variable.
<u><fmt:timeZone></u>	Specifies the time zone for any time formatting or parsing actions nested in its body.
<u><fmt:setTimeZone></u>	Stores the given time zone in the time zone configuration variable
<u><fmt:message></u>	To display an internationalized message.
<u><fmt:requestEncoding></u>	Sets the request character encoding

SQL Tags

Tags	Description
<u><sql:setDataSource></u>	Creates a simple DataSource suitable only for prototyping
<u><sql:query></u>	Executes the SQL query defined in its body or through the sql attribute.
<u><sql:update></u>	Executes the SQL update defined in its body or through the sql attribute.
<u><sql:param></u>	Sets a parameter in an SQL statement to the specified value.
<u><sql:dateParam></u>	Sets a parameter in an SQL statement to the specified java.util.Date value.
<u><sql:transaction ></u>	Provides nested database action elements with a shared Connection, set up to execute all statements as one transaction.

XML tags

Tags	Description
<u><x:parse></u>	Use to parse XML data specified either via an attribute or in the tag body.
<u><x:set ></u>	Sets a variable to the value of an XPath expression.
<u><x:if ></u>	Evaluates a test XPath expression and if it is true, it processes its body. If the test condition is false, the body is ignored.
<u><x:forEach></u>	To loop over nodes in an XML document.
<u><x:choose></u>	Simple conditional tag that establishes a context for mutually exclusive conditional operations, marked by <when> and <otherwise>
<u><x:when ></u>	Subtag of <choose> that includes its body if its expression evalutes to 'true'

XML Tags

Tag	Descriptor
<u><x:otherwise ></u>	Subtag of <choose> that follows <when> tags and runs only if all of the prior conditions evaluated to 'false'
<u><x:transform ></u>	Applies an XSL transformation on a XML document
<u><x:param ></u>	Use along with the transform tag to set a parameter in the XSLT stylesheet

Functions

Function	Description
<u>fn:contains()</u>	Tests if an input string contains the specified substring.
<u>fn:containsIgnoreCase()</u>	Tests if an input string contains the specified substring in a case insensitive way.
<u>fn:endsWith()</u>	Tests if an input string ends with the specified suffix.
<u>fn:escapeXml()</u>	Escapes characters that could be interpreted as XML markup.
<u>fn:indexOf()</u>	Returns the index within a string of the first occurrence of a specified substring.
<u>fn:join()</u>	Joins all elements of an array into a string.

Function	Description
<u>fn:replace()</u>	Returns a string resulting from replacing in an input string all occurrences with a given string.
<u>fn:split()</u>	Splits a string into an array of substrings.
<u>fn:startsWith()</u>	Tests if an input string starts with the specified prefix.
<u>fn:substring()</u>	Returns a subset of a string.
<u>fn:substringAfter()</u>	Returns a subset of a string following a specific substring.
<u>fn:substringBefore()</u>	Returns a subset of a string before a specific substring.

Tags	Description
<u>fn:toLowerCase()</u>	Converts all of the characters of a string to lower case.
<u>fn:toUpperCase()</u>	Converts all of the characters of a string to upper case.
<u>fn:trim()</u>	Removes white spaces from both ends of a string.

Thank you...