

EFREI – M1 - Java EE - JSTL

We can use **JSP EL** and **JSP Action Tags** to write JSP code like HTML but their functionality is very limited. For example, we can't loop through a collection using EL or action elements and we can't escape HTML tags to show them like text in client side.

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.

JSTL is part of the Java EE API and included in most servlet containers. But to use JSTL in our JSP pages, we need to download the JSTL jars for your servlet container. Most of the times, you can find them in the example projects and you can use them. You need to include these libraries in the project **WEB-INF/lib** directory. These jars are container specific, for example in Tomcat, we need to include `jstl.jar` and `standard.jar` jar files in project build path. If they are not present in the container lib directory, you should include them into your application.

```
<dependency>
  <groupId>jstl</groupId>
  <artifactId>jstl</artifactId>
  <version>1.2</version>
</dependency>
<dependency>
  <groupId>>taglibs</groupId>
  <artifactId>standard</artifactId>
  <version>1.1.2</version>
</dependency>
```

Based on the JSTL functions, they are categorized into five types.

1. **Core Tags:** 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.
1 <%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
2. **Formatting and Localization Tags:** 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:
1 <%@ taglib uri="http://java.sun.com/jsp/jstl/fmt" prefix="fmt" %>
3. **SQL Tags:** 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:
1 <%@ taglib uri="http://java.sun.com/jsp/jstl/sql" prefix="sql" %>
4. **XML Tags:** 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 is:

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```
1 <%@ taglib uri="http://java.sun.com/jsp/jstl/xml" prefix="x" %>
```

5. **JSTL Functions Tags:** 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 is:

```
1 <%@ taglib uri="http://java.sun.com/jsp/jstl/functions" prefix="fn" %>
```

Note that all the JSTL standard tags URI starts with `http://java.sun.com/jsp/jstl/` and we can use any prefix we want but it's best practice to use the prefix defined above because everybody uses them, so it will not create any confusion.

JSTL Core Tags

JSTL Core Tags are listed in the below table.

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

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<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