Java Server Pages

Lesson 09: JSP Standard Tag Library
 (JSTL)

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Lesson Objectives

In this lesson, you will learn:
- What is JSTL?
- Installing JSTL
- Using Expression Language
  - EL Capabilities
  - Accessing Scoped Variables
  - Accessing Bean Properties
  - Accessing Collections
  - Accessing Implicit Objects
  - Using Lambda in EL
  - EL Operators
- Using JSTL
  - Working with Core Tags

Introduction

JSTL is a custom tag library.
It is a JEE technology component.

The JSTL tags are organized into following libraries:
- Core Tag Library
- Formatting / Internationalization Tag Library
- XML Tag Library
- Database Tag Library
- Function Tag Library

Installing JSTL

Download the jstl.jar *and *standard.jar files from the above download link
(or you can get these from your local Apache Tomcat installation too!)
Put them in your project's WEB-INF/lib folder.

Add them to the CLASSPATH.

Now you can use JSTL in your pages.

Introduction

Expression Language (EL) is used extensively in JSTL.

EL is a feature of JSP and not of JSTL.

It simplifies the presentation layer.

EL makes it possible to easily access application data stored in JavaBeans components.
EL form : ${ expression }

Overview

JSTL includes following tag libraries:

- Core : http://java.sun.com/jsp/jstl/core
- XML : http://java.sun.com/jsp/jstl/xml
- Format : http://java.sun.com/jsp/jstl/fmt
- SQL : http://java.sun.com/jsp/jstl/sql
- Functions : http://java.sun.com/jsp/jstl/functions

Overview

Area	Function	Tags	Prefix
Core	Variable support	remove set	c
	Flow control	choose..when..otherwise, forEach, forTokens , if	
	URL management	import .. param , redirect .. Param, url .. param	
	Miscellaneous	catch out	

Illustration

Variable Support Tags:

<c:set var="x" scope="session" value="10"/>

<c:set var="x"> 10 </c:set>

<c:remove var="x" scope="session"/>

Illustration

Flow Control Tags:

```
<c:if test="${10 < 11}">
10 is less than 11
 </c:if>
```

```
<c:set var="s" value="${param.combo1}" /> Today is
<c:choose>
    <c:when test="${s==1}">Sunday </c:when>
    <c:when test="${s==2}">Monday</c:when>
    <c:when test="${s==3}">Tuesday</c:when>
    <c:when test="${s==4}">Wednesday</c:when>
    <c:when test="${s==5}">Thursday</c:when>
    <c:otherwise> select between 1 & 5 </c:otherwise>
</c:choose>
```

Illustration

URL Tags:

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

Miscellaneous Tags:

```
    <c:out value="value"
    [escapeXml="{true|false}"]   [default="defaultValue"] />
    <c:out value="${x}" />
```

Demo

Working with Core Tags:

- coreTags1.jsp
- coreTags2.jsp
- coreTags3.jsp
- coreTags4.jsp
- header.jsp
- footer.jsp

Lab 5.1

Summary

In this lesson, you have learnt about:
- The need for JSTL
- The JSTL libraries
- Features in EL expression
- Different tags from core

Review Question

Question 1: Which of the following library provides tags for internationalization?
- Option 1: sql
- Option 2: xml
- Option 3: fmt
- Option 4: core

Question 2: EL expression can be used within JSP scriptlet tags.
- True/False

Question 3: Which of the following library provides tags for adding request parameters to an URL
- Option 1: sql
- Option 2: fn
- Option 3: fmt
- Option 4: core

Question 4: EL language uses '#' symbol to write expression.
- True / False