

자바 웹프로그래밍 개발 입문 과정

34일차 (보강)

오늘의 키워드

- ▶ JSTL

JSTL

▶ JSP Standard Tag Library

- 자카르타(jakarta) 에서 제작
- JSP 페이지 내 자주 사용되는 기능 정의해둔 커스텀 태그
- JSP 페이지 제작시 사용되는 **표준 태그 라이브러리**

```
<jsp:태그이름 속성="속성값" 속성="속성값"... />
```

```
<c:태그이름 속성="속성값" 속성="속성값" ... />
```

JSTL

▶ JSTL 라이브러리

유형	URI 식별자	접두어	기능
코어(Core),	http://java.sun.com/jsp/jstl/core	c	변수선언, 제어문, URL처리 기능
XML 처리	http://java.sun.com/jsp/jstl/xml	x	XML문서 처리리
포매팅(Formatting)	http://java.sun.com/jsp/jstl/fmt	fmt	국제화 및 다국어지원 기능, 날짜,시간,숫자 형식관련 기능
데이터베이스(Database),	http://java.sun.com/jsp/jstl/sql	sql	데이터베이스내 데이터처리 를 위한 기능
함수(Function)	http://java.sun.com/jsp/jstl/functions	fn	문자열 및 컬렉션 함수

JSTL

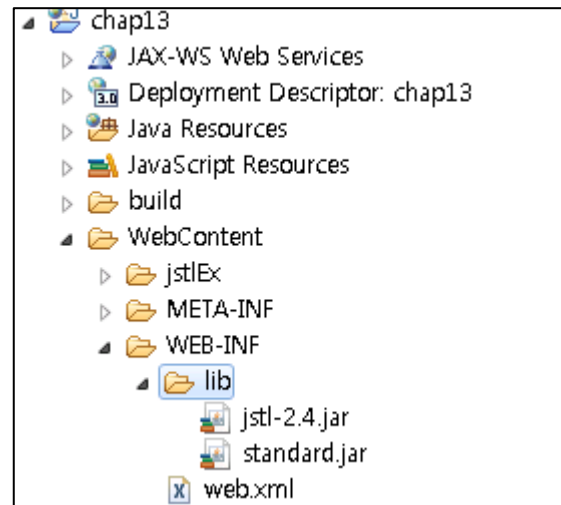
▶ 설치

이름	라이브러리 파일명
<u>JSTL API classes</u>	jstl.jar
<u>JSTL implementation classes</u>	standard.jar

- <http://jstl.java.net/download.html>

- JSTL API

- JSTL Implementation



JSTL

▶ How?

예제 : simple.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/strict.dtd">

<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>Insert title here</title>
</head>
<body>
    <% out.print("hello 스크립틀릿"); %><br/>
</body>
</html>
```

```
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
```

```
<c:out value="Hello jstl"/>
```

JSTL

▶ ○ ○ !

예제 : jstlEx1.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<!--jstl core태그를 사용하기 위한 선언을 해준다.-->
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>Insert title here</title>
</head>
<body> <!--PrintWriter 의 out메소드와 동일한 역할을 하는 태그이다.-->
    <c:out value="Hello jstl"/>
</body>
</html>
```

JSTL

▶ Loop ?

예제 : simple2.jsp

```
<%@ page language="java" contentType="text/html; charset=EUC-KR"
    pageEncoding="EUC-KR"%>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=EUC-KR">
<title>Insert title here</title>
</head>
<body>
    <table border='1'>
<%
        for(int i=1; i<=5; i++){
%>
        <tr>
            <td><%=i %></td>
        </tr>
<%
        }
%>
    </table>
</body>
</html>
```

```
<c:forEach var="i" begin="1" end="5"> </c:forEach>
```


JSTL

▶ ○ ○ !

예제 : jstlEx2.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<title>Insert title here</title>
</head>
<body><table border='1'>
    <c:forEach var="i" begin="1" end="5">
        <tr><td><c:out value="${i}"/></td></tr>
    </c:forEach>
</table>
</body>
</html>
```

JSTL

▶ JSTL Core ?

기능유형	태그	태그의 역할
출력	Out	JspWriter Stream의 내용 출력
예외처리	Catch	예외처리에 사용된다.
변수처리	Set	변수 설정
	remove	변수 제거
제어문	If	기존 if문과 동일
	Choose	기존 case문과 동일
	forEach	컬렉션 같은 객체요소를 반복할 때 사용
	forEachTokens	구분자로 토큰을 만들 때 사용
URL	Import	url에 지정한 클래스를 추가
	redirect	url의 출력스트림을 재정의
	url	url을 재작성

JSTL

▶ Print ?

```
<c:out value="출력할 내용" escapeXml="[true | false]" default="출력할 내용"/>
```

HTML 문자	변환 후 내용
<	<
>	>
&	&
'	'
"	"
공백	

JSTL

▶ Prnit ?

예제 : jstlEx3.jsp

```
<%@page import="java.io.FileReader"%>
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<%
    FileReader reader = new
    FileReader("C:\\jspbook\\workspace\\chap13\\WebContent\\simple.jsp");
%>
<body>
<pre>
    <c:out value="<%= reader %>" escapeXml="true" />
</pre>

</body>
</html>
```

JSTL

▶ Print ?

예제 : jstlEx4.jsp

```
<%@page import="java.io.FileReader"%>
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<%
    FileReader reader = null;
%>
<body>
<pre>
    <c:out value="<%= reader %>" escapeXml="true" default="값을 확인하세요."/>
</pre>

</body>
</html>
```

JSTL

▶ Exception ?

예제 : jstlEx5.jsp

```
<%@page import="java.io.File"%>
<%@page import="java.io.FileReader"%>
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<!--읽는 부분을 catch태그로 감싼다.
<c:catch var="FileEx">
    <%
        FileReader reader = new
        FileReader("C:\\jspbook\\workspace\\chap13\\WebContent\\sim");
    %>
</c:catch>

<body>
<pre>
<!--catch태그에 var속성을 지정하면
    해당 var속성으로 예외가 발생한 에러메시지를 출력할 수 있다. -->
    <c:out value="{FileEx}" />
</pre>
</body>
</html>
```

JSTL

```
<c:set var="변수명" value="변수값" />
```

▶ Variable?

예제 : SetEx1.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<body>
    <c:set var="name" value="okjsp"/>
    <c:out value="${name}" />
</body>
</html>
```

JSTL

▶ Variable? Remove!

```
<c:remove var="태그이름" />
```

예제 : removeEx1.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
    "http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<body>
    <c:set var="name" value="okjsp"/>
    <c:remove var="name"/>
    <c:out value="{name}"/>
</body>
</html>
```


JSTL

▶ Variable? Remove! Scope?

예제 : removeEx2.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
    "http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<body>
    <c:set var="name" value="okjsp" scope="session"/>
    <c:remove var="name" scope="page"/>
    <c:out value="${name}"/>
</body>
</html>
```

JSTL

▶ if ?

```
<c:if test=조건>
```

조건이 참인 경우 수행할 내용

```
</c:if>
```

```
<c:if var=조건문처리결과저장변수>
```

Var속성을 정의한 경우 Test에 명시한 조건을 판별한 후에
그 결과가 var속성에 저장된다.

- 조건 처리를 통한 분기 수행
- if ~ else 처럼 쓸 수는 없다

JSTL

▶ if ?

예제 : ifex1.jsp

```
<%@page import="java.io.File"%>
<%@page import="java.io.FileReader"%>
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<c:set var="value1" value="10"/>
<body>
    <c:if test="true">
        <c:out value="항상 참이므로 언제나 수행됨"/><br/>
    </c:if>
    <c:if test="${value1 > 9}" var="compareInt">
        <c:out value="${compareInt}"/><br/>
        <c:out value="${value1}"/>
    </c:if>
</body>
</html>
```

JSTL

▶ choose ? !

```
<c:choose>  
  <c:when test="조건">  
    when조건에 일치할 경우에 수행될 내용  
  </c:when>  
  <c:otherwise>  
    when조건에 부합하지 않는 경우에 수행될 내용  
  </c:otherwise>  
</c:choose>
```

◦ if ~ else !



JSTL

▶ choose ? !

예제 : chooseEx.jsp

```
<%@page import="java.io.File"%>
<%@page import="java.io.FileReader"%>
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<c:set var="value1" value="10"/>
<body>
    <c:choose >
        <c:when test="${value1 > 11}">
            <c:out value="${value1}"/>
        </c:when>
        <c:otherwise>
            otherwise에 내용 출력: <c:out value="${value1}"></c:out>
        </c:otherwise>
    </c:choose>
</body>
</html>
```

JSTL

▶ forEach

- list 와 같은 Collection 반복 순회

```
<c:forEach var=범위변수명 현재인덱스값 begin=시작끝인덱스 end=반복끝인덱스>  
</c:forEach>
```

예제: forEach.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"  
    pageEncoding="UTF-8"%>  
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>  
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"  
    "http://www.w3.org/TR/html4/loose.dtd">  
<html>  
<head>  
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">  
<title>Insert title here</title>  
</head>  
<body><table border='1'>  
    <c:forEach var="i" begin="1" end="5">  
        <tr><td><c:out value="${i}"/></td></tr>  
    </c:forEach>  
</table>  
</body>  
</html>
```

JSTL

▶ forTokens

```
<c:forToken items="내용" delims="구분자">
  items내용을 delims로 잘라서 표현
</c:forToken>
```

예제 : forTokens.jsp

```
<%@page import="java.io.File"%>
<%@page import="java.io.FileReader"%>
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<body>
    <c:forTokens items="010-3300-7979" delims="-" var="tokens">
        <c:out value="${tokens}"></c:out>
    </c:forTokens>
</body>
</html>
```

JSTL

▶ import

```
<c:import url="경로" var="변수명" />
```

예제 : import.jsp

```
<%@page import="java.io.File"%>
<%@page import="java.io.FileReader"%>
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<body>
    <c:import url="/simple.jsp" var="fileReader" />
    <pre>
    <c:out value="${fileReader}" />
    </pre>
</body>
</html>
```


JSTL

▶ import

예제 : import2.jsp

```
<%@page import="java.io.File"%>
<%@page import="java.io.FileReader"%>
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<body>
    <c:import url="/simple.jsp" />
</body>
</html>
```

JSTL

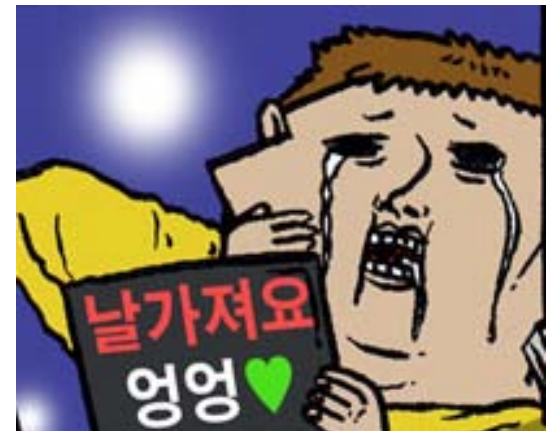
▶ import... parameter!

파라미터를 전달하지 않을 때

```
<c:import url="경로" var="변수명" />
```

파라미터를 전달할 때

```
<c:import url="경로" var="변수명">  
  <c:param name=변수명 value=값/>  
</c:import>
```



JSTL

▶ import... parameter!

예제 : import3.jsp

```
<%@page import="java.io.File"%>
<%@page import="java.io.FileReader"%>
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<body>
<c:import url="http://shopping.naver.com/search/all_search.nhn">
    <c:param name="where" value="all" />
    <c:param name="query" value="바람막이" />
    <c:param name="cat_id" value="40000038" />
    <c:param name="nv_mid" value="6565690833" />
    <c:param name="searchTab" value="SHOPN" />
</c:import>
</body>
</html>
```

JSTL

▶ redirect

파라미터를 전달하지 않을 때
`<c:redirect />`

파라미터를 전달할 때
`<c:redirect>`
 `<c:param name=변수명 value=값/>`
`</c:redirect>`

JSTL

▶ redirect

예제 : redirect.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<body>
    <c:redirect url="http://shopping.naver.com/search/all_search.nhn">
        <c:param name="where" value="all" />
        <c:param name="query" value="바람막이" />
        <c:param name="cat_id" value="40000038" />
        <c:param name="nv_mid" value="6565690833" />
        <c:param name="searchTab" value="SHOPN" />
    </c:redirect>
</body>
</html>
```

JSTL

▶ url

형식

```
<c:url value="웹 페이지 주소"/>
```

HTML a 태그와 함께 사용

```
<a href="<c:url value=' ' />" />
```

예제: url.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
    "http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
</head>
<body>
    <a href="<c:url value='http://google.co.kr' />" />google.co.kr</a>
</body>
</html>
```

오늘 숙제

- ▶ 이력서 웹 애플리케이션 내
- ▶ Java 코드를 **모두** 없애시오.

