Java Server Pages (JSP)

Lesson 06: JSP Scripting Elements

Lesson Objectives

In this lesson, you will learn about:

- Forms of Scripting Elements
  - JSP Expressions
  - JSP Scriptlets
  - JSP Declarations

- Predefined Variables
- Examples using Scripting Elements

JSP Scripting Elements

JSP scripting elements insert Java code into the generated servlet. There are three forms of scripting elements, namely:

- Expressions: <%= expression %>
- Scriptlets: <% scriplet code   %>
- Declarations: <%! Declarative code   %>

JSP Expressions

A JSP expression is used to insert Java values directly into the output.

- Form :

```
<%= Java expression%>
```

- Example:

```
hostname: <%=request.getRemoteHost( )%>
```

- The result of the expression is evaluated, converted to a String, and inserted in the JSP page.

JSP Scriptlets

A JSP scriptlet is used to insert Java code into the _jspService method.

- Form :

```
<%Java code%>
```

- Example:

```
<%
    String queryData = request.getQueryString();
    out.println ("Attached GET data: " + queryData);
%>
```

JSP Declarations

A JSP declaration is used to define methods or fields that are inserted in the Servlet class outside the _jspService() method.

- Form :

```
<%! Java Code%>
```

- Example: Count accesses to page since server reboot:

```
<%! private int accessCount = 0; %>
<%= ++accessCount %>
```

- Declaration can be used to override jspInit ( ) and jspDestroy( ) methods of servlet.

Implicit Objects

Let us see some of the implicit objects in JSP:

- request:
  - It is the HTTPServletRequest associated with the request.
- response:
  - It is the HTTPServletResponse associated with the response.
- out:
  - It is the Buffered PrintWriter (JSPWriter) used to send output to the client.
- session:
  - It is the HTTPSession object associated with the session.

Implicit Objects

- application:
  - It is the ServletContext object.
- config:
  - It is the ServletConfig object.
- pageContext:
  - It refers to the current page.
- exception:
  - It refers to the java.lang.Exception object that represents the uncaught exception.

Demo: JSP Scripting Elements

JSP Expressions
- remotehost.jsp
- predefined.jsp

JSP Scriplets
- scriptlet.jsp
- conditional.jsp

JSP Declarations
- declaration1.jsp
- declaration2.jsp
- declaration3.jsp
- fact.jsp

Lab: JSP Scripting Elements

Lab 3.1

Summary

In this lesson, you have learnt the following concepts:

- JSP Expressions
- JSP Scriptlets
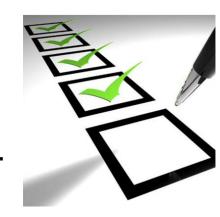- JSP Declarations
- Predefined Variables

Question 1: ____ inserts java code into _jspService( ) method.

Question 2: A JSP expression can end with a semicolon (:) . True/False

Question 3: ____ can be used to override jspInit( ) method.

Question 4: ____ is a buffered PrintWriter used in JSP to send output to client.

Question 5: ____ implicit object is used to share data across users of the same web application.