**JSP Introduction Quiz**

1. What is the main value of Java Server Pages?

* Separate display from processing (i.e separate html from java)

1. How are JSP pages related to servlets?

* JSP pages actually first are compiled into Java servlets

1. How are JSP pages related to HTML?

* JSP is a technology that allows you to write dynamic HTTP response with static data mixed with dynamic data with special tags

1. Give an example of a JSP scriptlet and show how it will look in the JSP servlet.

* JSP scriptlet:

<html><body>

<%

int a =3;

int b = 4;

int sum = a + b;

%>

Sum of 3 and 4 is <%=sum%>

</body></html>

* JSP Servlet:

public class basicCounter\_jsp extends SomeSpecialHttpServlet {

public void \_jspService(HttpServletRequest request, HttpServletResponse response)throws java.io.IOException, ServletException {

PrintWriter out = response.getWriter();

response.setContentType(“text/html”);

out.write(“<html><body>”);

int a = 3;

int b = 4;

int sum = a + b;

out.write(“Sum of 3 and 4 is”);

out.print(sum);

out.write(“</body></html>”);

}

}

1. Give an example of a JSP declaration and show how it will look in the JSP servlet.

* JSP declaration:

<html><body>

<%! int doubleCount() {

count = count\*2;

return count;

}

%>

<%! int count=1; %>

The page count is now:

<%= doubleCount() %>

</body></html>

* JSP servlet:

public class basicCounter\_jsp extends SomeSpecialHttpServlet {

int doubleCount() {

count = count\*2;

return count;

}

int count = 1;

public void \_jspService(HttpServletRequest request, HttpServletResponse response)throws java.io.IOException, ServletException {

PrintWriter out = response.getWriter();

response.setContentType(“text/html”);

out.write(“<html><body>”);

out.write(“The page count is now:”);

out.print( doubleCount() );

out.write(“</body></html>”);

}

}

1. Give an example of a JSP comment and show how it will look in the JSP servlet.

* JSP scriptlet:

<html><body>

<%-- This is comment --%>

</body></html>

* JSP Servlet:

public class basicCounter\_jsp extends SomeSpecialHttpServlet {

public void \_jspService(HttpServletRequest request, HttpServletResponse response)throws java.io.IOException, ServletException {

PrintWriter out = response.getWriter();

response.setContentType(“text/html”);

out.write(“<html><body>”);

out.print(“<!-- This is comment -->”);

out.write(“</body></html>”);

}

}

1. Give an example of a JSP expression and show how it will look in the JSP servlet.

* JSP scriptlet:

<html><body>

Sum of 3 and 4 is <%=3+4%>

</body></html>

* JSP Servlet:

public class basicCounter\_jsp extends SomeSpecialHttpServlet {

public void \_jspService(HttpServletRequest request, HttpServletResponse response)throws java.io.IOException, ServletException {

PrintWriter out = response.getWriter();

response.setContentType(“text/html”);

out.write(“<html><body>”);

out.write(“Sum of 3 and 4 is”);

out.print(3+4);

out.write(“</body></html>”);

}

}

1. Give an example of a JSP directive and show how it will look in the JSP servlet.

* JSP scriptlet:

<%@ page import=”java.util.Date”%>

<html><body>

<% Date date = new Date(); %>

The time is now <%=date%>

</body></html>

* JSP Servlet:

import java.util.Date;

public class basicCounter\_jsp extends SomeSpecialHttpServlet {

public void \_jspService(HttpServletRequest request, HttpServletResponse response)throws java.io.IOException, ServletException {

PrintWriter out = response.getWriter();

response.setContentType(“text/html”);

out.write(“<html><body>”);

Date date = new Date();

out.write(“The time is now”);

out.print(date);

out.write(“</body></html>”);

}

}

1. Explain how an EL expression is evaluated.

Ex: ${something}

* container evaluates this as follows:
  + checks page scope for an attribute named "something",
    - if found use it.
  + otherwise check request scope for an attribute named "something",
    - if found use it.
  + otherwise check session scope for an attribute named "something",
    - if found use it
  + otherwise check application scope for an attribute named "something",
    - if found use it.
  + otherwise ignore the expression.

1. Explain how servlet attributes are involved in EL expressions.

Ex: ${firstThing}

* if firstThing is not an implicit EL object, then search page, request, session and application scopes until attribute "firstThing" is found.

1. Explain how servlets and JSPs use request dispatch to interact.

* From JSP page: can invoke a servlet from a JSP page through the jsp:include and jsp:forward action tags

Ex:

<jsp:include page="/servlet/MyServlet" flush="true" />

<jsp:forward page="/servlet/MyServlet" />

* From Servlet: through functionality of the standard javax.servlet.RequestDispatcher interface

Ex:

RequestDispatcher rd = sc.getRequestDispatcher("/jsp/mypage.jsp");

rd.include(request, response);

or:

rd.forward(request, response);