44-563 Developing Web Applications and Services Fall 2013

Exam 3 Version 1

Each question is worth 4 points.

1. Ordinary html can be included in a JavaServer Pages page.  
   A. True  
   B. False
2. JSTL Tags can be included in a JavaServer Pages page.  
   A. True  
   B. False
3. In MVC, the letter M stands for  
   A. Mobile  
   B. Model  
   C. Master
4. In MVC, the letter V stands for  
   A. Vision  
   B. Version  
   C. View
5. In MVC, the letter C stands for  
   A. Controller  
   B. Computing  
   C. Command
6. Expressions written in JSP Expression Language are evaluated  
   A. On the client side.  
   B. On the server side.
7. Assume Drink is a Java class that has two attributes: type and size. A servlet executes this code:  
    Drink drinkOrder = new Drink("Tea", 16);  
   Write Java code that makes this object the value of a request attribute named "order".  
   request.setAttribute("order", drinkOrder);
8. The servlet in Problem 7 then forwards to ConfirmOrder.jsp. Write code that could be included in ConfirmOrder.jsp to display the size of drink the customer ordered. You must use an EL expression to obtain the size of the drink.  
   ${order.size}  
     
   Questions 9-12 pertain to this code for a start page:

<body>  
 <\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_="Response.jsp">  
 Ice cream flavor:  
 <input type="text" name="flavor">  
 <input type="\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_" value="Order">  
 </\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_>

</body>

1. What is the missing tag in the second and sixth lines? \_\_\_form\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is the missing attribute in the second line? \_\_action\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What is the missing attribute value in the fifth line? \_\_submit\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Write an EL expression that could be used in Response.jsp to display the ice cream flavor the user entered.  
   ${param.flavor}

1. Assume the value of param.flavor is a flavor of ice cream. Write code to be included in a JavaServer Page to display "Good Choice" if the flavor is "chocolate" and "Bad Choice" for all other flavors. Use the JSTL <c:choose> tag to write your code.  
   <c:choose>  
    <c:when test="${param.flavor eq 'chocolate'}">  
    Good Choice  
    </c:when>  
    <c:otherwise>  
    Bad Choice  
    </c:otherwise>  
   </c:choose>
2. Assume mouseList is an array of Strings. Each entry in the array is the name of a mouse. A servlet sets a request attribute named "mice" with value mouseList. It then forwards the request to a JavaServer Page. Complete the code below that would be included in a JavaServer Page to display the list of mouse names in an HTML table.

<table>

<c:\_\_forEach\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ var="mouse" items="${mice}">

<tr>

<td>\_\_\_${mouse}\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_</td>

</tr>

</c:\_\_forEach\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_>

</table>

1. JavaServer Faces is a \_\_\_\_\_\_\_\_\_\_ technology.  
   A. client side  
   B. server side
2. JavaServer Faces pages can include ordinary html code.  
   A. True  
   B. False
3. A language-country combination is called a  
   A. converter  
   B. locale  
   C. property
4. The welcome page index.xhtml for a JSF application contains the following code for a button inside a form:

**<h:commandButton value="Quit" action="Goodbye" />**

Complete the code so that the application navigates to the page Goodbye.xhtml when the button is clicked.

1. Suppose we want to internationalize a web application so that it can display text in either English or French. We have declared a resource bundle in faces-config.xml:

<application>

<resource-bundle>

  <base-name>

MyText

</base-name>

  <var>labels</var>

  </resource-bundle>

</application>

<application>

<locale-config>

  <default-locale>

en\_US

</default-locale>

  <supported-locale>

fr\_FR

</supported-locale>

  </locale-config>

</application>

(a) We need a label **student** with text "Student name" (or " Nom de l'étudiant" in French).

Write the entry that must be included in the file MyText.properties.

student=Student name

Write the entry that must be included in the file MyText\_fr\_FR.properties.

student=Nom de l'étudiant

(b) Complete the JSP code below that displays the label.

<h:outputText value="#{labels.student}" />

20. The code below is used to input a cat's age in a text box.

<h:inputText

value="#{UserBean.catAge}"

id="ageField"

/>

Rewrite the code so that the user is required to enter a value for this field.

<h:inputText

value="#{UserBean.catAge}"

id="ageField"

required="true"

/>

21. Rewrite the original code in Problem 20 to validate that the user enters a value between 0 and 25 (inclusive).

<h:inputText value="#{UserBean.catAge}"

id="ageField">

<f:validateLongRange

minimum="0"

maximum="25" />

</h:inputText>

22. Rewrite the code below by adding a converter so that totalOrder will be displayed as currency.

<h:outputText value="#{shoppingCartBean.totalOrder}">

<f:convertNumber type="currency" />

</h:outputText>

23. One of the examples in the JSF unit displayed a grade report for students in a class. It used a dataTable element to display the report. The beginning of the code for the dataTable is shown below. Write the code to create a column in the dataTable that displays the final exam grades of the students. The column heading must be “Final Exam”. Note: The Student class has a method getFinalExam().

<h:dataTable value=”#{gradeBook.students}” var=”student”>

<h:column>

<f:facet name=”header”>Final Exam</f:facet>

#{student.finalExam}

</h:column>

24. Here is some code from a JSF template:

<h:body>

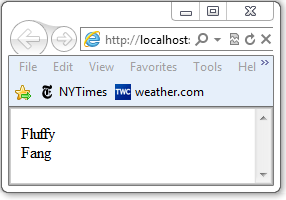
<ui:insert name="cat"></ui:insert>

<br />

<ui:insert name="dog"></ui:insert>

</h:body>

Complete the code in the facelet below so that the web page produced looks like the following when displayed in a browser.



<h:body>

<ui:composition template="./template.xhtml">

<ui:define name="cat">

Fluffy

</ui:define>

<ui:define name="dog">

Fang

</ui:define>

</ui:composition>

</h:body>

25. The code below appears inside a form element on a JSF page.

<h:inputText value="#{UserBean.salary}" />

What method is invoked by the expression #{UserBean.salary} when the web page is displayed?

A. setSalary()

B. getSalary()

C. salary()