**Q1 - Web Fragments Ordering :**

Considering the web fragments ordering rules, which statements are true:

Haut du formulaire

1. The <ordering> element can be placed within the web.xmlfile
2. The <ordering> element can be placed within the web-fragment.xml file
3. The <absolute-ordering> element can be placed within the web.xml file
4. The <absolute-ordering> element can be placed within the web-fragment.xml file
5. The only possible elements of <ordering> are <after>, <before> and <priority>
6. The only possible elements of the <after> element are <name> and <others>
7. If there are no <ordering> nor <absolute-ordering> elements defined in web.xml and web-fragment.xml, the order of web fragments scanning is unspecified

**b, c, f, g**

**Explanation**: The <ordering> element is used to define a relative ordering of web fragments and it's possible location is within the web-fragment.xml file. The <absolute-ordering> element is used to define an absolute ordering of web fragments and the main DD (web.xml) is the place where this element must be placed.

The <priority> is **not** a valid subelement of <ordering>. The only valid elements are <after> and <before> which can have <name> or<others> subelements.

**Q2 - Metadata-complete in Web Fragments and Web.xml:**

Choose statements that are true about the metadata-completeattribute of <web-app> element in web.xml?

Haut du formulaire

1. This attribute is of a boolean type which takes true/false values only
2. This attribute can define if the container should scan for web-fragments.xml to create final Deployment Descriptor
3. This attribute can define if the container should scan and process the new Servlets 3.0 annotations like @WebServlet, etc.
4. This attribute is purely informational and does not affect how container processes the final Deployment Descriptor
5. There is no attribute metadata-complete, but <metadata-complete> element within the <web-app>

**a, b, c**

**Explanation**: The metadata-complete is a <web-app> and <web-fragment> elements attribute which can be used to determine if the data presented in the web.xml is complete ("true") or incomplete ("false").  
If the data presented by theweb.xml is incomplete, the container will scan for additional web-fragment.xml files and for annotated classes to form the effective, final, Deployment Descriptor. If the value is set to "true" the container will ignore any web-fragment.xml files **as well as** any used annotations.

By default, this attribute takes value **false**.

**Q3 - Web Fragments Scanning**

What will be the order in which the container will scan and combine web fragments to form the effective Deployment Descriptor (attributes for <web-app> and <web-fragment> intentionally omitted; assume the default values):

**web.xml**

<web-app metadata-complete="true">

<absolute-ordering>

<name>Fragment 1</name>

<name>Fragment 2</name>

</absolute-ordering>

</web-app>

**web-fragment.xml**

<web-fragment>

<name>Fragment 1</name>

<ordering>

<after>Fragment 2</after>

</ordering>

</web-fragment>

**web-fragment.xml**

<web-fragment>

<name>Fragment 2</name>

</web-fragment>

Haut du formulaire

1. web.xml, Fragment 1, Fragment 2
2. web.xml, Fragment 2, Fragment 1
3. Fragment 1, Fragment 2, web.xml
4. Fragment 2, Fragment 1, web.xml
5. web.xml
6. At least one of the above Deployment Descriptors is invalid and will thrown a runtime exception

**e**

**Explanation**: If the metadata-complete attribute is present in the web.xml and it is set to **true**, it informs the container that the whole Deployment Descriptor data is complete and is presented in the web.xml. Therefore no web-fragment.xml files should be scanned, and no annotations should be taken under consideration.

**The default value** of the metadata-complete attribute is **false** which means that both the web-fragment.xml files should be scanned and the annotations should be combined into the final DD.

### Q5 - Web Fragments Scanning

What will be the order in which the container will scan and combine web fragments to form the effective Deployment Descriptor (attributes for <web-app> and <web-fragment> intentionally omitted; assume the default values):

**web.xml**

<web-app>

<absolute-ordering>

<name>Fragment 2</name>

</absolute-ordering>

</web-app>

**web-fragment.xml**

<web-fragment>

<name>Fragment 1</name>

</web-fragment>

**web-fragment.xml**

<web-fragment>

<name>Fragment 2</name>

</web-fragment>

Haut du formulaire

1. web.xml, Fragment 1, Fragment 2
2. web.xml, Fragment 2, Fragment 1
3. Fragment 1, Fragment 2, web.xml
4. Fragment 2, Fragment 1, web.xml
5. web.xml
6. web.xml, Fragment 1
7. web.xml, Fragment 2
8. At least one of the above Deployment Descriptors is invalid

**g**

**Explanation**: If the <absolute-ordering> element is present in the web.xml, it takes under consideration only the fragments which are specified by the <name>...</name> element. If the fragment name is not present within the <name>...</name> element **and** the <others />element is not present, the fragment will not be added to the result DD.

The <others /> element defines that every web fragments which are not defined explicitly within the <absolute-ordering> element, will be automatically added by the container to the result DD.

**Q6 - Private and Public Resources**

Consider the following testJar.jar structure:

/index0.html

/resources/index1.html

/META-INF/index2.html

/META-INF/resources/index3.html

Assume that this testJar.jar is placed under the "myApp" web application WEB-INF/lib directory.

Which statements are true:

Haut du formulaire

1. The resource index0.html is accessible by /myApp/index0.html request invocation
2. The resource index0.html is accessible by /myApp/testJar/index0.html request invocation
3. The resource index1.html is accessible by /myApp/testJar/resources/index1.html request invocation
4. The resource index1.html is accessible by /myApp/resources/index1.html request invocation
5. The resource index2.html is accessible by /myApp/testJar/index2.html request invocation
6. The resource index2.html is accessible by /myApp/index2.html request invocation
7. The resource index3.html is accessible by /myApp/testJar/resources/index3.html request invocation
8. The resource index3.html is accessible by /myApp/index3.html request invocation

**h**

**Explanation**: The WEB-INF directory in a web application is **basically a private directory**. An exception is made, however, to **static resources** which are located in the **/META-INF/resources** directory of a JAR file located in WEB-INF/lib directory of the web application. Such resources are served **directly to the client**.

Bas du formulaire

Bas du formulaire

Bas du formulaire

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