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Question Bank

Chapter: 2. The Structure and Deployment of Web Applications



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Unit- 2: The Structure and Deployment of Web Applications

Objectives

- 1. Construct the file and directory structure of a Web Application that may contain (a) static content, (b) JSP pages, (c) servlet classes, (d) the deployment descriptor, (e) tag libraries, (d) JAR files, and (e) Java class files; and describe how to protect resource files from HTTP access.
- 2. Describe the purpose and semantics of the deployment descriptor.
- 3. Construct the correct structure of the deployment descriptor.
- 4. Explain the purpose of a WAR file and describe the contents of a WAR file, how one may be constructed

Q1 Which three are valid URL mappings to a servlet in a web deployment descriptor? (Choose three.)

A. */* B. *,do

C. MyServlet
E. /MyServlet/*

D. /MyServlet
F. MyServlet/*.jsp

Answer: B, D, E

Q2. Click the Task button.

Place the appropriate element names on the left on the web application deployment descriptor on the right so that files ending in ".mpg" are associated with the MIME type "video/mpeg."



Answers:

<mime-mapping>

<mime-type>mpg</mime-type>

<extension>vedio/mpeg</extension>

</mime-mapping>

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Q3. Which three web application deployment descriptor elements allow webcomponents to gain references to resources or EJB components? (Choose three.)

A. ejb-ref

C. servlet-ref

D. resource-ref

B. jdbc-ref

E. javamail-ref

F. ejb-remote-ref

G. resource-env-ref

Answer: A, D, G

- Q4. Which two actions protect a resource file from direct HTTP access within a web application? (Choose two.)
- A. placing it in the /secure directory
- B. placing it in the /WEB-INF directory
- C. placing it in the /META-INF/secure directory
- D. creating a <web-resource> element within the deployment descriptor
- E. creating a <secure-resource> element within the deployment descriptor

Answer: B, C

- Q5. Given that www.example.com/SCWCDtestApp is a validly deployed Java EE web application and that all of the JSP files specified in the requests below exist in the locations specified.Which two requests, issued from a browser, will return an HTTP 404 error? (Choose two.)
- A. http://www.example.com/SCWCDtestApp/test.jsp
- $B.\ http://www.example.com/SCWCDtestApp/WEB-INF/test.jsp$
- C. http://www.example.com/SCWCDtestApp/WEB-WAR/test.jsp
- $D.\ http://www.example.com/SCWCDtestApp/Customer/test.jsp$
- E. http://www.example.com/SCWCDtestApp/META-INF/test.jsp

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F. http://www.example.com/SCWCDtestApp/Customer/Update/test.jsp **Answer: B, E**



Q6. Which two about WAR files are true? (Choose two.)

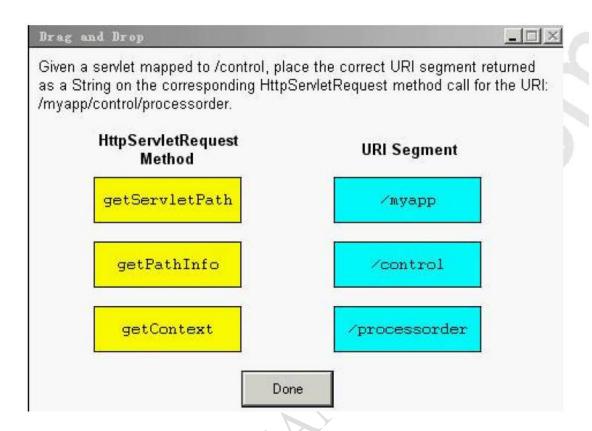
- A. WAR files must be located in the web application library directory.
- B. WAR files must contain the web application deployment descriptor.
- C. WAR files must be created by using archive tools designed specifically for that purpose.
- D. The web container must serve the content of any META-INF directory located in a WAR file.
- E. The web container must allow access to resources in JARs in the web application library directory.

Answer: B, E

Q7.Click the Task button.

Given a servlet mapped to /control, place the correct URI segment returned as a String on thecorresponding HttpServletRequest method call for the URI: /myapp/control/processorder.

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Answers: getServletPath()--->/control getPathInfo() --->/processorder getContext()---->/myapp

Q8. Given an HttpSession session, a ServletRequest request, and a ServletContext context, which retrieves a URL to /WEB-INF/myconfig.xml within a web application?

- A. session.getResource("/WEB-INF/myconfig.xml")
- B. request.getResource("/WEB-INF/myconfig.xml")
- C. context.getResource("/WEB-INF/myconfig.xml")
- D. getClass().getResource("/WEB-INF/myconfig.xml")

Answer: C

Q9. You have built a web application with tight security. Several directories of your webapp are used for internal purposes and you have overridden the default servlet to send an HTTP403 status code for any request that maps to one of these directories. During testing, the QualityAssurance director decided that they did NOT like seeing the bare response page generated by Firefoxand Internet Explorer.

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The director recommended that the webapp should return a more user-friendlyweb page that has the same look-and-feel as the webapp plus links to the webapp's search engine. Youhave created this JSP page in the /WEB- INF/jsps/error403.jsp file. You do NOT want to alter the complex logic of the default servlet. How can you declare that the web container must send this JSP page whenever a 403 status is generated?

A. <error-page>
<error-code>403</error-code>
<url>/WEB-INF/jsps/error403.jsp</url>
</error-page>
B. <error-page>
<status-code>403</status-code>
<url>/WEB-INF/jsps/error403.jsp</url>
</error-page>
C. <error-page>
<error-code>403</error-code>
<location>/WEB-INF/jsps/error403.jsp</location>
</error-page>
D. <error-page>
<status-code>403</status-code>
<location>/WEB-INF/jsps/error403.jsp</location>
</error-page>
<cror-page>
D. <error-page>
<status-code>403</status-code>
<location>/WEB-INF/jsps/error403.jsp</location>

Q: 10 You want to create a valid directory structure for your Java EE web application, and your application uses tag files and a JAR file. Which three must be located directly in your WEB-INF directory (NOT in a subdirectory of WEB-INF)? (Choose three.)

A. The JAR file

</error-page>
Answer: C

- B. A directory called lib
- C. A directory called tags
- D. A directory called TLDs
- E. A directory called classes
- F. A directory called META-INF

Answer: B, C, E



```
O 11. Given:
11. public class MyServlet extends HttpServlet {
12. public void service(HttpServletRequest request,
13. HttpServletResponse response)
14. throws ServletException, IOException {
15. // insert code here
16. }
17. }
and this element in the web application's deployment descriptor:
<error-page>
<error-code>302</error-code>
<location>/html/error.html</location>
</error-page>
Which, inserted at line 15, causes the container to redirect control to the error.html
resource?
A. response.setError(302);
B. response.sendError(302);
C. response.setStatus(302);
D. response.sendRedirect(302);
E. response.sendErrorRedirect(302);
   Answer: B
Q12. Which element of the web application deployment descriptor defines the
servlet class associated with a servlet instance?
A. <class>
B. <webapp>
C. <servlet>
D. <codebase>
E. <servlet-class>
F. <servlet-mapping>
Answer: E
Q13. Within the web application deployment descriptor, which defines a valid JNDI
environment entry?
A. <env-entry>
<env-entry-type>java.lang.Boolean
<env-entry-value>true</env-entry-value>
```

</env-entry>

B. <env-entry>
<env-entry-name>param/MyExampleString</env-entry-name>
<env-entry-value>This is an Example</env-entry-value>
</env-entry>
C. <env-entry>
<env-entry-name>param/MyExampleString</env-entry-name>
<env-entry-type>int</env-entry-type>
<env-entry-value>10</env-entry-value>
</env-entry>
D. <env-entry>
<env-entry-name>param/MyExampleString</env-entry-name>
<env-entry-name>param/MyExampleString</env-entry-name>
<env-entry-type>java.lang.String</env-entry-type>
<env-entry-value>This is an Example</env-entry-value>

Answer: D

</env-entry>



Q14. Which three are described in the standard web application deployment descriptor? (Choose three.)

- A. session configuration
- B. MIME type mappings
- C. context root for the application
- D. servlet instance pool configuration
- E. web container default port bindings
- F. ServletContext initialization parameters

Answer: A, B, F

Q15. Which two are true regarding a web application class loader?

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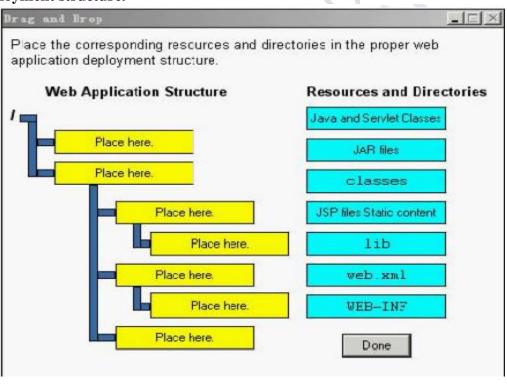
(Choose two.)

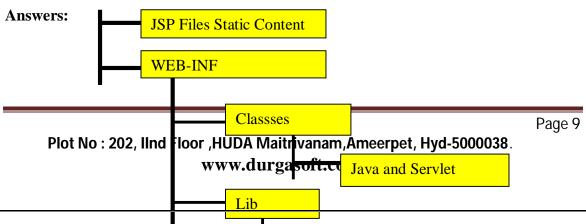
- A. A web application may override the web container's implementation classes.
- B. A web application running in a J2EE product may override classes in the javax.* namespace.
- C. A web application class loader may NOT override any classes in the java.* and javax.* namespaces.
- D. Resources in the WAR class directory or in any of the JAR files within the library directory may be accessed using the J2SE semantics of getResource.
- E. Resources in the WAR class directory or in any of the JAR files within the library directory CANNOT be accessed using the J2SE semantics of getResource.

Answer: C, D

Q16. Click the Task button.

Place the corresponding resources and directories in the proper web application deployment structure.





JAR Files

Q17. You want to create a valid directory structure for your Java EE web application, and you want to put your web application into a WAR file called MyApp.war. Which two are true about the WAR file? (Choose two.)

- A. At deploy time, Java EE containers add a directory called META-INF directly into the MyApp directory.
- B. At deploy time, Java EE containers add a file called MANIFEST.MF directly into the MyApp directory.
- C. It can instruct your Java EE container to verify, at deploy time, whether you have properly configured your application's classes.
- D. At deploy time, Java EE containers add a directory call META-WAR directly into the MyApp directory.

Answer: A, C

Q18. Which two from the web application deployment descriptor are valid?(Choose two.)

```
A. <error-page>
<exception-type>*</exception-type>
<location>/error.html</location>
</error-page>
B. <error-page>
<exception-type>java.lang.Error</exception-type>
<location>/error.html</location>
</error-page>
C. <error-page>
<exception-type>java.lang.Throwable</exception-type>
<location>/error.html</location>
</error-page>
D. <error-page>
<exception-type>java.io.IOException</exception-type>
<location>/error.html</location>
</error-page>
E. <error-page>
<exception-type>NullPointerException</exception-type>
<location>/error.html</location>
</error-page>
```

Answer: C, D



Q19. After a merger with another small business, your company has inherited a legacy WAR file but the original source files were lost. After reading the documentation of that web application, you discover that the WAR file contains a useful tag library that you want to reuse in your own webapp packaged as a WAR file. What do you need to do to reuse this tag library?

- A. Simply rename the legacy WAR file as a JAR file and place it in your webapp's library directory.
- B. Unpack the legacy WAR file, move the TLD file to the META-INF directory, repackage the whole thing as a JAR file, and place that JAR file in your webapp's library directory.
- C. Unpack the legacy WAR file, move the TLD file to the META-INF directory, move the class files to the top-level directory, repackage the whole thing as a JAR file, and place that JAR file in your webapp's library directory.
- D. Unpack the legacy WAR file, move the TLD file to the META-INF directory, move the class files to thetop-level directory, repackage the WAR, and place that WAR file in your webapp's WEB-INF directory.

Answer: C

Q 20. Which path is required to be present within a WAR file?

A. /classes

B. /index.html

C. /MANIFEST-INF

D. /WEB-INF/web.xml

E. /WEB-INF/classes

F. /WEB-INF/index.html

G. /META-INF/index.xml

Answer: D

Q21. Given:

- 11. <servlet>
- 12. <servlet-name>catalog</servlet-name>
- 13. <jsp-file>/catalogTemplate.jsp</jsp-file>
- 14. <load-on-startup>10</load-on-startup>
- 15. </servlet>

Which two are true? (Choose two.)

- A. Line 13 is not valid for a servlet declaration.
- B. Line 14 is not valid for a servlet declaration.
- C. One instance of the servlet will be loaded at startup.
- D. Ten instances of the servlet will be loaded at startup.
- E. The servlet will be referenced by the name catalog in mappings.

Answer: C, E

Q22. You have built a web application with tight security. Several directories of your webapp are used for internal purposes and you have overridden the default servlet to send an HTTP 403 status code for any request that maps to one of these directories. During testing, the Quality Assurance director decided that they did NOT like seeing the bare response page generated by Firefox and Internet Explorer. The director recommended that the webapp should return a more user-friendly web page that has the same look-and-feel as the webapp plus links to the webapp's search engine. You have created this JSP page in the /WEB-INF/jsps/error403.jsp file. You do NOT want to alter the complex logic of the default servlet. How can you declare that the web container must send this JSP page whenever a 403 status is generated?

A. <error-page>
<error-code>403</error-code>
<url>/WEB-INF/jsps/error403.jsp</url>
</error-page>
B. <error-page>
<status-code>403</status-code>
<url>/WEB-INF/jsps/error403.jsp</url>
</error-page>
C. <error-page>
<error-code>403</error-code>
<location>/WEB-INF/jsps/error403.jsp</location>
</error-page>
D. <error-page>
<status-code>403</status-code>

<location>/WEB-INF/jsps/error403.jsp</location> </error-page> Answer: C

Q23. Given a portion of a valid Java EE web application's directory structure:

MyApp |-- Directory1 |-- File1.html |-- META-INF |-- File2.html |-- WEB-INF |-- File3.html

You want to know whether File1.html, File2.html, and/or File3.html is protected from direct access by your web client's browsers.

What statement is true?

- A. All three files are directly accessible.
- B. Only File1.html is directly accessible.
- C. Only File2.html is directly accessible.
- D. Only File3.html is directly accessible.
- E. Only File1.html and File2.html are directly accessible.
- F. Only File1.html and File3.html are directly accessible.
- G. Only File2.html and File3.html are directly accessible.

Answer: B



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Q24. A web component accesses a local EJB session bean with a component interface of com.example.Account with a home interface of com.example.AccountHome and a JNDI reference of ejb/Account. Which makes the local EJB component accessible to the web components in the web application deployment descriptor?

A. <env-ref>

<ejb-ref-name>ejb/Account</ejb-ref-name>

<ejb-ref-type>Session</ejb-ref-type>

<local-home>com.example.AccountHome</local-home>

<local>com.example.Account</local>

</env-ref>

B. <resource-ref>

<ejb-ref-name>ejb/Account</ejb-ref-name>

<ejb-ref-type>Session</ejb-ref-type>

<local-home>com.example.AccountHome</local-home>

<local>com.example.Account</local>

</resource-ref>

C. <ejb-local-ref>

<ejb-ref-name>ejb/Account</ejb-ref-name>

<ejb-ref-type>Session</ejb-ref-type>

<local-home>com.example.AccountHome</local-home>

<local>com.example.Account</local>

</ejb-local-ref>

D. <ejb-remote-ref>

<ejb-ref-name>ejb/Account</ejb-ref-name>

<ejb-ref-type>Session</ejb-ref-type>

<local-home>com.example.AccountHome</local-home>

<local>com.example.Account</local>

</ejb-remote-ref>

Answer: C



Q 25. Click the Task button.

Place the servlet name onto every request URL, relative to the web application context root, that will invoke that servlet. Every request URL must be filled.

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Given the servlets and their	path patterns:
Serviet Name	Path Pattern
ControlServlet	*.do
DataServlet	/data/*
the web application context	every request URL, relative to root, that will invoke that servlet.
Request URL	Serviet Name ControlServiet
Request URL	Serviet Name
Request URL	Serviet Name ControlServiet
/data/ /data/index.jsp	Serviet Name ControlServiet

Answers:

/data/ --->DataServlet /data/index.jsp --->DataServlet /secure/command.do --->ControlServlet /data/command.do --->DataServlet /data.do --->ControlServlet

Q26. Given a portion of a valid Java EE web application's directory structure:

You want to know whether File1.html, File2.html, and/or File3.html will be directly accessible by your web client's browsers.

Which statement is true?

A. All three files are directly accessible.

B. Only File1.html is directly accessible.

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- C. Only File2.html is directly accessible. D. Only File3.html is directly accessible.
- E. Only File1.html and File2.html are directly accessible.
- F. Only File1.html and File3.html are directly accessible.
- G. Only File2.html and File3.html are directly accessible.

Answer: E

Q 27. You have created a servlet that generates weather maps. The data for these maps is calculated by a remote host. The IP address of this host is usually stable, but occasionally does have to change as the corporate network grows and changes. This IP address used to be hard coded, but after the fifth change to the IP address in two years, you have decided that this value should be declared in the deployment descriptor so you do NOT have the recompile the web application every time the IP address changes. Which deployment descriptor snippet accomplishes this goal?

```
A. <serlvet-param>
<name>WeatherServlet.hostIP</name>
<value>127.0.4.20</value>
</servlet-param>
B. <init-param>
<name>WeatherServlet.hostIP</name>
<value>127.0.4.20</value>
</init-param>
C. <servlet>
<!-- servlet definition here -->
<param-name>WeatherServlet.hostIP</param-name>
<param-value>127.0.4.20</param-value>
</servlet>
D. <init-param>
<param-name>WeatherServlet.hostIP</param-name>
<param-value>127.0.4.20</param-value>
</init-param>
E. <serlvet-param>
<param-name>WeatherServlet.hostIP</param-name>
<param-value>127.0.4.20</param-value>
</servlet-param>
Answer:D
```

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Q 28. In which two locations can library dependencies be defined for a web application? (Choose two.)

- A. the web application deployment descriptor
- B. the /META-INF/dependencies.xml file
- C. the /META-INF/MANIFEST.MF manifest file
- D. the /META-INF/MANIFEST.MF manifest of a JAR in the web application classpath **Answer: C, D**

Q29. Which two about WAR files are true? (Choose two.)

- A. WAR files must be located in the web application library directory.
- B. WAR files must contain the web application deployment descriptor.
- C. WAR files must be created by using archive tools designed specifically for that purpose.
- D. The web container must serve the content of any META-INF directory located in a WAR file.
- E. The web container must allow access to resources in JARs in the web application library directory.

Answer: B, E

Q30. Given this fragment from a Java EE deployment descriptor:

- 341. <error-page>
- 342. <exception-type>java.lang.Throwable</exception-type>
- 343. <location>/mainError.jsp</location>
- **344.** </error-page>
- 345. <error-page>
- 346. <exception-type>java.lang.ClassCastException</exception-type>
- 347. <location>/castError.jsp</location>
- **348.** </error-page>

If the web application associated with the fragment above throws a ClassCastException.

Which statement is true?

- A. The deployment descriptor is invalid.
- B. The container invokes mainError.jsp.
- C. The container invokes castError.jsp.
- D. Neither mainError.jsp nor castError.jsp is invoked.

Answer: C

Q31. Which defines the welcome files in a web application deployment descriptor?

A. <welcome> <welcome-file>/welcome.jsp</welcome-file> </welcome> <welcome> <welcome-file>/index.html</welcome-file> </welcome> B. <welcome-file-list> <welcome-file>welcome.jsp</welcome-file> <welcome-file>index.html</welcome-file> </welcome-file-list> C. <welcome> <welcome-file>welcome.jsp</welcome-file> </welcome> <welcome> <welcome-file>index.html</welcome-file> </welcome> D. <welcome-file-list> <welcome-file>/welcome.jsp</welcome-file> <welcome-file>/index.html</welcome-file> </welcome-file-list> E. <welcome> <welcome-file> www.TestsNow.com <welcome-name>Welcome</welcome-name> <location>welcome.jsp</location> </welcome-file> <welcome-file> <welcome-name>Index</welcome-name>

Answer: B

</welcome-file>

<location>index.html</location>

Q32. In which three directories, relative to a web application's root, may a tag library descriptor file reside when deployed directly into a web application? (Choose three.)

A. /WEB-INF C. /WEB-INF/tlds

E. /WEB-INF/resources

Answer: A, C, E

B. /META-INF

D. /META-INF/tlds

F. /META-INF/resources





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