

Experiment- 5

Understanding modifications of Web.XML

Java web applications use a deployment descriptor file to determine how URLs map to servlets, which URLs require authentication, and other information. This file is named web.xml, and resides in the app's WAR under the WEB-INF/ directory. web.xml is part of the servlet standard for web applications.

A web application's deployment descriptor describes the classes, resources and configuration of the application and how the web server uses them to serve web requests.

web.xml defines mappings between URL paths and the servlets that handle requests with those paths. The web server uses this configuration to identify the

servlet to handle a given request and call the class method that corresponds to the request method. To map a URL to a servlet, you declare the servlet with the <servlet> element, then define a mapping from a URL path to a servlet declaration with the <servlet-mapping> element.

Example:

```
1.<web-app>
2. <servlet>
3 <servlet-name>HelloWorld</servlet-name>
4
<servlet-class>servletemplate.createHelloWorldExample</
servlet-class>
5 </servlet>
6 <servlet-mapping>
7 <servlet-name>HelloWorld</servlet-name>
8 <url-pattern>/HelloWorldExample/*</url-pattern>
9 </servlet-mapping>
10 </web-app>
```

Elements in Web.xml

Description of elements Used in web.xml file:

1. <web-aap>: This element represents whole application of web.xml file

2. <servlet>: This is the sub element of and represents the servlet
 3. <servlet-name>: This is the sub element of servlet and used to represents the name of servlet
 4. <servlet-class>: This is the sub element of servlet and used to represents the class of servlet
 5. <servlet-mapping>: This is the sub element of and used to map the servlet
 6. <url-pattern>: This is the sub element of servlet-mapping and used to client side to invoke the servlet
- Web.xml Tags

Tags used in web.xml file are:

1. Welcome-file-list tag; This tag is used to specify the default page of web application if none is specified.

Example:

- 1 <welcome-file-list>
- 2 <welcome-file>index.jsp</welcome-file>
- 3 </welcome-file-list>

In the above example index.jsp used as web page for web application

2.Session config tag: This tag is used to specify the session configuration parameter

Example:

```
1 <session-config>
2 <session-timeout>
3 15
4 </session-timeout>
5 </session-config>
```

In the above example session-config tag contains another tag sessiontimeout which specifies the http session timeout. The time specify in minutes.

3. Error page tag: This tag is used to specify the error occurred in the while weblogic server is responding ti a HTTP request, returns an HTML page that displays either the HTTP error code.

```
1 <error-page>
```

2 <error-code>105</error-code>
3 <location>/jsp/error/PageNotFound.jsp</location>
4 </error page>

In the above example error-page tag specify the error code as 105 and location describes the location of the jsp page.

Advantages of web.xml file

The first benefit of the xml is we can write it in our own markup language. There is no restriction to limited sets of tags. By defining our own tag we can create a markup language in terms of specific problem.
Searching the data is easy and efficient.
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Example- A part of web.xml for apache tomcat server.

```
<!-- Only valid in GET requests -->
<!-->
<servlet>
  <servlet-name>default</servlet-name>
  <servlet-class>org.apache.catalina.servlets.DefaultServlet</servlet-class>
  <init-param>
    <param-name>debug</param-name>
    <param-value>0</param-value>
  </init-param>
  <init-param>
    <param-name>listings</param-name>
    <param-value>true</param-value>
  </init-param>
  <load-on-startup>1</load-on-startup>
</servlet>
```