JSF - CUSTOM TAG

http://www.tutorialspoint.com/jsf/jsf_custom_tag.htm

JSF provides developer a powerful capability to define own custom tags which can be used to render custom contents.

Defining a custom tag in JSF is a three step process

Step No.	Description
1a	Create a xhtml file and define contents in it using **ui:composition** tag
1b	Create a tag library descriptor . *taglib. xmlfile* and declares the above custom tag in it.
1c	Register the tag libray descriptor in web.xml

Step 1a: Define custom tag contents : buttonPanel.xhtml

```
<h:body>
   <ui:composition>
      <h:commandButton type="submit" value="#{okLabel}" />
      <h:commandButton type="reset" value="#{cancelLabel}" />
   </ui:composition>
</h:body>
```

Step 1b: Define a tag library : tutorialspoint.taglib.xml

As name mentions a Tag library is a library of tags. Following table describes important attributes of a tag library.

S.N.	Node & Description
1	**facelet-taglib** Contains all the tags.
2	**namespace** Namespace of the tag library and should be unique.
3	**tag** **Contains a single tag**
4	**tag-name** Name of the tag
5	**source** tag implementation

```
<facelet-taglib>
   <namespace>http://tutorialspoint.com/facelets</namespace>
   <tag>
      <tag-name>buttonPanel</tag-name>
      <source>com/tutorialspoint/buttonPanel.xhtml</source>
   </tag>
</facelet-taglib>
```

Step 1c: Register the tag library :web.xml

```
<context-param>
   <param-name>javax.faces.FACELETS_LIBRARIES</param-name>
   <param-value>/WEB-INF/tutorialspoint.taglib.xml</param-value>
</context-param>
```

Using a custom tag in JSF is a two step process

Step No.	Description
2a	Create a xhtml file and use custom tag library's namespace.
2b	Use the custom tag as normal JSF tags

Step 2a: Use Custom Namespace: home.xhtml

```
<html xmlns="http://www.w3.org/1999/xhtml"
   xmlns:h="http://java.sun.com/jsf/html"
   xmlns:ui="http://java.sun.com/jsf/facelets">
   xmlns:tp="http://tutorialspoint.com/facelets">
```

Step 2b: Use Custom Tag: home.xhtml

```
<h:body>
   <tp:buttonPanel okLabel="Ok" cancelLabel="Cancel" />
</h:body>
```

Example Application

Let us create a test JSF application to test the template tags in JSF.

Step	Description
1	Create a project with a name *helloworld* under a package *com.tutorialspoint.test* as explained in the *JSF - First Application* chapter.
2	Create *com* folder under *WEB-INF* directory.
3	Create *tutorialspoint* folder under *WEB-INF > com* directory.
4	Create *buttonPanel.xhtml* file under *WEB-INF > com > tutorialspoint* folder. Modify it as explained below.
5	Create *tutorialspoint.taglib.xml* file under *WEB-INF* folder. Modify it as explained below.
6	Modify *web.xml* file under *WEB-INF* folder as explained below.
7	Modify *home.xhtml* as explained below. Keep rest of the files unchanged.
8	Compile and run the application to make sure business logic is working as per the requirements.
9	Finally, build the application in the form of war file and deploy it in Apache Tomcat Webserver.

10 Launch your web application using appropriate URL as explained below in the last step.

buttonPanel.xhtml

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml"
   xmlns:h="http://java.sun.com/jsf/html"
   xmlns:ui="http://java.sun.com/jsf/facelets">
   <h:body>
      <ui:composition>
         <h:commandButton type="submit" value="#{okLabel}" />
         <h:commandButton type="reset" value="#{cancelLabel}" />
      </ui:composition>
   </h:body>
</html>
```

tutorialspoint.taglib.xml

```
<?xml version="1.0"?>
<!DOCTYPE facelet-taglib PUBLIC
"-//Sun Microsystems, Inc.//DTD Facelet Taglib 1.0//EN"
"http://java.sun.com/dtd/facelet-taglib_1_0.dtd">
<facelet-taglib>
   <namespace>http://tutorialspoint.com/facelets</namespace>
   <tag>
      <tag-name>buttonPanel</tag-name>
      <source>com/tutorialspoint/buttonPanel.xhtml</source>
   </tag>
</facelet-taglib>
```

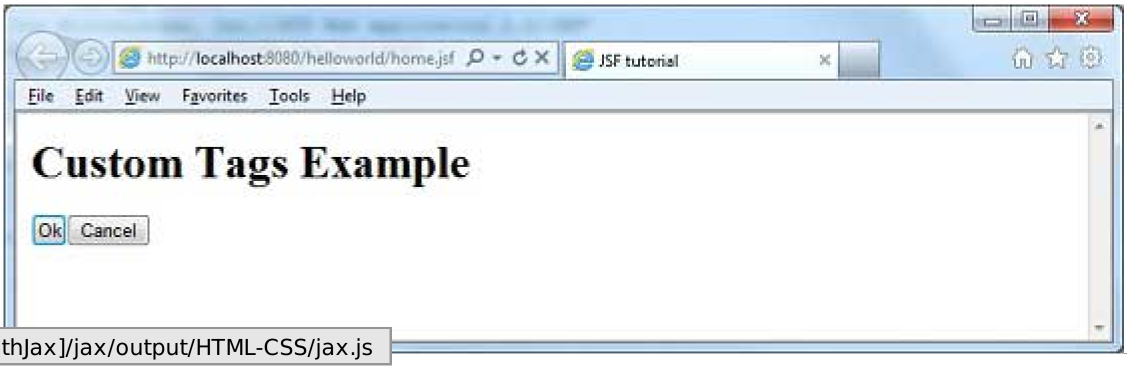
web.xml

```
<!DOCTYPE web-app PUBLIC
"-//Sun Microsystems, Inc.//DTD Web Application 2.3//EN"
"http://java.sun.com/dtd/web-app_2_3.dtd" >
<web-app>
   <display-name>Archetype Created Web Application</display-name>
   <context-param>
      <param-name>javax.faces.PROJECT_STAGE</param-name>
      <param-value>Development</param-value>
   </context-param>
   <context-param>
      <param-name>javax.faces.FACELETS_LIBRARIES</param-name>
      <param-value>/WEB-INF/tutorialspoint.taglib.xml</param-value>
   </context-param>
   <servlet>
      <servlet-name>Faces Servlet</servlet-name>
      <servlet-class>javax.faces.webapp.FacesServlet</servlet-class>
   </servlet>
   <servlet-mapping>
      <servlet-name>Faces Servlet</servlet-name>
      <url-pattern>*.jsf</url-pattern>
   </servlet-mapping>
</web-app>
```

home.xhtml

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml"
   xmlns:h="http://java.sun.com/jsf/html"
   xmlns:ui="http://java.sun.com/jsf/facelets"
   xmlns:tp="http://tutorialspoint.com/facelets">
   <h:head>
      <title>JSF tutorial</title>
   </h:head>
   <h:body>
      <h1>Custom Tags Example</h1>
      <tp:buttonPanel okLabel="Ok" cancelLabel="Cancel" />
   </h:body>
</html>
```

Once you are ready with all the changes done, let us compile and run the application as we did in JSF - First Application chapter. If everything is fine with your application, this will produce following result:



http://localhost:8080/helloworld/home.jsf
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Custom Tags Example

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