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ABOUT THODORIS BAIS



Thodoris is an Oracle Certified Associate Java Programmer and currently works as a Junior Software Developer, for Intrasoftware International S.A. He holds a diploma at Informatics & Telecommunications Engineering and is interested in continuous development.



Introduction to JSF Facelets Templates

Posted by: Thodoris Bais in jsf March 6th, 2015



There are many times that we found ourselves dreaming of an available UI template to help us develop as fast as possible the web application that we are thinking of. JSF Facelets Templates is the solution for creating easy to extend and use UIs. Thus, we can reuse code and avoid recreating similarly constructed pages.

Today's example will demonstrate a template's creation, usage and partial override (for the cases that the template doesn't match our project's needs and we want to change it a bit).

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A small intro to Facelets Templates common tags

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defines the content that is inserted into a page by a template.

```
ui:include
```

encapsulates and reuses content for multiple pages.

```
ui:insert
```

inserts content into a template.

```
ui:composition
```

defines a page composition that optionally uses a template. Any content outside this tag is ignored.

You can read more about the facelets' tags here.

1. Project Environment

This example was implemented using the following tools:

1. JSF 2.2
2. Maven 3.1
3. Eclipse 4.3 (Kepler)
4. JDK 1.7
5. Apache Tomcat 7.0.41



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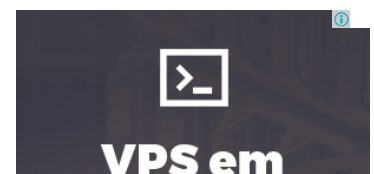
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Just like any other of my previous JSF examples, you need to create a Dynamic Web Project with Maven and JSF should be included in it. At any case, if you don't remember some configurations, consult my very first example according to JSF.

This is the project's final structure, just to ensure that you won't get lost anytime.

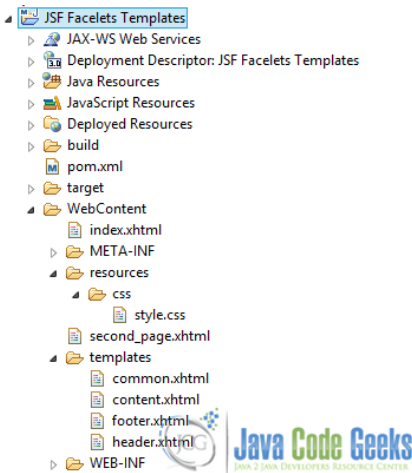


Figure 1. App Structure

2. Header, Footer and Content files

The usual design of a web application's design consists of header, footer and the content of the page, between them. We'll use representative

header.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">
  <body>
    <ui:composition>
      <h1>Template's Header</h1>
    </ui:composition>
  </body>
</html>
```

content.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">
  <body>
    <ui:composition>
      <h1>Template's Content</h1>
    </ui:composition>
  </body>
</html>
```

footer.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">
  <body>
    <ui:composition>
      <h1>Template's Footer</h1>
    </ui:composition>
  </body>
</html>
```

At this point, there is only a single point that needs to be clarified:

ui:composition

tag considers only the content in it, so any other content before and after the tag's definition, will be ignored. Essentially, each of the above files, contains only the html header tags.

3. Template file

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The template file is a usual XHTML file that includes layout-descriptive, facelet tags.

common.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:head>
  <h:outputStylesheet src="resources/style.css" name="style.css" library="css" />
</h:head>
<h:body>
  <div id="header">
    <ui:insert name="header">
      <ui:include src="/templates/header.xhtml" />
    </ui:insert>
  </div>
  <br />
  <div id="content">
    <ui:insert name="content">
      <ui:include src="/templates/content.xhtml" />
    </ui:insert>
  </div>
  <br />
  <div id="footer">
    <ui:insert name="footer">
      <ui:include src="/templates/footer.xhtml" />
    </ui:insert>
  </div>
</h:body>
</html>
```

We here use a custom

css

stylesheet, which only draws a separate box around each

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In addition, we made use of the

ui:insert

to insert content to the three fore-mentioned reusable page sections and

ui:include

to provide a default content for each, if no replacement is specified, when the template is called.

4. Application files

Suppose our web app consists of a main and a secondary page, with a link button to enable navigation between them.

index.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 template="/templates/common.xhtml">
    <ui:define name="content">
      <br />
      <br />
      <h:link value="secondary Page" outcome="second_page" />
      <br />
      <br />
    </ui:define>
  </ui:composition>
</h:body>
</html>
```

We're making use of the existing template, with a small addition: the link button that makes the navigation to the secondary page, using the

ui:define

tag, which defines that a link is inserted into the **content**

div

Finally, this is the second page, where we demonstrate how we can override the usage of a template.

secondary_page.xhtml

```

<!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 template="templates/common.xhtml">
    <ui:define name="header">
      <h2>This is the overridden header.</h2>
    </ui:define>
    <ui:define name="content">
      <h2>This is the overridden content.</h2>
      <h:link value="Back To Home" outcome="index" />
    </ui:define>
    <ui:define name="footer">
      <h2>This is the overridden footer.</h2>
    </ui:define>
  </ui:composition>
</h:body>
</html>

```

Despite using the template, we here see that we have actually overridden everything into it.

5. Demo

The index view seems like:



Figure 2, Index View of the app

And after clicking the link button:



Figure 3, Secondary View of the app

6. Download the Eclipse Project

This was an example of JSF Facelets Templates.

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You can download the full source code of this example here : [JSFFaceletsTemplates.zip](#)

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