

MASTER INFORMATIQUE - SEMESTRE 5

Cours : Développement Web

Séquence 4: JavaServer Faces





Apache Tomcat 8
Version 8.5.24, Nov 27 2017



Partie 4:

Jeux de composants additionnels JSF



Contenu

- Architectures Multi-tiers (Rappel)
- La plate-forme Java EE (Rappel)
- JavaServer Faces
 - Environnement de développement
 - Une séparation de la couches présentation des autres couches
 - Un mapping entre l'HTML et L'objet
 - JSF et Bases de données
 - Un ensemble de composants riches et utilisables
 - Une liaison simple entre les actions côte Client et côte serveur
 - Composants additionnels JSF: Primefaces
 - Combinaison de plusieurs composants pour aboutir à un composant plus complexe

Jeux de composants additionnels à JSF



- Il est possible d'utiliser des jeux de composants additionnels offrant de nouveaux composants plus riches. On peut citer par exemple:
 - [Primefaces](#), un jeu de composants open-source supportant Ajax, Jsf 2, Push
 - [ICEfaces](#), un jeu de composants open-source supportant Ajax.
 - [jBoss RichFaces](#) et *Ajax4JSF*, un jeu de composants open-source supportant Ajax
 - [Apache Tomahawk](#), un jeu de composants très riche et open-source
 - [RCFaces](#), un jeu de composants très riche AJAX et open-source

Les deux jeux de composants standards de JSF s'avèrent trop limités et insuffisants pour le développement d'applications d'entreprise

https://fr.wikipedia.org/wiki/JavaServer_Faces

PrimeFaces



	
Original author(s)	PrimeTek
Stable release	5.2.1 ^[1] / April 17, 2015
Written in	Java
Operating system	Cross-platform
Type	Java, JSF, Ajax, Framework
License	Apache License 2.0 ^[2]
Website	primefaces.org 

http://www.primefaces.org/docs/guide/primefaces_user_guide_5_1.pdf

PrimeFaces



- Très Nombreux champs supplémentaires : **ColorPicker, Calendar, TagCloud...**
- **Panneaux, graphiques, multimédia, gestion de fichiers...**
- Gestion par JSF d'**images dynamiques** (en JSF pures, gérées par... une servlet).
- Extension de la spécification : langage plus riche pour désigner des éléments,

http://www.primefaces.org/docs/guide/primefaces_user_guide_5_1.pdf

PrimeFaces

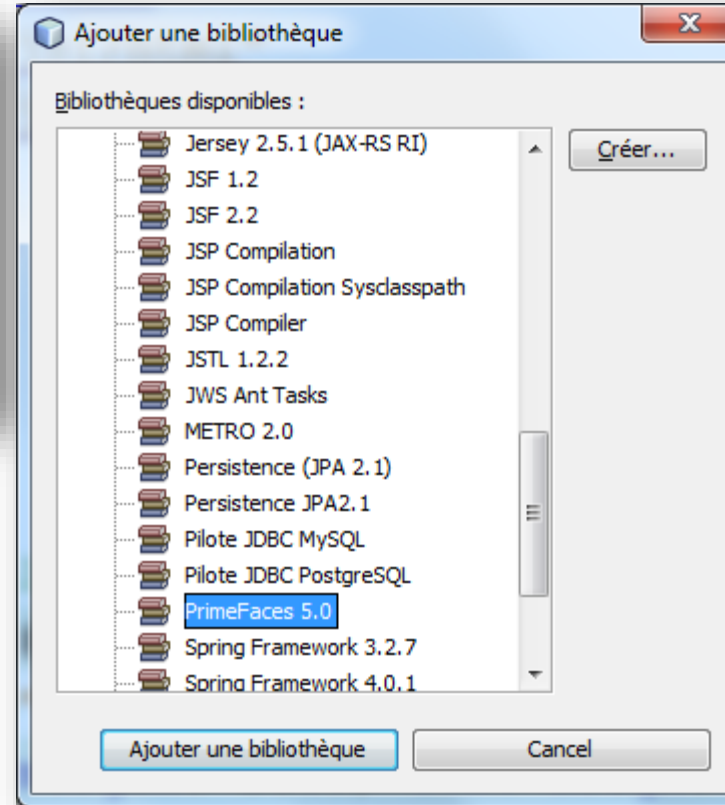
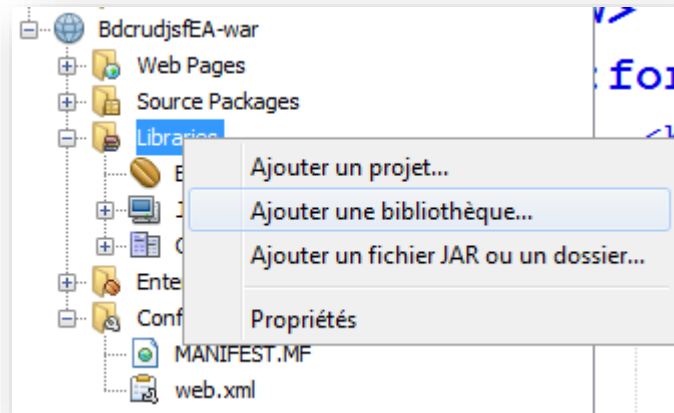


- Les concurrents de PRIMEFACES :

- RichFaces
- ICEfaces
- Tomahawk
- RC Faces
- Open Faces
-



PrimeFaces



- Prime Faces namespace est nécessaire pour ajouter les composants Prime Faces à votre page : [xmlns:p="http://primefaces.org/ui"](http://primefaces.org/ui)

Quelques Composants et fonctions PrimeFaces

<http://www.primefaces.org/docs/vdl/3.5/alltags-noframe.html>

primefaces-p:component()
primefaces-p:ifAllGranted()
primefaces-p:ifAnyGranted()
primefaces-p:ifGranted()
primefaces-p:ifNoneGranted()
primefaces-p:remoteUser()
primefaces-p:userPrincipal()
primefaces-p:widgetVar()
primefaces-p:accordionPanel
primefaces-p:ajax
primefaces-p:ajaxStatus
primefaces-p:autoComplete
primefaces-p:barChart
primefaces-p:blockUI
primefaces-p:breadcrumb
primefaces-p:bubbleChart
primefaces-p:button
primefaces-p:calendar
primefaces-p:captcha
primefaces-p:carousel
primefaces-p:cellEditor
primefaces-p:clock
primefaces-p:collector
primefaces-p:colorPicker
primefaces-p:column
primefaces-p:columnGroup
primefaces-p:columns

primefaces-p:columnGroup
primefaces-p:columns
primefaces-p:commandButton
primefaces-p:commandLink
primefaces-p:confirmDialog
primefaces-p:contextMenu
primefaces-p:dashboard
primefaces-p:dataExporter
primefaces-p:dataGrid
primefaces-p:dataList
primefaces-p:dataTable
primefaces-p:defaultCommand
primefaces-p:dialog
primefaces-p:dock
primefaces-p:donutChart
primefaces-p:draggable
primefaces-p:droppable
primefaces-p:editor
primefaces-p:effect
primefaces-p:feedReader
primefaces-p:fieldset
primefaces-p:fileDownload
primefaces-p:fileUpload
primefaces-p:focus
primefaces-p:galleria
primefaces-p:gmap
primefaces-p:gmapInfoWindow
primefaces-p:graphicImage
primefaces-p:growl
primefaces-p:hotkey
primefaces-p:idleMonitor

primefaces-p:imageCompare
primefaces-p:imageCropper
primefaces-p:imageSwitch
primefaces-p:inplace
primefaces-p:inputMask
primefaces-p:inputText
primefaces-p:inputTextarea
primefaces-p:keyboard
primefaces-p:layout
primefaces-p:layoutUnit
primefaces-p:lightBox
primefaces-p:lineChart
primefaces-p:log
primefaces-p:media
primefaces-p:megaMenu
primefaces-p:menu
primefaces-p:menubar
primefaces-p:menuButton
primefaces-p:menuItem
primefaces-p:message
primefaces-p:messages
primefaces-p:meterGaugeChart
primefaces-p:mindmap
primefaces-p:notificationBar
primefaces-p:ohlcChart
primefaces-p:orderList
primefaces-p:outputLabel
primefaces-p:outputPanel
primefaces-p:overlayPanel
primefaces-p:panel
primefaces-p:panelGrid
primefaces-p:panelMenu
primefaces-p:password
primefaces-p:photoCam
primefaces-p:pickList

primefaces-p:pieChart
primefaces-p:poll
primefaces-p:printer
primefaces-p:progressBar
primefaces-p:radioButton
primefaces-p:rating
primefaces-p:remoteCommand
primefaces-p:resetInput
primefaces-p:resizable
primefaces-p:ring
primefaces-p:row
primefaces-p:rowEditor
primefaces-p:rowExpansion
primefaces-p:rowToggler
primefaces-p:schedule
primefaces-p:scrollPanel
primefaces-p:selectBooleanButton
primefaces-p:selectBooleanCheckbox
primefaces-p:selectCheckboxMenu
primefaces-p:selectManyButton
primefaces-p:selectManyCheckbox
primefaces-p:selectManyMenu
primefaces-p:selectOneButton
primefaces-p:selectOneListbox
primefaces-p:selectOneMenu
primefaces-p:selectOneRadio
primefaces-p:separator
primefaces-p:slideMenu
primefaces-p:slider
primefaces-p:socket
primefaces-p:spacer
primefaces-p:spinner
primefaces-p:splitButton
primefaces-p:splitView

primefaces-p:stack
primefaces-p:submenu
primefaces-p:subTable
primefaces-p:summaryRow
primefaces-p:tab
primefaces-p:tabMenu
primefaces-p:tabView
primefaces-p>tagCloud
primefaces-p:terminal
primefaces-p:themeSwitcher
primefaces-p:tieredMenu
primefaces-p:toolbar
primefaces-p:toolbarGroup
primefaces-p:tooltip
primefaces-p:tree
primefaces-p:TreeNode
primefaces-p:treeTable
primefaces-p:watermark
primefaces-p:wizard

PrimeFaces

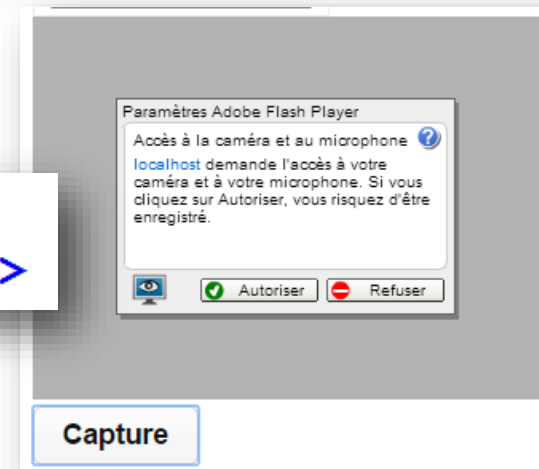


- Exemple du calendrier du formulaire

```
<p:calendar id="datenaiss" value="#{etudiantJSFManagedBean.etudiant.datenaiss}"  
            title="Datenaiss" required="true"  
            requiredMessage="The Datenaiss field is required."  
            showOn="both">  
    <f:convertDateTime pattern="dd/MM/yyyy" />  
</p:calendar>
```

- Simple accès au web cam

```
<p:photoCam widgetVar="pc" />  
<p:commandButton type="button" value="Capture"/>
```

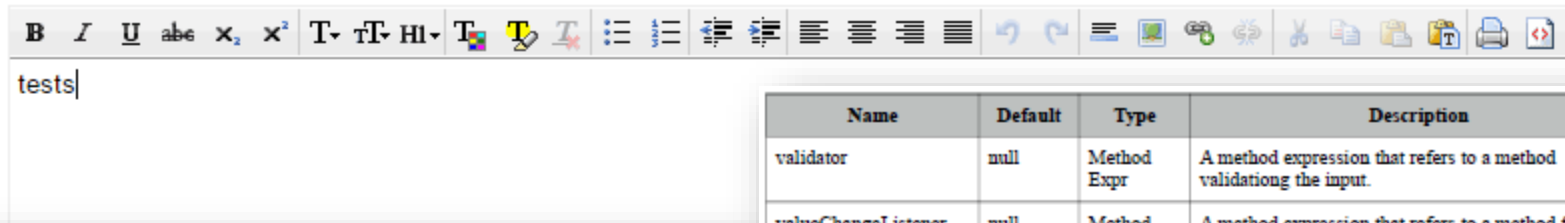


PrimeFaces



- Exemple **Editor**

```
<p:editor value="tests" />
```



Name	Default	Type	Description
id	null	String	Unique identifier of the component.
rendered	true	Boolean	Boolean value to specify the rendering of the component.
binding	null	Object	An el expression that maps to a server side UIComponent instance in a backing bean.
value	null	Object	Value of the component than can be either an EL expression of a literal text.
converter	null	Converter/ String	An el expression or a literal text that defines a converter for the component. When it's an EL expression, it's resolved to a converter instance. In case it's a static text, it must refer to a converter id.
immediate	false	Boolean	When set true, process validations logic is executed at apply request values phase for this component.
required	false	Boolean	Marks component as required.

Name	Default	Type	Description
validator	null	Method Expr	A method expression that refers to a method validating the input.
valueChangeListener	null	Method Expr	A method expression that refers to a method for handling a valuchangeevent.
requiredMessage	null	String	Message to be displayed when required field validation fails.
converterMessage	null	String	Message to be displayed when conversion fails.
validatorMessage	null	String	Message to be displayed when validation fails.
widgetVar	null	String	Name of the client side widget.
controls	null	String	List of controls to customize toolbar.
height	null	Integer	Height of the editor.
width	null	Integer	Width of the editor.
disabled	false	Boolean	Disables editor.
style	null	String	Inline style of the editor container.
styleClass	null	String	Style class of the editor container.
onchange	null	String	Client side callback to execute when editor data changes.
maxlength	null	Integer	Maximum length of the raw input.

PrimeFaces



- Exemple **AccordionPanel**

▼ First Tab Title

Lorem ...More content for first tab

▶ Second Tab Title

```
<p:accordionPanel>
  <p:tab title="First Tab Title">
    <h:outputText value= "Lorem"/>
    ...More content for first tab
  </p:tab>
  <p:tab title="Second Tab Title">
    <h:outputText value="Ipsum" />
  </p:tab>
  // any number of tabs
</p:accordionPanel>
```

PrimeFaces

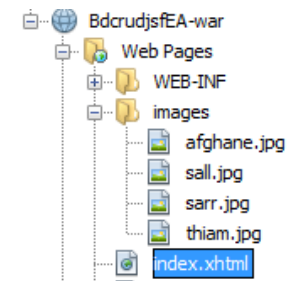


Carousel is a multi purpose component to display a set of data or general content with slide effects.

- Exemple **Carousel**

```
<p:carousel autoPlayInterval="2000" effect="easeInStrong" circular="true"
            itemStyle="width:200px" >
    <p:graphicImage value="/images/sarr.jpg"/>
    <p:graphicImage value="/images/thiam.jpg"/>
    <p:graphicImage value="/images/sall.jpg"/>
    <p:graphicImage value="/images/afghane.jpg"/>
</p:carousel>
```

PrimeFaces



ContentFlow is a horizontal content gallery component with a slide animation.

- Exemple **ContentFlow**

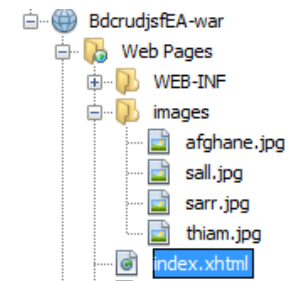
```
private List<String> images = new ArrayList<> (Arrays.asList(  
    "thiam.jpg", "sarr.jpg", "sall.jpg", "afghane.jpg"));
```

```
public List<String> getImages() {  
    return images;  
}
```

```
public void setImages(List<String> images) {  
    this.images = images;  
}
```

```
<p:contentFlow var="image" value="#{etudiantJSFManagedBean.images}">  
    <p:graphicImage value="/images/#{image}" styleClass="content" />  
</p:contentFlow>
```


PrimeFaces



Galleria is used to display a set of images.

- Exemple **Galleria**

```
<p:galleria value="#{etudiantJSFManagedBean.images}" var="image" >
    <p:graphicImage value="/images/#{image}"
                    title="titre" alt="description" />
</p:galleria>
```



PrimeFaces



ColorPicker is an input component with a color palette.

- Exemple **Color Picker**

```
<h:body style="background-color: #{etudiantJSFManagedBean.color}">
  <h:form>
    <p:colorPicker value="#{etudiantJSFManagedBean.color}" mode="inline"/>
    <h:commandButton value="Valider"/>
    Couleur:<h:outputText value="#{etudiantJSFManagedBean.color}" />
  </h:form>
</h:body>
```



Name	Default	Type	Description
valueChangeListener	null	ValueChange Listener	A method binding expression that refers to a method for handling a valuchangeevent.
requiredMessage	null	String	Message to be displayed when required field validation fails.
converterMessage	null	String	Message to be displayed when conversion fails.
validatorMessage	null	String	Message to be displayed when validation fields.
widgetVar	null	String	Name of the client side widget.
mode	popup	String	Display mode, valid values are "popup" and "inline".
style	null	String	Inline style of the component.
styleClass	null	String	Style class of the component.

PrimeFaces



- Exemple **Dock**

Dock component mimics the well known dock interface of Mac OS X.



```
<p:dock>
```

```
    <p:menuitem value="Home" icon="/images/dock/home.png" url="#" />
    <p:menuitem value="Music" icon="/images/dock/music.png" url="#" />
    <p:menuitem value="Video" icon="/images/dock/video.png" url="#" />
    <p:menuitem value="Email" icon="/images/dock/email.png" url="#" />
    <p:menuitem value="Link" icon="/images/dock/link.png" url="#" />
    <p:menuitem value="RSS" icon="/images/dock/rss.png" url="#" />
    <p:menuitem value="History" icon="/images/dock/history.png" url="#" />
```

```
</p:dock>
```

Name	Default	Type	Description
id	null	String	Unique identifier of the component
rendered	true	Boolean	Boolean value to specify the rendering of the component, when set to false component will not be rendered.
binding	null	Object	An el expression that maps to a server side UIComponent instance in a backing bean
model	null	MenuModel	MenuModel instance to create menus programmatically
position	bottom	String	Position of the dock, <i>bottom</i> or <i>top</i> .
itemWidth	40	Integer	Initial width of items.
maxWidth	50	Integer	Maximum width of items.
proximity	90	Integer	Distance to enlarge.
halign	center	String	Horizontal alignment,
widgetVar	null	String	Name of the client side widget.

PrimeFaces



GMap is a map component integrated with Google Maps API V3.

- Exemple **GMap**

```
<script src="http://maps.google.com/maps/api/js?sensor=true|false"
type="text/javascript"></script>

<p:gmap center="14.7727624, -16.95356909999998" zoom="15" type="hybrid"
style="width:600px;height:400px" />
```



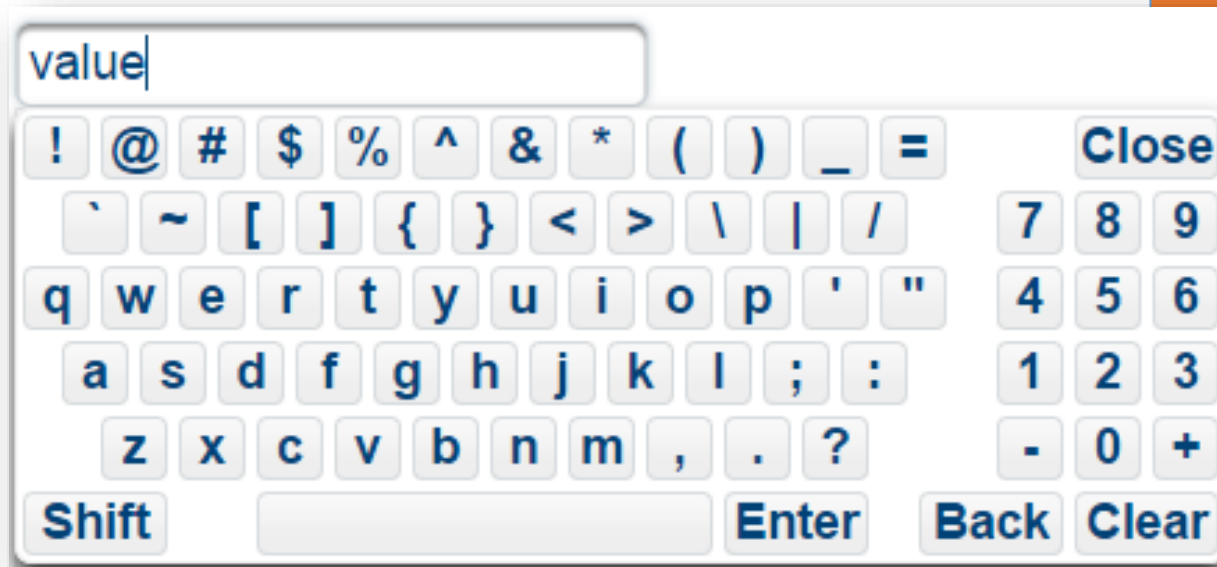
PrimeFaces



- Exemple **Keyboard**

```
<p:keyboard value="value" />
```

Keyboard is an input component that uses a virtual keyboard to provide the input. Notable features are the customizable layouts and skinning ities.



PrimeFaces

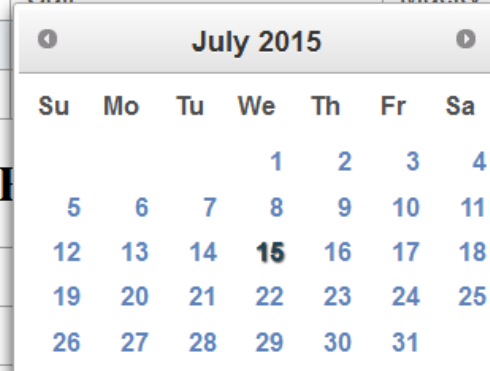


Liste des étudiants

Id	Nom	Prenom	Datenaiss	Opérations
2	Sall	Mackv	01/01/1945	Supprimer Mettre à jour
3		ye	30/11/1908	Supprimer Mettre à jour
4		ye	18/11/1945	Supprimer Mettre à jour

Créer/Editer un E

Nom:	
Prenom:	
Datenaiss:	<input type="text"/>
<input type="button" value="Ajouter un étudiant"/>	

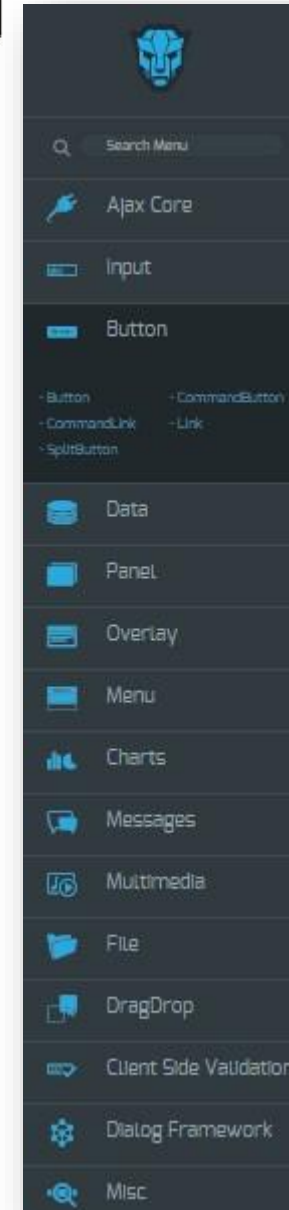
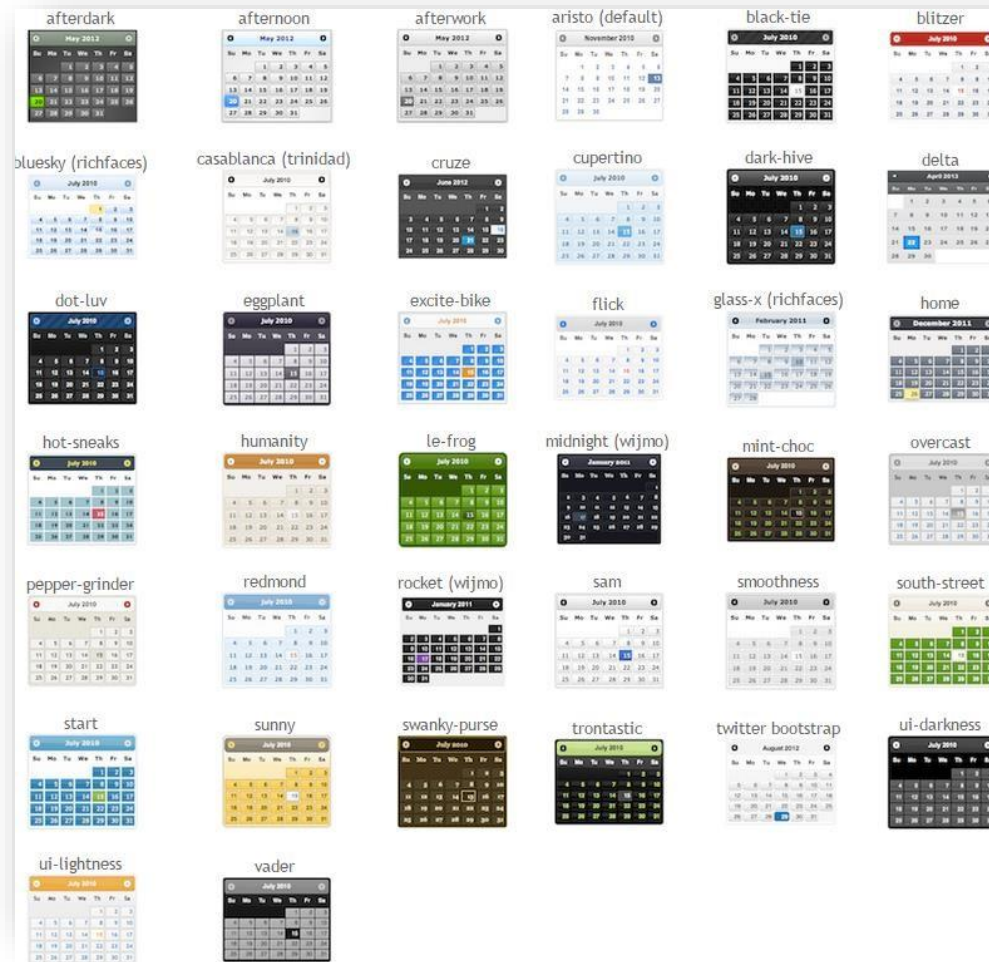


PrimeFaces



<http://www.primefaces.org/showcase/>

Thèmes (+30 thèmes prédéfinis) :



PrimeFaces



- Télécharger le jar d'un des thèmes et l'ajouter au projet

<http://primefaces.org/themes>

repository.primefaces.org/org/primefaces/themes/

Applications Bookmarks Persos Programmation Jeux Supports de

Index of /org/primefaces/themes

Name	Last modified	Size	Description
Parent Directory	-	-	-
afterdark/	21-Apr-2013 22:59	-	-
afternoon/	21-Apr-2013 22:59	-	-
afterwork/	21-Apr-2013 23:00	-	-
all-themes/	21-Apr-2013 23:18	-	-
aristo/	05-Sep-2011 15:12	-	-
black-tie/	21-Apr-2013 23:01	-	-
blitzer/	21-Apr-2013 23:01	-	-
bluesky/	21-Apr-2013 23:02	-	-

Index of /org/primefaces/themes/cupertino/1.0.10

Name	Last modified	Size	Description
Parent Directory	-	-	-
cupertino-1.0.10.jar	21-Apr-2013 23:04	30K	
cupertino-1.0.10.jar.md5	21-Apr-2013 23:04	32	
cupertino-1.0.10.jar.sha1	21-Apr-2013 23:04	40	
cupertino-1.0.10.pom	21-Apr-2013 23:04	627	
cupertino-1.0.10.pom.md5	21-Apr-2013 23:04	32	
cupertino-1.0.10.pom.sha1	21-Apr-2013 23:04	40	

PrimeFaces



- Ajouter le nom du thème approprié dans le fichier « web.xml »

```
<context-param>  
    <param-name>primefaces.THEME</param-name>  
    <param-value>cupertino</param-value>  
</context-param>
```

PrimeFaces



- Aspect du thème « cupertino »

The screenshot shows a web browser window with the title 'Facelet Title'. The address bar shows 'localhost:8080/BdcrudjsfEA-war/faces/index.xhtml'. The page content includes a table titled 'Liste des étudiants' and a form titled 'Créer/Editer un E'.

Id	Nom	Prenom	Datenaiss	Opérations
2	Sell	Macky	01/01/1945	Supprimer Mettre à jour
3	ddoulaye	ddoulaye	30/11/1908	Supprimer Mettre à jour
4	ddoulaye	ddoulaye	18/11/1945	Supprimer Mettre à jour

Créer/Editer un E

Nom:

Prenom:

Datenaiss:

[Ajouter un étudiant](#)

July 2015

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

PrimeFaces



- Aspect du thème « blitzzer »

The screenshot shows a web browser window with the title 'Facelet Title'. The address bar shows 'localhost:8080/BdcrudjsfEA-war/faces/index.xhtml'. The page content includes a search bar with the text 'Rechercher' and a table titled 'Liste des étudiants'.

Id	Nom	Prenom	Datenaiss	Opérations
2		Macky	01/01/1945	Supprimer Mettre à jour
3		Addoulaye	30/11/1908	Supprimer Mettre à jour
4		Addoulaye	18/11/1945	Supprimer Mettre à jour

Below the table, there is a section titled 'Créer/Editer un I' with input fields for 'Nom:', 'Prenom:', and 'Datenaiss:'. A button labeled 'Ajouter un étudiant' is at the bottom.

A date picker is open, showing the month of July 2015. The calendar grid shows the following dates:

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

PrimeFaces




```
<p:accordionPanel>
  <p:tab title="Affichage des étudiants">
    <f:view>
      <h:form>
        <h1><h:outputText value="Liste des étudiants"/></h1>
        <p:dataTable value="#{etudiantJSFManagedBean.listeEtudiants}" var="item"
          style="margin: auto; text-align: left" class="table1">
          <p:column ...6 lines />
          <p:column ...6 lines />
          <p:column ...6 lines />
          <p:column ...8 lines />
          <p:column ...9 lines />
        </p:dataTable>
      </h:form>
    </f:view>
  </p:tab>
</p:accordionPanel>
```

PrimeFaces



► Affichage des étudiants

Créer/Editer un Etudiant


Nom:	<input type="text"/>
Prenom:	<input type="text"/>
Datenaiss:	<input type="text"/> 
<input type="button" value="Ajouter un étudiant"/>	

▼ Affichage des étudiants

Liste des étudiants

Id	Nom	Prenom	Datenaiss	Opérations
2	Sall	Macky	01/01/1945	Supprimer Mettre à jour
3	Wade	Addoulaye	30/11/1908	Supprimer Mettre à jour
4	Diop	Addoulaye	18/11/1945	Supprimer Mettre à jour

Créer/Editer un Etudiant

Nom:	<input type="text"/>
Prenom:	<input type="text"/>
Datenaiss:	<input type="text"/> 
<input type="button" value="Ajouter un étudiant"/>	

PrimeFaces



```
<p:accordionPanel>
  <p:tab title="Affichage des étudiants">
    <f:view>
      <h:form>
        <h1><h:outputText value="Liste des étudiants"/></h1>
        <p:dataTable value="#{etudiantJSFManagedBean.listeEtudiants}" var="item"
          style="margin: auto; text-align: left" class="table1">
          <p:column ...6 lines />
          <p:column ...6 lines />
          <p:column ...6 lines />
          <p:column ...8 lines />
          <p:column ...9 lines />
        </p:dataTable>
      </h:form>
    </f:view>
  </p:tab>
</p:accordionPanel>
```

Bibliographie

- The Java EE 6 Tutorial,
<http://docs.oracle.com/javaee/6/tutorial/doc/javaeetutorial6.pdf>
- <http://www.ibm.com/developerworks/library/j-jsf1/>
- <http://www.ibm.com/developerworks/library/j-jsf2/>
- <http://www.ibm.com/developerworks/library/j-jsf3/>