Natural for Ajax

Responsive Natural Page Layout

Version 9.3.2

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ADABAS & NATURAL

This document applies to Natural for Ajax Version 9.3.2 and all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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Responsive Natural Page Layout

A set of controls and containers for building responsive applications is available. The controls and containers support responsiveness, which means that the pages automatically adapt to various screen sizes. The controls are built with Bootstrap (*http://getbootstrap.com/*). You will find running samples built with these controls and containers in the Natural Ajax Demos.

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1 About this Documentation

Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
`Monospace font`	Identifies service names and locations in the format *`folder.subfolder.service`*, APIs, Java classes, methods, properties.
`Italic`	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
`Monospace font`	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
|	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the | symbol.
[ ]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [ ] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

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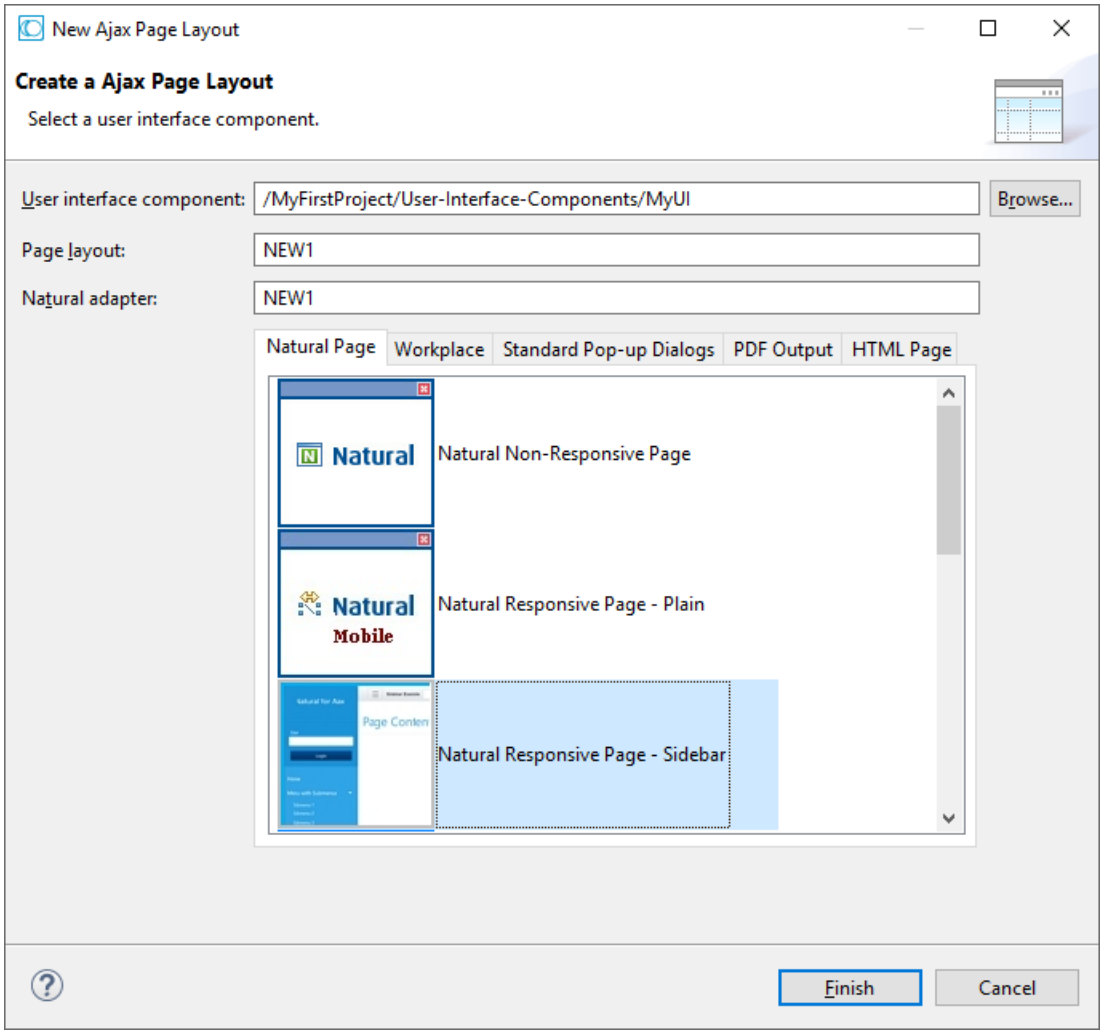
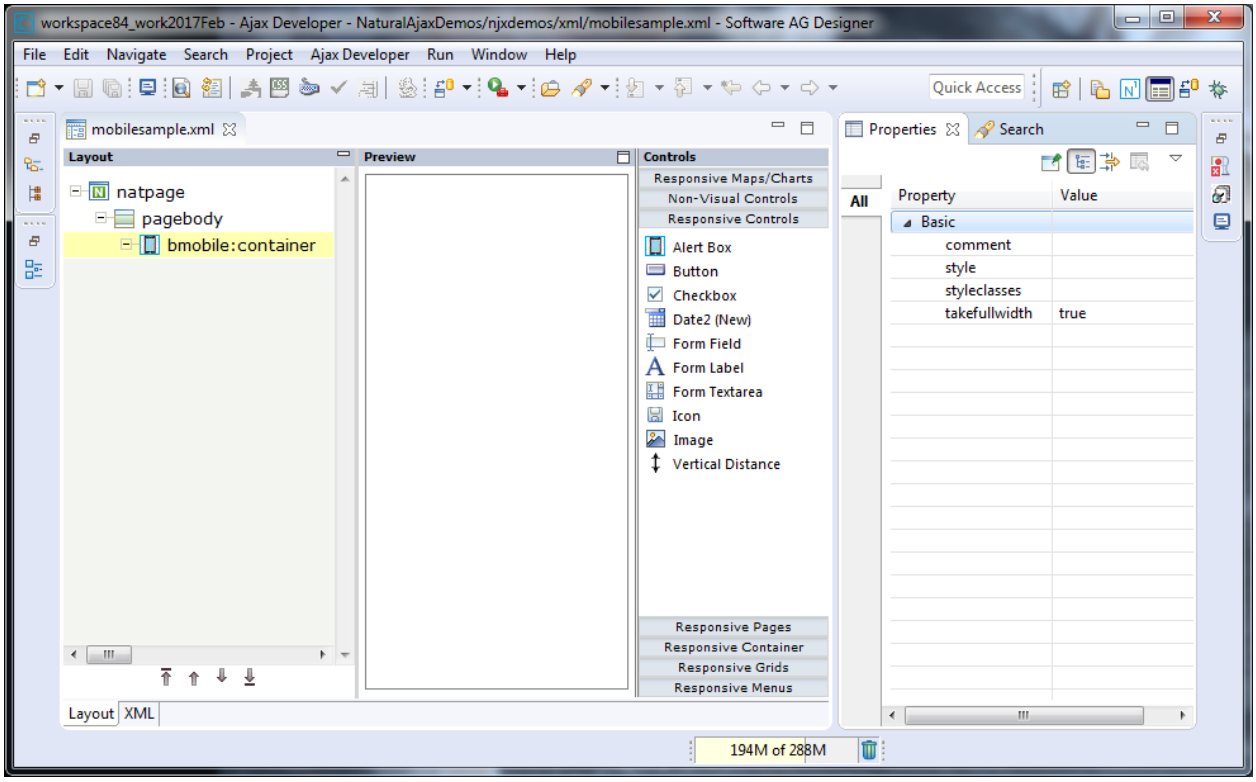
2 Creating Responsive Pages

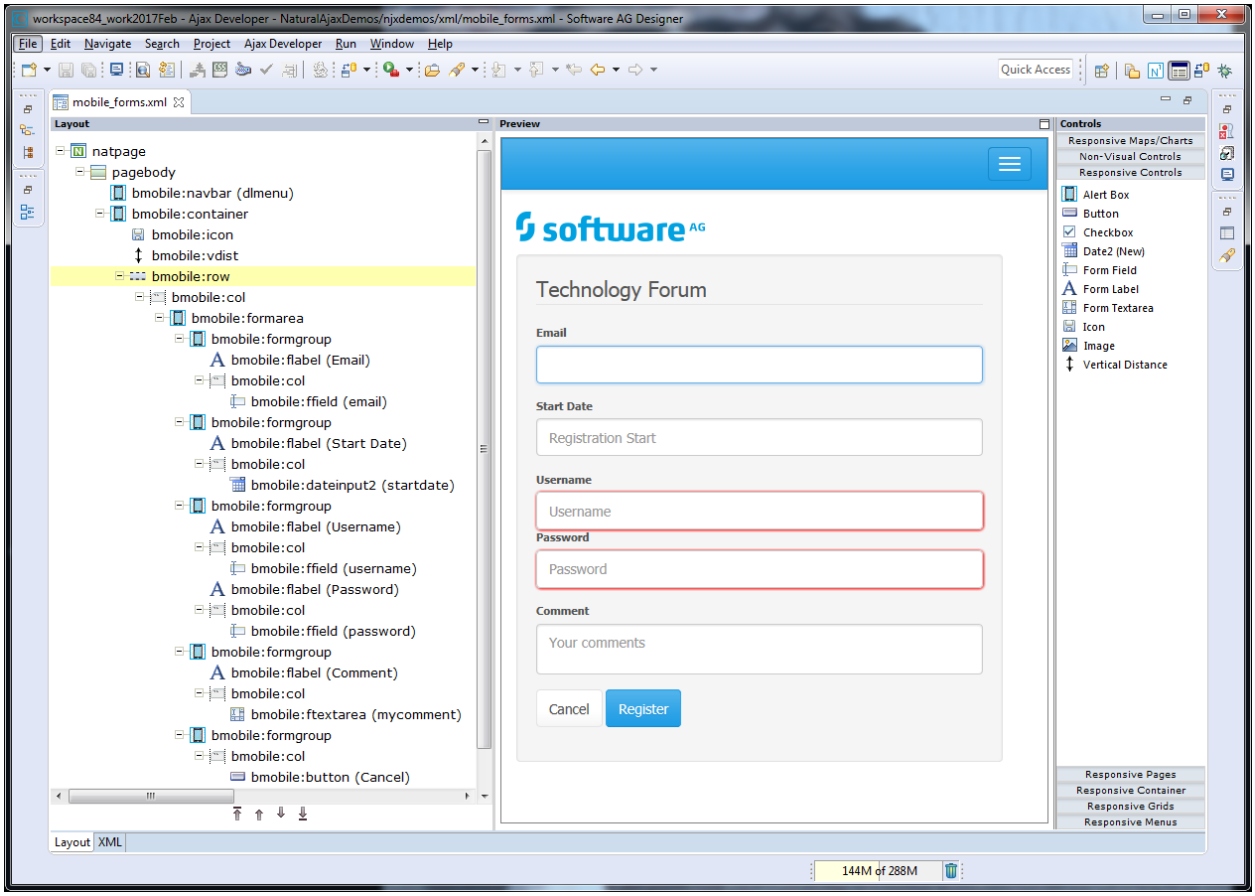
To create layout pages for responsive applications use one of the **Natural Responsive Page** templates. If you want your application to have a sidebar with navigation menu choose the **Natural Responsive Page - Sidebar** template.



The wizard will create a page layout with responsive containers. The palette shows exactly the controls, which are supported in responsive pages. You can add controls from the palette to your layout in the usual way.



To see the rendering in the preview area set **HTML** as **Layout display mode** in the Ajax Developer properties of your project. The following shows the *mobile_forms.xml* example layout of the Natural Ajax Demos in the Layout Painter.


workspace84_work2017Feb - Ajax Developer - NaturalAjaxDemos/njxdemos/xml/mobile_forms.xml - Software AG Designer
File Edit Navigate Search Project Ajax Developer Run Window Help
Quick Access
mobile_forms.xml
Layout
natpage
pagebody
bmobile:navbar (dlmenu)
bmobile:container
bmobile:icon
bmobile:vdist
bmobile:row
bmobile:col
bmobile:formarea
bmobile:formgroup
bmobile:flabel (Email)
bmobile:col
bmobile:ffield (email)
bmobile:formgroup
bmobile:flabel (Start Date)
bmobile:col
bmobile:dateinput2 (startdate)
bmobile:formgroup
bmobile:flabel (Username)
bmobile:col
bmobile:ffield (username)
bmobile:flabel (Password)
bmobile:col
bmobile:ffield (password)
bmobile:formgroup
bmobile:flabel (Comment)
bmobile:col
bmobile:ftextarea (mycomment)
bmobile:formgroup
bmobile:col
bmobile:button (Cancel)
Layout XML
Preview
software AG
Technology Forum
Email
Start Date
Registration Start
Username
Username
Password
Password
Comment
Your comments
Cancel
Register
Controls
Responsive Maps/Charts
Non-Visual Controls
Responsive Controls
Alert Box
Button
Checkbox
Date2 (New)
Form Field
Form Label
Form Textarea
Icon
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3 First Steps towards Responsiveness

The responsiveness of a layout is based on style classes. For controls and containers the major responsive style classes are applied automatically, which defines the basic functionality for this control/container in a responsive way.

The responsive sizing of rows and columns in a page is also based on style classes. The basis for this is the **grid system of Bootstrap**. This system allows up to 12 columns across the page. You can specify different dimensions for your rows and columns depending on the devices. This means: Instead of directly applying pixel or percentage width to your controls, you specify style classes defining the number of columns this control is supposed to occupy on a device.

You can add your own additional style classes or style classes supported by the Bootstrap framework to the controls to customize the rendering. The Bootstrap framework contains a variety of ready-to-use classes. For controls and containers, the Layout Painter will offer you the most frequently used classes for this specific control/container.

The best way to get started is by using the Natural Ajax Demos with a large set of simple samples.

4 Responsive Pages

BMOBILE:PAGEHEADER

A responsive control to render a page header.

Properties

Basic			
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Sometimes obligatory	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Sometimes obligatory	
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
htmlheading	The rendering of the heading: H1-H6	Optional	h1 h2 h3 h4 h5 h6
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	lead h1 h2 h3

			h4 h5 h6 font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter navbar-brand
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	

BMOBILE:FOOTER

A responsive control to render a page footer.

Properties

Note: The properties for the BMOBILE:FOOTER control are the same as for the BMOBILE:PAGEHEADER control but are implemented using different style sheet classes.

Basic			
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Sometimes obligatory	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Sometimes obligatory	
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
htmlheading	The rendering of the heading: H1-H6	Optional	h1 h2 h3 h4 h5 h6
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	lead h1 h2 h3 h4 h5 h6 font-italic

			font-weight-bold font-weight-bolder font-weight-light font-weight-lighter navbar-brand
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:SUBPAGE

A control for responsive embedding of non-Ajax pages or other media.

Properties

Basic			
valueprop	Name of the adapter parameter that provides the content of the control.	Optional	
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are:	Optional	

	border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
styleclasses	CSS style classes separated by a blank.	Optional	bg-light ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-* mt-* mb-* my-* border border-primary border border-secondary border border-dark border border-light
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
alwaysreload	When setting to false, the subpage is not reloaded when a page switch is executed, default is true.	Optional	true false

aspectratio	Defines the proportional relationship between width and height of the control. Example: 4by3	Optional	
width	Width of the control. There are three possibilities to define the width: (A) You do not define a width at all. In this case the width of the control will either be a default width or - in case of container controls - it will follow the width that is occupied by its content. (B) Pixel sizing: just input a number value (e.g. "100"). (C) Percentage sizing: input a percantage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a width this control can reference. If you specify this control to have a width of 50% then the parent element (e.g. an ITR-row) may itself define a width of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.	Optional	100 120 140 160 180 200 50% 100%
height	Height of the control. There are three possibilities to define the height: (A) You do not define a height at all. As consequence the control will be rendered with its default height. If the control is a container control (containing) other controls then the height of the control will follow the height of its content. (B) Pixel sizing: just input a number value (e.g. "20"). (C) Percentage sizing: input a percentage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a height this control can reference. If you specify this control to have a height of 50% then the parent element (e.g. an ITR-row) may itself define a height of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.	Optional	100 150 200 250 300 250 400 50% 100%
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group	Optional	

	structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.		
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	

BMOBILE:SUBCISPAGE

A control for responsive embedding of Ajax subpages.

Properties

Basic			
valueprop	Name of the adapter parameter that provides the content of the control.	Optional	
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
width	Width of the control. There are three possibilities to define the width:	Optional	100 120 140

	(A) You do not define a width at all. In this case the width of the control will either be a default width or - in case of container controls - it will follow the width that is occupied by its content. (B) Pixel sizing: just input a number value (e.g. "100"). (C) Percentage sizing: input a percantage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a width this control can reference. If you specify this control to have a width of 50% then the parent element (e.g. an ITR-row) may itself define a width of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.		160 180 200 50% 100%
height	Height of the control. There are three possibilities to define the height: (A) You do not define a height at all. As consequence the control will be rendered with its default height. If the control is a container control (containing) other controls then the height of the control will follow the height of its content. (B) Pixel sizing: just input a number value (e.g. "20"). (C) Percentage sizing: input a percentage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a height this control can reference. If you specify this control to have a height of 50% then the parent element (e.g. an ITR-row) may itself define a height of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.	Optional	100 150 200 250 300 250 400 50% 100%
aspectratio	Defines the proportional relationship between width and height of the control. Example: 4by3	Optional	1by1 16by9 21by9 4by3
styleclasses	CSS style classes separated by a blank.	Optional	bg-light ml-* mr-* mx-* mx-sm-*

			mx-md-* mx-lg-* mx-xl-* mt-* mb-* my-* border border-primary border border-secondary border border-dark border border-light
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	

BMOBILE:MODAL

A control for responsive embedding of modals. The content of this modal can be any content reachable via a URL. To integrate Natural content, use the BMOBILE:INTMODAL* controls. To open a modal via BMOBILE:BUTTON and BMOBILE:ICON controls apply "`modalid:<mymodalid>`" as method.

Example

```
<bmobile:button method="modal:mymodalid" ....></bmobile:button>
<bmobile:modal modalid="mymodalid"...></bmobile:modal>
```

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
titlename	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
modalid	An id string for the modal. You can use this id in buttons to open the modal. For a modalid mymodalid the methodname in a button is modal:mymodalid.	Optional	
resizable	Per default end-users can resize an open pop-up dialog. Set this property to FALSE if you don't want the end-users to resize the pop-up.	Optional	true false
draggable	Per default open pop-up dialogs are draggable within their parent container. Set this property to FALSE if you don't want the end-users to drag the pop-up.	Optional	true false
pageurl	The url of an html page.	Optional	
pageurlprop	Name of the adapter parameter that dynamically defines the url of an html page.	Optional	
modalbodystyle	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are:	Optional	

	border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:INTMODAL, BMOBILE:HELPMODAL, BMOBILE:INTMODALHEADER, BMOBILE:INTMODALBODY and BMOBILE:INTMODALFOOTER

Use these controls to implement responsive modals. The modals are designed and rendered page internal. You can have any container and control inside the BMOBILE:INTMODALBODY. No separate Adapter is generated for the internal modals. The corresponding fields and events are generated into the Adapter of the page containing the BMOBILE:INTMODAL control. This simplifies data exchange between the parent page and the modal.

To open a modal via BMOBILE:BUTTON and BMOBILE:ICON controls apply "modalid:<*mymodalid*>" as method.

Example

```
<bmobile:button method="modal:mymodalid" ....></bmobile:button>
<bmobile:modal modalid="mymodalid"...></bmobile:modal>
```

- Properties for BMOBILE:INTMODAL
- Properties for BMOBILE:HELPMODAL
- Properties for BMOBILE:INTMODALHEADER
- Properties for BMOBILE:INTMODALBODY
- Properties for BMOBILE:INTMODALFOOTER

Properties for BMOBILE:INTMODAL

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
modalid	An id string for the modal. You can use this id in buttons to open the modal. For a modalid mymodalid the methodname in a button is modal:mymodalid.	Optional	
modalsize	Per default modals have medium size. Set this if you want for instance small size modal-sm, or large size modal-lg.	Optional	modal-sm modal-lg
scrollable	If set to true, the modal will be scrollable, otherwise not.	Optional	true false
closeonclick	Per default the pop-up dialog is closed when clicking outside of the pop-up. Set this property to FALSE if you don't want the pop-up dialog to automatically close when clicking outside.	Optional	true false
closeonesc	Per default the pop-up dialog is closed when the escape key is pressed. Set this property to FALSE if you don't want the he pop-up to automatically close when escape is pressed.	Optional	true false
resizable	Per default end-users can resize an open pop-up dialog. Set this property to FALSE if you don't want the end-users to resize the pop-up.	Optional	true false
draggable	Per default open pop-up dialogs are draggable within their parent container. Set this property to FALSE if you don't want the end-users to drag the pop-up.	Optional	true false

centered	Per default a pop-up dialog is centered witin it's parent container. Set this property to FALSE if you don't want the pop-up to be centered.	Optional	true false
animatefade	Per default a fade-in animation is used when the pop-up opens. Set this property to FALSE if you want to switch off animation.	Optional	true false
styleclasses	CSS style classes separated by a blank.	Optional	
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	

Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

Properties for BMOBILE:HELPMODAL

This modal is used for showing online help. It is added automatically to pages in which `helpid` attributes have been set for controls. The modal is opened automatically on help requests.

Properties for BMOBILE:INTMODALHEADER

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter bg-warning bg-success bg-danger bg-info bg-primary bg-secondary bg-success bg-warning bg-dark bg-light
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are:	Optional	

	border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
htmlheading	The rendering of the heading: H1-H6	Optional	h1 h2 h3 h4 h5 h6
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural	Optional	

	adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.		
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

Properties for BMOBILE:INTMODALBODY

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	bg-light ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-* mt-* mb-*

			my-* border border-primary border border-secondary border border-dark border border-light
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

Properties for BMOBILE:INTMODALFOOTER

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	justify-content-center justify-content-start justify-content-end justify-content-*-center justify-content-*-start justify-content-*-end bg-warning

			bg-success bg-danger bg-info bg-primary bg-secondary bg-success bg-warning bg-dark bg-light
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:DYNMODAL

This control supports dynamic pop-ups.

As with non-responsive pages, you can also open any responsive page as a pop-up via the Natural `PROCESS PAGE MODAL` statement. You can customize the rendering and behavior of the pop-up at design-time and dynamically at runtime before the pop-up is opened. Dynamic settings will overwrite design-time settings. From version 9.2.1, each responsive page contains a ***BMOBILE:DYNMODAL*** control. This control provides the pop-up frame for all pop-ups opened from this page. You can customize this control at design-time.

Hints:

1. To have common settings for all pages, you can customize the layout templates. For details, refer to *NaturalONE documentation > Ajax Developer > Getting Started with the Layout Painter > Creating Custom Layout Templates*.
2. If you have older responsive layouts which do not contain this BMOBILE:DYNMODAL control yet, you can simply drag this control to the page from the Layout Painter Control Palette.

Design-Time Pop-Up Settings

You can set design-time properties in 2 ways:

1. Set the properties `popupfeatures`, `popupheight` and `popupwidth` in the NATPAGE control of the pop-up layout. See *NATPAGE Properties*.
2. Set the properties of the BMOBILE:DYNMODAL control in the pop-up parent.

The design-time of the page opened as pop-up will overwrite the BMOBILE:DYNMODAL settings of the pop-up parent.

Dynamic Pop-Up Settings at Runtime

To dynamically customize the pop-up settings at runtime from your Natural program, add an *NJX:XCIOPENPOPUP* control to your parent page. The data structure generated for this control is identical for responsive and non-responsive pages.

Supported Pop-Up Features

Independently whether you specify the features at design-time or at runtime, the following features are supported:

	Values	Default	Description
closeonclick	true/false	true	If true clicking outside the pop-up will close the pop-up
closeonesc	true/false	true	If true pressing the escape key will close the pop-up
resizeable	true/false	true	If true end-users can resize the opened pop-up
draggable	true/false	true	If true end-users can drag the opened pop-up
sizetocontent	true/false	true	If true the pop-up height is automatically sized to the height of the page shown as pop-up
withclosebutton	true/false	true	If true a close button will appear in the header and the footer of the pop-up frame.

In the `popupfeatures` design-time property (NATPAGE) and the Natural XCIOPENPOPUP.FEATURES field you can specify several of these features separated by ";". Example:

XCIOPENPOPUP.FEATURES:='closeonclick:false;closeonesc:false;sizetocontent:true"

Properties for BMOBILE:DYNMODAL

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
modalsize	Per default modals have medium size. Set this if you want for instance small size modal-sm, or large size modal-lg.	Optional	modal-sm modal-lg
sizetocontent	If set to TRUE the pop-up dialog is sized according to the content. If set to FALSE and no direct height/width properties are set, a fixed default size is used. Default is TRUE.	Optional	true false
closeonclick	Per default the pop-up dialog is closed when clicking outside of the pop-up. Set this property to FALSE if you don't want the pop-up dialog to automatically close when clicking outside.	Optional	true false
closeonesc	Per default the pop-up dialog is closed when the escape key is pressed. Set this property to FALSE if you don't want the he pop-up to automatically close when escape is pressed.	Optional	true false
resizable	Per default end-users can resize an open pop-up dialog. Set this property to FALSE if you don't want the end-users to resize the pop-up.	Optional	true false

draggable	Per default open pop-up dialogs are draggable within their parent container. Set this property to FALSE if you don't want the end-users to drag the pop-up.	Optional	true false
withclosebutton	Per default the opened pop-up dialog contains a close button in the footer and in the header. Set this property to FALSE if you don't want close buttons in header of footer of the pop-up.	Optional	true false
centered	Per default a pop-up dialog is centered witin it's parent container. Set this property to FALSE if you don't want the pop-up to be centered.	Optional	true false
animatefade	Per default a fade-in animation is used when the pop-up opens. Set this property to FALSE if you want to switch off animation.	Optional	true false
styleclasses	CSS style classes separated by a blank.	Optional	
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the	Optional	

	format of the string, A (code page) or U (Unicode). The default is A.		
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

5 Responsive Controls

BMOBILE:ALERT

This control is similar to the STATUSBAR control but more flexible. Use this control to show success or failure of an action.

Properties

Basic			
typeprop	Name of the adapter parameter that provides as value the type of the alert message. The type defines the style in which the alert box is rendered.	Obligatory	
shorttextprop	Name of the adapter parameter that provides as value the message text that is visible inside the alert box.	Obligatory	
longtextprop	Name of the adapter parameter that provides as value the message text that is visible inside the alert box.	Optional	
duration	The duration of the animation in milliseconds.	Optional	500 1000 2000 6000
onclosemethod	Name of the event that is sent to the adapter when the user closes the alert box.	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:BARTEXT

Supports text like headlines in containers like the BMOBILE:HORIZONTALBAR and the BMOBILE:SIDEBAR.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
styleclasses	CSS style classes separated by a blank.	Optional	lead h1 h2 h3 h4 h5 h6 font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter navbar-brand

style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natsysvar	If the control shall be bound to a Natural system variable, this attribute specifies the name of the system variable.	Optional	
njx:natsysio	If the control shall be bound to a Natural system variable with the attribute njx:natsysvar, this attribute indicates if the system variable is modifiable. The default is false.	Optional	
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcv	Name of a Natural control variable that shall be assigned to the control.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this	Optional	

	attributes to indicate a generated statusprop variable to which field the statusprop belongs.		
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:BUTTON

A responsive button.

Properties

Basic			
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
type	The type of the button like reset or submit.	Optional	button submit file reset
renderaslink	If set to "TRUE" the control is rendered as a link.	Optional	true false
renderasicon	Set to TRUE if you specified an icon font without any text. This will render the button like an icon. The margin and padding is reduced and the font-size is adapted.	Optional	true false
renderasbadge	If set to "TRUE" the control is rendered as a badge.	Optional	true false

title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
helpid	Help id that is passed to the online help management in case the user presses F1 on the control.	Optional	
Appearance			
styleclasses	CSS style classes separated by a blank.	Optional	btn-default btn-primary btn-info btn-success btn-warning btn-danger btn-sm btn-lg btn-icon-sm btn-icon-lg btn-responsive btn-outline-primary btn-outline-info btn-outline-success btn-outline-warning btn-outline-danger close mx-auto
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080	Optional	

	You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
Binding			
method	Name of the event that is sent to the adapter when the user presses the button. If no method is specified, a default event is sent. If the method starts with javascript: the corresponding javascript method is called.	Optional	
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
Miscellaneous			

testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:CHECKBOX

A responsive checkbox control.

Properties

Basic			
valueprop	Name of the adapter parameter that represents the control in the adapter.	Obligatory	
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
helpid	Help id that is passed to the online help management in case the user presses F1 on the control.	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
Appearance			
displayonly	If set to true, the FIELD will not be accessible for input. It is just used as an output field.	Optional	true false
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
styleclasses	CSS style classes separated by a blank.	Optional	form-control-sm form-control-lg

			font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
inline	Only set this property to true if you see rounding issues when zooming your page in Google Chrome or Edge Chromium browser. The property will force the browser to use a different rendering style for this itr. Use this property only if your ITR only contains the following controls: FIELD, LABEL, HDIST, ICON, BUTTON and/or XCIDATADEF and you are using pixel sizing.	Optional	true false
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false

titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
renderasswitch	If set to "TRUE" the control is rendered as a switch.	Optional	true false
Binding			
valueprop	(already explained above)		
flush	Flushing behaviour of the input control. By default an input into the control is registered within the browser client - and communicated to the server adapter object when a user e.g. presses a button. By using the FLUSH property you can change this behaviour. Setting FLUSH to "server" means that directly after changing the input a synchronization with the server adapter is triggered. As consequence you directly can react inside your adapter logic onto the change of the corresponding value. - Please be aware of that during the synchronization always all changed properties - also the ones that were changed before - are transferred to the adapter object, not only the one that triggered the synchonization. Setting FLUSH to "screen" means that the changed value is populated inside the page. You use this option if you have redundant usage of the same property inside one page and if you want to pass one changed value to all its representation directly after changing the value.	Optional	screen server
flushmethod	When the data synchronization of the control is set to FLUSH="server" then you can specify an explicit event to be sent when the user updates the content of the control. By doing so you can distinguish on the server side from which control the flush of data was triggered.	Optional	
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	

titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
statusprop	Name of the adapter parameter that dynamically passes information how the control should be rendered and how it should act. Valid parameter values at runtime: "INVISIBLE", "FOCUS", "FOCUS_NO_SELECT", "ERROR", "ERROR_NO_FOCUS". In responsive controls additionally the values "WARNING" and "SUCCESS" are supported. The value "INVISIBLE" is only supported if the control does not support an INVISIBLEPROP. Use DISPLAYPROP or VISIBLEPROP if available to render the control displayonly/invisible/cleared.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natsysvar	If the control shall be bound to a Natural system variable, this attribute specifies the name of the system variable.	Optional	
njx:natsysio	If the control shall be bound to a Natural system variable with the attribute njx:natsysvar, this attribute indicates if the system variable is modifiable. The default is false.	Optional	
njx:natcv	Name of a Natural control variable that shall be assigned to the control.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:COMBOFIX

The BMOBILE:COMBOFIX control allows specifying a defined set of values which can be selected. This set of values is defined as part of the layout definition - it cannot be controlled dynamically by the application. Use the BMOBILE:COMPOOPTION control to define the selection values. Optionally you can group the selection values by the control BMOBILE:COMBOGROUP.

Properties

Basic			
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
helpid	Help id that is passed to the online help management in case the user presses F1 on the control.	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
Appearance			
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
combomode	Rendering mode of the control. "basic" is the default rendering style usually used in forms. "modern" has a slightly rendering style. Per default "basic" is used.	Optional	basic modern
datatype	By default, the control is managing its content as string. By explicitly setting a datatype you can define that the control will format the data coming from the server: if the field has datatype "date" and the user inputs "010304" then the input will be translated into "01.03.2004" (or other representation, dependent on date format settings). Please note: the datatype "float" is named a bit misleading - it represents any decimal format number. The server side representation may be a float value, but also can be a double or a BigDecimal property.	Optional	date float int long time timestamp color xs:decimal

			xs:double xs:date xs:dateTime xs:time ---------- N n.n P n.n string n L xs:boolean xs:byte xs:short
styleclasses	CSS style classes separated by a blank.	Optional	form-control-sm form-control-lg custom-select-sm custom-select-lg
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
size	Number of rows that are displayed inside the control. If specified as "1" (default) then the control is rendered as combo box - if ">1" then the control is rendered as multi line selection.	Optional	1 2

			3 int-value
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
placeholder	The text for the HTML placeholder attribute. The placeholder attribute specifies a short hint that describes the expected value.	Optional	
Binding			
valueprop	(already explained above)		
flush	Flushing behaviour of the input control. By default an input into the control is registered within the browser client - and communicated to the server adapter object when a user e.g. presses a button. By using the FLUSH property you can change this behaviour. Setting FLUSH to "server" means that directly after changing the input a synchronization with the server adapter is triggered. As consequence you directly can react inside your adapter logic onto the change of the corresponding value. - Please be aware of that during the synchronization always all changed properties - also the ones that were changed before - are transferred to the adapter object, not only the one that triggered the synchonization. Setting FLUSH to "screen" means that the changed value is populated inside the page. You use this option if you have redundant usage of the same property inside one page and if you want to pass one changed value to all its representation directly after changing the value.	Optional	screen server
flushmethod	When the data synchronization of the control is set to FLUSH="server" then you can specify an explicit event to be sent when the user updates the content of the control.	Optional	

	By doing so you can distinguish on the server side from which control the flush of data was triggered.		
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
statusprop	Name of the adapter parameter that dynamically passes information how the control should be rendered and how it should act. Valid parameter values at runtime: "INVISIBLE", "FOCUS", "FOCUS_NO_SELECT", "ERROR", "ERROR_NO_FOCUS". In responsive controls additionally the values "WARNING" and "SUCCESS" are supported. The value "INVISIBLE" is only supported if the control does not support an INVISIBLEPROP. Use DISPLAYPROP or VISIBLEPROP if available to render the control displayonly/invisible/cleared.	Optional	
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natsysvar	If the control shall be bound to a Natural system variable, this attribute specifies the name of the system variable.	Optional	
njx:natsysio	If the control shall be bound to a Natural system variable with the attribute njx:natsysvar, this attribute indicates if the system variable is modifiable. The default is false.	Optional	
njx:natcv	Name of a Natural control variable that shall be assigned to the control.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this	Optional	

	attributes to indicate a generated statusprop variable to which field the statusprop belongs.		
Accessibility			
titleaslabel	If set to TRUE then an aria-label attribute is added with the title value. Default is FALSE	Optional	true false
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:COMBOGROUP

See `BMOBILE:COMBOFIX` for the context of use of this control.

Properties

Basic			
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Sometimes obligatory	
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	

BMOBILE:COMBOOPTION

See BMOBILE:COMBOFIX for the context of use of this control.

Properties

Basic			
value	Actual value of the option that is passed into the adapter property specified by VALUEPROP inside the COMBOFIX control.	Obligatory	
name	Name that is displayed as selectable option. Either use the NAME property to specify the text in a "hard" way or use the TEXTID property to define the text in a language dependent way.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Sometimes obligatory	
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	

BMOBILE:COMBODYN

The BMOBILE:COMBODYN control is the dynamic counterpart of the BMOBILE:COMBOFIX control. Whereas the selection options inside the BMOBILE:COMBOFIX control are defined in a fixed way inside the page definition, the BMOBILE:COMBODYN control offers the possibility to control the selection options dynamically in the application.

Adapter Interface

For a BMOBILE:COMBODYN with valueprop="selectedvalue" and validvaluesprop="theoptions" the following is generated:

```
1 SELECTEDVALUE (U) DYNAMIC
1 THEOPTIONS (1:*)
2 ID (U) DYNAMIC
2 NAME (U) DYNAMIC
```

Properties

Basic			
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
validvaluesprop	Name of the adapter parameter that provides the valid values that are available as selectable options.	Obligatory	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
Appearance			
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
combomode	Rendering mode of the control. "basic" is the default rendering style usually used in forms. "modern" has a slightly rendering style. Per default "basic" is used.	Optional	basic modern
styleclasses	CSS style classes separated by a blank.	Optional	form-control-sm form-control-lg custom-select-sm custom-select-lg
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080	Optional	

	You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
size	Number of rows that are displayed inside the control. If specified as "1" (default) then the control is rendered as combo box - if ">1" then the control is rendered as multi line selection.	Optional	1 2 3 int-value
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
helpid	Help id that is passed to the online help management in case the user presses F1 on the control.	Optional	
placeholder	The text for the HTML placeholder attribute. The placeholder attribute specifies a short hint that describes the expected value.	Optional	
Binding			
valueprop	(already explained above)		
flush	Flushing behaviour of the input control. By default an input into the control is registered within the browser client - and communicated to the server adapter object when a user e.g. presses a button. By using the FLUSH property you can change this behaviour. Setting FLUSH to "server" means that directly after changing the input a synchronization with the server adapter is triggered. As consequence you directly can react inside your adapter logic onto the change of the corresponding value. - Please be aware of that during the synchronization always all changed properties - also the ones that were changed before - are transferred to the	Optional	screen server

	adapter object, not only the one that triggered the synchonization. Setting FLUSH to "screen" means that the changed value is populated inside the page. You use this option if you have redundant usage of the same property inside one page and if you want to pass one changed value to all its representation directly after changing the value.		
flushmethod	When the data synchronization of the control is set to FLUSH="server" then you can specify an explicit event to be sent when the user updates the content of the control. By doing so you can distinguish on the server side from which control the flush of data was triggered.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
statusprop	Name of the adapter parameter that dynamically passes information how the control should be rendered and how it should act. Valid parameter values at runtime: "INVISIBLE", "FOCUS", "FOCUS_NO_SELECT", "ERROR", "ERROR_NO_FOCUS". In responsive controls additionally the values "WARNING" and "SUCCESS" are supported. The value "INVISIBLE" is only supported if the control does not support an INVISIBLEPROP. Use DISPLAYPROP or VISIBLEPROP if available to render the control displayonly/invisible/cleared.	Optional	
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natsysvar	If the control shall be bound to a Natural system variable, this attribute specifies the name of the system variable.	Optional	

njx:natsysio	If the control shall be bound to a Natural system variable with the attribute njx:natsysvar, this attribute indicates if the system variable is modifiable. The default is false.	Optional	
njx:natcv	Name of a Natural control variable that shall be assigned to the control.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	
Accessibility			
titleaslabel	If set to TRUE then an aria-label attribute is added with the title value. Default is FALSE	Optional	true false
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:DATEINPUT2

A responsive form of the DATEINPUT2 control.

Customizing Date and Calendar Formats

Default behavior for the date and calendar formats:

- **Date format in browser:**
  Per default the dates are shown in the browser according to the Natural DTFORM parameter.
- **Date format in Natural program:**
  Depending on the `datatype` property the Natural type D or an (A/U) DYNAMIC type is used. For the latter the format on the server is YYYYMMDD.
- **Calendar format:**
  The first day in week of the calendar is per default Sunday and can be customized per application and per single page at runtime by using the NJX:SESSIONPARAMS control

Some use cases require the formats to be customized independently of the central Natural format at design time and in a more flexible way. This is supported by the properties `clientformat`, `severformat`, and `firstdayinweek`. If these properties are set in a control, they will overwrite the

default behavior. For the `clientformat` and the `serverformat` property a subset of the Natural date edit masks is supported:

Character	Usage
DD	Day
ZD	Day with zero supression
MM	Month
ZM	Month with zero supression
YYYY	Year, 4 digits
YY	Year, 2 digits

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
datatype	By default, the DATEINPUT control is managing a day. By explicitly setting a datatype you can define that the control is managing a day and time. In the first use type CDATE within your adapter program - in the second case use type CTIMESTAMP.	Optional	date datetime ---------- xs:date xs:dateTime
serverformat	For alphanumeric datatypes you can choose the format of the date at design time. Examples: YYYY-MM-DD, DD.MM.YY, YY/MM/DD. A subset of the Natural date edit masks is supported. The serverforma is the format in which the data is sent to Natural.	Optional	YYYY-MM-DD DD/MM/YYYY MM-DD-YY
clientformat	You can choose the format of the date in the browser at design time. Examples: YYYY-MM-DD, DD.MM.YY, YY/MM/DD. A subset of the Natural date edit masks is supported. If set the Natural DTFORM parameter will not be used. This setting is only for the rendering in the client. It is independent of the set datatype.	Optional	YYYY-MM-DD DD/MM/YYYY MM-DD-YY
firstdayinweek	You can set the first day in week at design time. Valid values are SU - for Sunday - and MO - for	Optional	SU

	Monday. If set the value set by the NJX:SESSIONPARAMS control will not be used.		MO
helpid	Help id that is passed to the online help management in case the user presses F1 on the control.	Optional	
Binding			
valueprop	(already explained above)		
fromprop	Name of the adapter parameter that provides a lower limit for the value of the control. The value is used for client side validation of user input.	Optional	
toprop	Name of the adapter parameter that provides an upper limit for the value of the control. The value is used for client side validation of user input.	Optional	
statusprop	Name of the adapter parameter that dynamically passes information how the control should be rendered and how it should act. Valid parameter values at runtime: "INVISIBLE", "FOCUS", "FOCUS_NO_SELECT", "ERROR", "ERROR_NO_FOCUS". In responsive controls additionally the values "WARNING" and "SUCCESS" are supported. The value "INVISIBLE" is only supported if the control does not support an INVISIBLEPROP. Use DISPLAYPROP or VISIBLEPROP if available to render the control displayonly/invisible/cleared.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
flush	Flushing behaviour of the input control. By default an input into the control is registered within the browser client - and communicated to the server adapter object when a user e.g. presses a button. By using the FLUSH property you can change this behaviour. Setting FLUSH to "server" means that directly after changing the input a synchronization with the server adapter is triggered. As consequence you directly can react inside your adapter logic onto the change of the corresponding value. - Please be aware of that during the synchronization always all changed properties - also the ones that were changed before - are	Optional	screen server

	transferred to the adapter object, not only the one that triggered the synchonization. Setting FLUSH to "screen" means that the changed value is populated inside the page. You use this option if you have redundant usage of the same property inside one page and if you want to pass one changed value to all its representation directly after changing the value.		
flushmethod	When the data synchronization of the control is set to FLUSH="server" then you can specify an explicit event to be sent when the user updates the content of the control. By doing so you can distinguish on the server side from which control the flush of data was triggered.	Optional	
holidaysurlprop	Name of the Adapter paramter which provides the URL for a json file with custom holidays dynamically at runtime.	Optional	
Appearance			
displayonly	If set to true, the FIELD will not be accessible for input. It is just used as an output field.	Optional	true false
styleclasses	CSS style classes separated by a blank.	Optional	form-control-sm form-control-lg font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon.	Optional	

	Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
numberofmonths	Number of months shown for selection. Default is 1	Optional	
popuponalt40	Value help in a field is triggered either by clicking with the mouse or by pressing a certain key inside the field. The "traditional" keys are "cusrsor-down", "F7" or "F4". Sometimes you do not want to mix other "cursor-down" behaviour (e.g. scrolling in lists) with the value help behaviour. In this case switch this property to "true" - and the value help will only come up anymore when "alt-cursor-down" is pressed.	Optional	true false
popuponF4F7	Per default the calendar is opened on F4 and F7. Set this property to false if you want to use F4 or F7 for other purpose.	Optional	true false
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
popupicon	URL of image that is displayed inside the right corner of the field to indicate to the user that there is some value help available.. Any image type (.gif, .jpg, ...) that your browser does understand is valid. Use the following options to specify the URL: (A) Define the URL relative to your page. Your page is generated directly into your project's folder. Specifiying "images/xyz.gif" will point into a directory parallel to your page. Specifying "../HTMLBasedGUI/images/new.gif" will point to an image of a neighbour project.	Optional	gif jpg jpeg

	(B) Define a complete URL, like "http://www.softwareag.com/images/logo.gif".		
placeholder	The text for the HTML placeholder attribute. The placeholder attribute specifies a short hint that describes the expected value.	Optional	
holidaysurl	URL for json file, which contains custom holidays.	Optional	
holidaysstyleclass	Name of the css style class, which is used for the rendering of custom holidays. Default is DATEINPUT2Holidays	Optional	
holidaysdescriptionastooltip	Set this property to true if you want to show descriptions in the json file as tool tips.	Optional	true false
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natsysvar	If the control shall be bound to a Natural system variable, this attribute specifies the name of the system variable.	Optional	
njx:natsysio	If the control shall be bound to a Natural system variable with the attribute njx:natsysvar, this attribute indicates if the system variable is modifiable. The default is false.	Optional	
njx:natcv	Name of a Natural control variable that shall be assigned to the control.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes	Optional	

	to indicate a generated statusprop variable to which field the statusprop belongs.		
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:DROPDOWN

The control `BMOBILE:DROPDOWN` renders a dropdown button. Add the dropdown content, i.e. the content you want to show, when the button is clicked, as sub controls of the `BMOBILE:DROPDOWN`. Use the `BMOBILE:DROPDOWNITEM` to render leight-weight dropdown menus. You can also add a `BMOBILE:FORM` as dropdown content. This can be used for instance to implement a multiselect dropdown with `BMOBILE:CHECKBOX` controls. Examples are available in the *NaturalAjaxDemos*. Use the `BMOBILE:DROPDOWNHEADER` and the `BMOBILE:DROPDOWNSEPARATOR` to apply structure to your dropdown content. Use the `BMOBILE:DROPDOWNLIST` to apply drop down items dynamically from your Natural program at runtime.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Sometimes obligatory	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Sometimes obligatory	
Appearance			
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that	Optional	true false

	the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".		
styleclasses	CSS style classes separated by a blank.	Optional	ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-*
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
dropdownmode	Set this if you want to expand the menu upwards or if you want to position the menu to the right or to the left. Supported values are dropdown,	Optional	dropdown dropright

	dropup, dropleft, dropright. The default is dropdown.		dropleft dropup
buttonclasses	CSS style classes separated by a blank for rendering the dropdown button in the control.	Optional	btn-default btn-primary btn-info btn-success btn-warning btn-danger btn-sm btn-lg btn-icon-sm btn-icon-lg btn-responsive btn-outline-primary btn-outline-info btn-outline-success btn-outline-warning btn-outline-danger close mx-auto
buttonstyle	CSS style definition for rendering the dropdown button in control.	Optional	
renderasicon	Set to TRUE if you specified an icon font without any text. This will render the button like an icon. The margin and padding is reduced and the font-size is adapted.	Optional	true false
menuclasses	CSS style classes separated by a blank for rendering the dropdown menu.	Optional	dropdown-menu-right dropdown-menu-sm-right dropdown-menu-md-right dropdown-menu-lg-right

			dropdown-menu-left dropdown-menu-sm-left dropdown-menu-md-left dropdown-menu-lg-left
Binding			
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:DROPDOWNLIST

See `BMOBILE:DROPDOWN` (above) for the context of use of this control.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
styleclasses	CSS style classes separated by a blank.	Optional	bg-light ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-*

			mt-* mb-* my-* border border-primary border border-secondary border border-dark border border-light
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
withicon	If set to true, an additional ICON field is generated in the Natural data structure. In this field the html of an icon font can be provided. The icon is rendered left of the item text.	Optional	true false
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once	Optional	

	defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.		
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	

BMOBILE:DROPDOWNHEADER

See `BMOBILE:DROPDOWN` for the context of use of this control.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Sometimes obligatory	
Appearance			
styleclasses	CSS style classes separated by a blank.	Optional	d-none d-md-block d-none d-lg-block text-uppercase font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter text-center

			text-right text-left text-truncate
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
Binding			
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	

BMOBILE:DROPDOWNITEM

See `BMOBILE:DROPDOWN` for the context of use of this control.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Sometimes obligatory	
icon	Html of an icon font. If specified then the icon is rendered left of the item text.	Optional	
helpid	Help id that is passed to the online help management in case the user presses F1 on the control.	Optional	
Appearance			
styleclasses	CSS style classes separated by a blank.	Optional	font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter text-lowercase text-uppercase text-danger text-info text-primary text-secondary text-success text-warning
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080	Optional	

	You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
Binding			
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
iconprop	Name of the adapter parameter that dynamically passes the html of an icon font. If specified the icon is rendered left of the item text.	Optional	
inactiveprop	Name of the adapter parameter that dynamically passes information if the item should be inactive.	Optional	
method	Name of the event that is sent to the adapter when clicking on the control.	Optional	

BMOBILE:DROPDOWNSEPARATOR

See `BMOBILE:DROPDOWN` for the context of use of this control.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
Appearance			
styleclasses	CSS style classes separated by a blank.	Optional	mt-1 mt-2 mt-3 mt-4

			mt-5 mt-sm-* mt-md-* mt-lg-* mt-xl-*
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	

BMOBILE:FFIELD

A responsive form of the `FIELD` control.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
password	If set to "true", each entered character is displayed as a '*'.	Optional	true false
helpid	Help id that is passed to the online help management in case the user presses F1 on the control.	Optional	
Appearance			

title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
styleclasses	CSS style classes separated by a blank.	Optional	form-control-sm form-control-lg font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your	Optional	

	browser and select the "View source" or "View frame's source" function.		
placeholder	The text for the HTML placeholder attribute. The placeholder attribute specifies a short hint that describes the expected value.	Optional	
maxlength	Maximum number of characters that a user may enter. This property is not depending on the LENGTH property - please do not get confused by the similar naming. MAXLENGTH has nothing to do with the optical sizing of the control but only with the number of characters you may input.	Optional	5 10 15 20 int-value
autotab	If set to true, an automatic tab is executed for fields with a specified MAXLENGTH when the maxlength value is reached. For fields without a MAXLENGTH specified it has no effect. Default is true.	Optional	true false
uppercase	If "true" then all input is automatically transferred to upper case characters.	Optional	true false
shownull	If set to FALSE numeric field are shown as empty if the value is 0 or 0.0	Optional	true false
formautocomplete	This property only has effects if the withformtag property in the PAGEBODY is activated. In this case you can switch on and off the browser's autocomplete behavior for HTML form tags in single FIELD controls. Default is TRUE.	Optional	true false
email	If set to true E-Mail validation is done by the browser.	Optional	true false
displayonly	If set to true, the FIELD will not be accessible for input. It is just used as an output field.	Optional	true false
invisiblemode	If the visibility of the control is determined dynamically by an adapter property then there are two rendering modes if the visibility is "false": (1) "invisible": the control is not visible.	Optional	invisible disabled cleared

	(2)"cleared": the control is not visible but it still occupies space.		
datatype	By default, the FIELD control is managing its content as string. By explicitly setting a datatype you can define that the control... ...will check the user input if it reflects the datatype. E.g. if the user inputs "abc" into a field with datatype "int" then a corresponding error message will popup when the user leaves the field. ...will format the data coming from the server or coming form the user input: if the field has datatype "date" and the user inputs "010304" then the input will be translated into "01.03.2004" (or other representation, dependent on date format settings). In addition valeu popups are offered for the user automatically for some datatypes: e.g. when specifying datatype "date" the automatically the field provides a calendar input popup. Please note: the datatype "float" is named a bit misleading - it represents any decimal format number. The server side representation may be a float value, but also can be a double or a BigDecimal property.	Optional	date float int long time timestamp color xs:decimal xs:double xs:date xs:dateTime xs:time ---------- N n.n P n.n string n L xs:boolean xs:byte xs:short
editmask	NATPAGE only: A subset of the Natural edit masks is supported depending on the data type.	Optional	
required	If set to true a value is required.	Optional	true false
validation	The HTML validation attribute for input controls.	Optional	[a-zA-Z0-9_.-] {1,}\ \@[a-zA-Z0-9_.-]

			{1,}\\.\\w{2,}\\d{5} [0-9)(-/+]+
validationmessage	The message which is shown when the validation is not successful.	Optional	
validationmessagetextid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
withtogglepassword	If set to TRUE a small toggle button is shown which allows to show the password in clear text and hide it again.	Optional	true false
Binding			
hotkeys	Semicolon separated list of hot keys. A hotkey consists of a list of keys and a method name. Separate the keys by "-" and the method name again with a semicolon Example: ctrl-alt-65;onCtrlAltA;13;onEnter ...defines two hot keys. Method onCtrlAltA is invoked if the user presses Ctrl-Alt-A. Method "onEnter" is called if the user presses the ENTER key. Use the popup help within the Layout Painter to input hot keys.	Optional	
alwaysflush	If set to TRUE then a specified server flushmethod is also called in case the value has not changed. The default is FALSE, meaning that a server flushmethod is only called for a changed value.	Optional	true false
flush	Flushing behaviour of the input control. By default an input into the control is registered within the browser client - and communicated to the server adapter object when a user e.g. presses a button. By using the FLUSH property you can change this behaviour.	Optional	screen server

	Setting FLUSH to "server" means that directly after changing the input a synchronization with the server adapter is triggered. As consequence you directly can react inside your adapter logic onto the change of the corresponding value. - Please be aware of that during the synchronization always all changed properties - also the ones that were changed before - are transferred to the adapter object, not only the one that triggered the synchonization. Setting FLUSH to "screen" means that the changed value is populated inside the page. You use this option if you have redundant usage of the same property inside one page and if you want to pass one changed value to all its representation directly after changing the value.		
flushmethod	When the data synchronization of the control is set to FLUSH="server" then you can specify an explicit event to be sent when the user updates the content of the control. By doing so you can distinguish on the server side from which control the flush of data was triggered.	Optional	
flushindexprop	Name of a changeindexprop property of another control. On flush='screen" the value of the specified property is automatically increased so that the controls is automatically refreshed. This property is ignored for flush="server"	Optional	
contextmenu	If set to TRUE for a field myfield, method/event reactOnContextMenuMyfield will be called/triggered on right mouse click. In this method/event you can set a contextmenu correspondingly. Please use the attribute CONTEXTMENUMETHOD in case you would like to use a different method/eventname. In case a valid value is specified for the CONTEXTMENUMETHOD attribute, the value for the CONTEXTMENU attribute is ignored. Default value is FALSE.	Optional	true false

contextmenumethod	Name of the event that is sent to the adapter when the user presses the right mouse button in an empty area.	Optional	
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
statusprop	Name of the adapter parameter that dynamically passes information how the control should be rendered and how it should act. Valid parameter values at runtime: "INVISIBLE", "FOCUS", "FOCUS_NO_SELECT", "ERROR", "ERROR_NO_FOCUS". In responsive controls additionally the values "WARNING" and "SUCCESS" are supported. The value "INVISIBLE" is only supported if the control does not support an INVISIBLEPROP. Use DISPLAYPROP or VISIBLEPROP if available to render the control displayonly/invisible/cleared.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
Add-ons			
autocompleteref	Adds autocomplete functionality to the FIELD control. As value set the id of the AUTOCOMPLETE control.	Optional	
autocompletedisplayname	Name of the value to be displayed in an additional control.	Optional	
autocompletedisplayref	Sets a reference to an additional control to display additional informaton on selection. As value set the valueprop of the control in which you would like to display the information.	Optional	
autocompleteresultsref	Sets a reference to an additional control to display the total number of results. Use this when the number of matching items can be very high and you limited the number of displayed items in the dropdown for performance reasons. As value set the valueprop of the control in which you would like to display the total number.	Optional	

autocompletewithdropdown	If set to "TRUE" a dropdown button/icon will be appended to the field. When it is clicked, all items are shown.	Optional	true false
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natsysvar	If the control shall be bound to a Natural system variable, this attribute specifies the name of the system variable.	Optional	
njx:natsysio	If the control shall be bound to a Natural system variable with the attribute njx:natsysvar, this attribute indicates if the system variable is modifiable. The default is false.	Optional	
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcv	Name of a Natural control variable that shall be assigned to the control.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated	Optional	

	statusprop variable to which field the statusprop belongs.		
Accessibility			
titleaslabel	If set to TRUE then an aria-label attribute is added with the title value. Default is FALSE	Optional	true false
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:FLABEL

A responsive form of the LABEL control.

Properties

Basic			
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Sometimes obligatory	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Sometimes obligatory	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
Appearance			
invisiblemode	If the visibility of the control is determined dynamically by an adapter property then there are two rendering modes if the visibility is "false": (1) "invisible": the control is not visible. (2)"cleared": the control is not visible but it still occupies space.	Optional	invisible cleared
title	Text that is shown as tooltip for the control.	Optional	

	Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.		
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
styleclasses	CSS style classes separated by a blank.	Optional	col-* col-sm-* col-md-* col-lg-* col-xl-* form-control-sm form-control-lg font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter text-info sr-only text-primary text-secondary text-success text-warning
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are:	Optional	

	border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
Binding			
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:FTEXTAREA

A responsive form of the TEXTAREA control.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
rows	Height of control specified by number of rows. Either define the height by the HEIGHT property or by the ROWS property. Do not specify both! When specifying the height by ROWS then be aware of that the height depends from the font size used inside the control (that is defined in the styles sheet definition).	Optional	1 2 3 int-value
cols	Width of control specified by number of characters. Either define the width by the WIDTH property or by the COLS property. Do not specify both! When specifying the width by COLS then be aware of that the width depends from the font size used inside the control (that is defined in the styles sheet definition).	Optional	1 2 3 int-value
styleclasses	CSS style classes separated by a blank.	Optional	col-* col-sm-* col-md-* col-lg-* col-xl-* form-control-sm form-control-lg font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter text-info sr-only text-primary text-secondary

			text-success text-warning
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
placeholder	The text for the HTML placeholder attribute. The placeholder attribute specifies a short hint that describes the expected value.	Optional	
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
datatype	By default, the FIELD control is managing its content as string. By explicitly setting a datatype you can define that the control... ...will check the user input if it reflects the datatype. E.g. if the user inputs "abc" into a field with datatype "int" then a corresponding error message will popup when the user leaves the field. ...will format the data coming from the server or coming form the user input: if the field has datatype "date" and the user inputs "010304" then the input will be translated into "01.03.2004" (or other representation, dependent on date format settings). In addition valeu popups are offered for the user automatically for some datatypes: e.g. when specifying datatype "date" the automatically the field provides a calendar input popup. Please note: the datatype "float" is named a bit misleading - it represents any decimal format number. The server	Optional	string n xs:string

	side representation may be a float value, but also can be a double or a BigDecimal property.		
flush	Flushing behaviour of the input control. By default an input into the control is registered within the browser client - and communicated to the server adapter object when a user e.g. presses a button. By using the FLUSH property you can change this behaviour. Setting FLUSH to "server" means that directly after changing the input a synchronization with the server adapter is triggered. As consequence you directly can react inside your adapter logic onto the change of the corresponding value. - Please be aware of that during the synchronization always all changed properties - also the ones that were changed before - are transferred to the adapter object, not only the one that triggered the synchonization. Setting FLUSH to "screen" means that the changed value is populated inside the page. You use this option if you have redundant usage of the same property inside one page and if you want to pass one changed value to all its representation directly after changing the value.	Optional	screen server
flushmethod	When the data synchronization of the control is set to FLUSH="server" then you can specify an explicit event to be sent when the user updates the content of the control. By doing so you can distinguish on the server side from which control the flush of data was triggered.	Optional	
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	

titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
helpid	Help id that is passed to the online help management in case the user presses F1 on the control.	Optional	
maxlength	Maximum number of characters that a user may enter. This property is not depending on the LENGTH property - please do not get confused by the similar naming. MAXLENGTH has nothing to do with the optical sizing of the control but only with the number of characters you may input.	Optional	5 10 15 20 int-value
displayonly	If set to true, the FIELD will not be accessible for input. It is just used as an output field.	Optional	true false
hotkeys	Semicolon separated list of hot keys. A hotkey consists of a list of keys and a method name. Separate the keys by "-" and the method name again with a semicolon Example: ctrl-alt-65;onCtrlAltA;13;onEnter ...defines two hot keys. Method onCtrlAltA is invoked if the user presses Ctrl-Alt-A. Method "onEnter" is called if the user presses the ENTER key. Use the popup help within the Layout Painter to input hot keys.	Optional	
required	If set to true a value is required.	Optional	true false
wrap	Specifies the line wrapping inside the control. By default a line that exceeds the width of the control is broken automatically.	Optional	

	You may define this property to not wrap at all ("off") - in this case the text control offers horizontal scroll bars to scroll the text. There are two styles of wrapping "soft" and "hard". The difference between "soft" and "hard" is the way the text is - if changed by the user - passed back to the adapter property: when specifying "soft" then line breaks which are caused by wrapping are not sent to the server, when specifying "hard" then line breaks caused by wrapping are sent as carriage return/ line feed. - Be carefule when specifying "hard" as consequence! The wrap attribute is not part of the HTML standard. It depends on the browser if wrap=hard/soft are supported.		
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natsysvar	If the control shall be bound to a Natural system variable, this attribute specifies the name of the system variable.	Optional	
njx:natsysio	If the control shall be bound to a Natural system variable with the attribute njx:natsysvar, this attribute indicates if the system variable is modifiable. The default is false.	Optional	
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcv	Name of a Natural control variable that shall be assigned to the control.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	

Accessibility			
titleaslabel	If set to TRUE then an aria-label attribute is added with the title value. Default is FALSE	Optional	true false
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:FTEXTOUT

Supports plain read-only text in forms.

Properties

Basic			
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
datatype	By default, the FIELD control is managing its content as string. By explicitly setting a datatype you can define that the control... ...will check the user input if it reflects the datatype. E.g. if the user inputs "abc" into a field with datatype "int" then a corresponding error message will popup when the user leaves the field. ...will format the data coming from the server or coming form the user input: if the field has datatype "date" and the user inputs "010304" then the input will be translated into "01.03.2004" (or other representation, dependent on date format settings). In addition valeu popups are offered for the user automatically for some datatypes: e.g. when specifying datatype "date" the automatically the field provides a calendar input popup. Please note: the datatype "float" is named a bit misleading - it represents any decimal format number. The server side representation may be a float value, but also can be a double or a BigDecimal property.	Optional	date float int long time timestamp color xs:decimal xs:double xs:date xs:dateTime xs:time ---------- N n.n P n.n

			string n L xs:boolean xs:byte xs:short
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible cleared
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
styleclasses	CSS style classes separated by a blank.	Optional	col-* col-sm-* col-md-* col-lg-*

			col-xl-* form-control-sm form-control-lg font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter text-info sr-only text-primary text-secondary text-success text-warning
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in	Optional	

	this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.		
njx:natsysvar	If the control shall be bound to a Natural system variable, this attribute specifies the name of the system variable.	Optional	
njx:natsysio	If the control shall be bound to a Natural system variable with the attribute njx:natsysvar, this attribute indicates if the system variable is modifiable. The default is false.	Optional	
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcv	Name of a Natural control variable that shall be assigned to the control.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	
Accessibility			
titleaslabel	If set to TRUE then an aria-label attribute is added with the title value. Default is FALSE	Optional	true false
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:GOOGLEMAP

A responsive Google map control.

Properties

Basic			
apikeypagename	Name of the Maps API Key page. Example: mygooglemapsapikey.html. Keep this file within the project directory (directory within the CIS HTML pages are kept). The GOOGLEMAP-control expects this file within certain Javascript includes and content. Have look into chapter "Google Map - Before You Start" within the Developers Guide	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
Appearance			
mapmode	Lets you toggle between map types (e.g., Map and Satellite)	Optional	1 2
controltype	Lets you toggle between a small and large pan/zoom control	Optional	small large

BMOBILE:ICON

A responsive form of the `ICON` control.

Properties

Basic			
iconurl	URL of image that is displayed inside the control. Any image type (.gif, .jpg, ...) that your browser does understand is valid. Use the following options to specify the URL: (A) Define the URL relative to your page. Your page is generated directly into your project's folder. Specifiying "images/xyz.gif" will point into a directory parallel to your page. Specifying "../HTMLBasedGUI/images/new.gif" will point to an image of a neighbour project. (B) Define a complete URL, like "http://www.softwareag.com/images/logo.gif".	Optional	
iconurlprop	Name of adapter parameter that provides as value the URL of the image that is shown inside the control.	Optional	
method	Name of the event that is sent to the adapter when clicking on the control.	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	

titletextid	Text ID that is passed to the multi lanaguage management - representing the tooltip text that is used for the control.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
popovertextid	If specified a popover with the corresponding multilanguage text will be opened when the icon is activated.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	baricon baricon-svg icon-svg-primary
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
helpid	Help id that is passed to the online help management in case the user presses F1 on the control.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This	Optional	

	mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.		
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:IMAGEOUT

A responsive image control.

Properties

Basic			
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false

width	Width of the control. There are three possibilities to define the width: (A) You do not define a width at all. In this case the width of the control will either be a default width or - in case of container controls - it will follow the width that is occupied by its content. (B) Pixel sizing: just input a number value (e.g. "100"). (C) Percentage sizing: input a percantage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a width this control can reference. If you specify this control to have a width of 50% then the parent element (e.g. an ITR-row) may itself define a width of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.	Optional	100 120 140 160 180 200 50% 100%
height	Height of the control. There are three possibilities to define the height: (A) You do not define a height at all. As consequence the control will be rendered with its default height. If the control is a container control (containing) other controls then the height of the control will follow the height of its content. (B) Pixel sizing: just input a number value (e.g. "20"). (C) Percentage sizing: input a percentage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a height this control can reference. If you specify this control to have a height of 50% then the parent element (e.g. an ITR-row) may itself define a height of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.	Optional	100 150 200 250 300 250 400 50% 100%
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	img-circle img-rounded img-thumbnail
style	CSS style definition that is directly passed into this control.	Optional	

	With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:RADIOBUTTON

A responsive radio button control.

Properties

Basic			
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
value	Value that represents this instance of the RADIOBUTTON control. The value is set into the adapter property that is defined by the VALUEPROP property when the user clicks onto the control. - Vice versa: the control is switched to "marked" when the adapter property holds the value defined.	Optional	
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
helpid	Help id that is passed to the online help management in case the user presses F1 on the control.	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
Appearance			
styleclasses	CSS style classes separated by a blank.	Optional	form-control-sm form-control-lg font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter

style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
inline	Only set this property to true if you see rounding issues when zooming your page in Google Chrome or Edge Chromium browser. The property will force the browser to use a different rendering style for this itr. Use this property only if your ITR only contains the following controls: FIELD, LABEL, HDIST, ICON, BUTTON and/or XCIDATADEF and you are using pixel sizing.	Optional	true false
displayonly	If set to true, the FIELD will not be accessible for input. It is just used as an output field.	Optional	true false
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
datatype	By default, the control is managing its content as string. By explicitly setting a datatype you can define that the control will format the data coming from the server: if the field has datatype "date" and the user inputs "010304"	Optional	xs:string ---------- N n.n

	then the input will be translated into "01.03.2004" (or other representation, dependent on date format settings). Please note: the datatype "float" is named a bit misleading - it represents any decimal format number. The server side representation may be a float value, but also can be a double or a BigDecimal property.		P n.n string n
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
Binding			
valueprop	(already explained above)		
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
statusprop	Name of the adapter parameter that dynamically passes information how the control should be rendered and how it should act. Valid parameter values at runtime: "INVISIBLE", "FOCUS", "FOCUS_NO_SELECT", "ERROR", "ERROR_NO_FOCUS". In responsive controls additionally the values "WARNING" and "SUCCESS" are supported. The value "INVISIBLE" is only supported if the control does not support an INVISIBLEPROP. Use DISPLAYPROP or VISIBLEPROP if available to render the control displayonly/invisible/cleared.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
flush	Flushing behaviour of the input control.	Optional	screen server

	By default an input into the control is registered within the browser client - and communicated to the server adapter object when a user e.g. presses a button. By using the FLUSH property you can change this behaviour. Setting FLUSH to "server" means that directly after changing the input a synchronization with the server adapter is triggered. As consequence you directly can react inside your adapter logic onto the change of the corresponding value. - Please be aware of that during the synchronization always all changed properties - also the ones that were changed before - are transferred to the adapter object, not only the one that triggered the synchonization. Setting FLUSH to "screen" means that the changed value is populated inside the page. You use this option if you have redundant usage of the same property inside one page and if you want to pass one changed value to all its representation directly after changing the value.		
flushmethod	When the data synchronization of the control is set to FLUSH="server" then you can specify an explicit event to be sent when the user updates the content of the control. By doing so you can distinguish on the server side from which control the flush of data was triggered.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	
Miscellaneous			

testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:TOGGLER

A toggle button you can use in bars to toggle the visibility of containers like the BMOBILE:SIDEBAR.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
toggleref	The value of the toggleid property of the control for which visibility should be toggled.	Optional	
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	

styleclasses	CSS style classes separated by a blank.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

6 Responsive Containers

BMOBILE:CARD

- BMOBILE:CARDBODY
- BMOBILE:CARDFOOTER
- BMOBILE:CARDHEADER

A card is a box with an optional header, an optional footer, an optional image, and a body with textual content, a list group, or both.

You can arrange multiple cards in a **BMOBILE:CARDCONTAINER**. You can also add them to other controls into a **BMOBILE:ROW**.

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
imageurl	URL of image that is displayed inside the control. Any image type (.gif, .jpg, ...) that your browser does understand is valid. Use the following options to specify the URL: (A) Define the URL relative to your page. Your page is generated directly into your project's folder. Specifiying "images/xyz.gif" will point into a directory parallel to your page. Specifying "../HTMLBasedGUI/images/new.gif" will point to an image of a neighbour project. (B) Define a complete URL, like "http://www.softwareag.com/images/logo.gif".	Optional	
imageurlprop	Name of adapter parameter that provides as value the URL of the image that is shown inside the control.	Optional	
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
oncontextmenumethod	Name of the event that is sent to the adapter when the user presses the right mouse button in an empty area of the client tree.	Optional	
Appearance			
invisiblemode	If the visibility of the control is determined dynamically by an adapter property then there are two rendering modes if the visibility is "false":	Optional	invisible disabled

	(1) "invisible": the control is not visible. (2)"cleared": the control is not visible but it still occupies space.		cleared
styleclasses	CSS style classes separated by a blank.	Optional	bg-light ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-* mt-* mb-* my-* border border-primary border border-secondary border border-dark border border-light
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon.	Optional	

	Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
imagestyleclasses	CSS style classes separated by a blank.	Optional	baricon-svg icon-svg-primary w-* p-* mx-auto
imagestyle	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
imageposition	The position of the image within it's container. Valid values are "top" and "bottom".	Optional	top bottom left right
imageoverlay	If set to TRUE the image will be used as card background and overlayed with the card body.	Optional	true false
tabindex	Index that defines the tab order of the control. Controls are selected in increasing index order and in source order to resolve duplicates.	Optional	-1 0 1

			2 5 10 32767

BMOBILE:CARDBODY

A cardbody renders contextual content in a card.

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
namestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
subname	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
subnamestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
text	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
textstraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that	Optional	true false

	the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".		
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
subnameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
textprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
Appearance			
styleclasses	CSS style classes separated by a blank.	Optional	bg-light ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-* mt-* mb-* my-* border border-primary border border-secondary border border-dark border border-light
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are:	Optional	

	border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
namestyleclasses	CSS style classes separated by a blank.	Optional	font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter text-lowercase text-uppercase text-danger text-info text-primary text-secondary text-success text-warning
namestyle	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon.	Optional	

	Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
namehtmlheading	The rendering of the heading: H1-H6	Optional	h1 h2 h3 h4 h5 h6
subnamestyleclasses	CSS style classes separated by a blank.	Optional	font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter text-lowercase text-uppercase text-danger text-info text-primary text-secondary text-success text-warning
subnamestyle	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080	Optional	

	You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
subnamehtmlheading	The rendering of the heading: H1-H6	Optional	h1 h2 h3 h4 h5 h6
textstyleclasses	CSS style classes separated by a blank.	Optional	font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter text-lowercase text-uppercase text-danger text-info text-primary text-secondary text-success text-warning
textstyle	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are:	Optional	

	border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		

BMOBILE:CARDFOOTER

An optional footer for cards.

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
Appearance			
styleclasses	CSS style classes separated by a blank.	Optional	d-none d-md-block d-none d-lg-block text-uppercase font-italic font-weight-bold

			font-weight-bolder font-weight-light font-weight-lighter text-center text-right text-left text-truncate
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	

BMOBILE:CARDHEADER

An optional header for cards.

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	

straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
Appearance			
styleclasses	CSS style classes separated by a blank.	Optional	d-none d-md-block d-none d-lg-block text-uppercase font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter text-center text-right text-left text-truncate
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	

BMOBILE:CARDCONTAINER

A BMOBILE:CARDCONTAINER contains several cards. The following options are supported to arrange the cards in the container:

Card Decks

The cards are rendered as a grid of cards with equal height and width. On small devices the cards are arranged vertically. On medium and large devices, cards are arranged horizontally in one line.

Card Groups

The arrangement of the cards is the same as for card decks. The only difference is that there are no gaps between the cards.

Card Columns

You can create masonry-like grid of cards. The cards can be of different sizes. Simply add several cards to the container, and they will be arranged – including line breaks – automatically depending on the number of cards and the device.

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
containertype	The cards will be arranged according to the container type. Supported values are: deck, group and columns.	Optional	deck group columns
Appearance			
styleclasses	CSS style classes separated by a blank.	Optional	bg-light

			ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-* mt-* mb-* my-* border border-primary border border-secondary border border-dark border border-light
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	

BMOBILE:COL

BMOBILE: COL supports the responsive **grid system of Bootstrap**.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	col-auto col col-* col-sm-* col-md-* col-lg-* col-xl-* offset-* offset-sm-* offset-md-* offset-lg-* offset-xl-* mx-auto btn-group

			btn-group-vertical
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	

BMOBILE:PANEL

BMOBILE:PANEL supports the responsive **grid system of Bootstrap**.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
foldable	The "folding"-function that is available by clicking on the title of the area can be switched off ("false"). "True" is the default.	Optional	true false
foldedprop	Name of adapter parameter which controls whether the content of the ROWAREA is folded (true) or displayed (false). By using this property you can dynamically control the "folded"-status of the control at runtime.	Optional	
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	

tabindex	Index that defines the tab order of the control. Controls are selected in increasing index order and in source order to resolve duplicates.	Optional	-1 0 1 2 5 10 32767
oncontextmenumethod	Name of the event that is sent to the adapter when the user presses the right mouse button in an empty area of the client tree.	Optional	
Appearance			
invisiblemode	If the visibility of the control is determined dynamically by an adapter property then there are two rendering modes if the visibility is "false": (1) "invisible": the control is not visible. (2)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
styleclasses	CSS style classes separated by a blank.	Optional	panel-warning panel-success panel-danger panel-info ml-* mr-* mx-*
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080	Optional	

	You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
tabindex	(already explained above)		

BMOBILE:ROW

BMOBILE:ROW supports the responsive **grid system of Bootstrap**.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	no-gutters row-cols-* row-cols-sm-* row-cols-md-* row-cols-lg-* row-cols-xl-*
style	CSS style definition that is directly passed into this control.	Optional	

	With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		

BMOBILE:CONTAINER

A responsive container into which you add your controls, grids and other containers. You usually have exactly one BMOBILE:CONTAINER per page.

Properties

Basic			
takefullwidth	If set to "true" then the control takes all available horizontal width as its width. If set to "false" then the control does not have a predefined width but grows with its content.	Optional	true false
takefullheight	Indicates if the content of the control's area gets the full available height. If you use percentage sizing inside the control's area then this property must be switched to 'true'. If you use no explicit vertical sizing at all - or you use vertical pixel sizing for your controls - the property must be switched to 'false'. Background information: container control's internally open up a table in which you place rows (ITR/TR) which then hold controls (e.g. LABEL/FIELD). The table that is opened up normally has no explicit height and grows with its content as consequence. By specifying "takefullheight=true" the table itself is sized to fill the maximum height of the available area.	Optional	true false
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	bg-light

			ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-* mt-* mb-* my-* border border-primary border border-secondary border border-dark border border-light
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
Accessibility			
role	If set a role attribute is added to the html for screen readers. Example values are: banner, main, navigation.	Optional	main banner contentinfo

			complementary navigation

BMOBILE:FORM, BMOBILE:FORMINLINE

These forms are more light-weight and flexible than `BMOBILE:FORMAREA`. Use the `BMOBILE:FORMINLINE` to add forms to bars like the `BMOBILE:HORIZONTALBAR` and the `BMOBILE:SIDEBAR`.

These forms are not supported for Bootstrap 3.

Properties for BMOBILE:FORM

Basic			
displayonly	If set to true, the FIELD will not be accessible for input. It is just used as an output field.	Optional	true false
invisiblemode	If the visibility of the control is determined dynamically by an adapter property then there are two rendering modes if the visibility is "false": (1) "invisible": the control is not visible. (2)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	d-none d-md-block d-none d-lg-block ml-* mr-* mx-*

style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

Properties for BMOBILE:FORMINLINE

Basic			
displayonly	If set to true, the FIELD will not be accessible for input. It is just used as an output field.	Optional	true false
invisiblemode	If the visibility of the control is determined dynamically by an adapter property then there are two rendering modes if the visibility is "false": (1) "invisible": the control is not visible. (2)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	d-none d-md-block d-none d-lg-block ml-*

			mr-* mx-*
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:FORMAREA

The surrounding container for forms. Within a BMOBILE:FORMAREA you can have several **BMOBILE:FORMGROUP** containers.

Properties

Basic			
legend	A caption shown for the formarea.	Optional	
legendprop	The name of the adapter parameter which dynamically defines the caption of the formarea at runtime.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	

invisiblemode	If the visibility of the control is determined dynamically by an adapter property then there are two rendering modes if the visibility is "false": (1) "invisible": the control is not visible. (2)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
displayonly	If set to true, the FIELD will not be accessible for input. It is just used as an output field.	Optional	true false
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	bg-light ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-* mt-* mb-* my-* border border-primary border border-secondary border border-dark border border-light
style	CSS style definition that is directly passed into this control.	Optional	

	With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:FORMGROUP

Use this container to group several **BMOBILE:FLABEL** and input controls like **BMOBILE:FFIELD** within a form.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	d-none d-md-block d-none d-lg-block ml-* mr-* mx-*
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are:	Optional	

	border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
invisiblemode	If the visibility of the control is determined dynamically by an adapter property then there are two rendering modes if the visibility is "false": (1) "invisible": the control is not visible. (2)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
renderasrow	If set to TRUE FLABEL and corresponding FFIELD will be rendered horizontally in a row. If set to false they will be stacked vertically. Only supported for Bootstrap 4 and higher. Default is TRUE.	Optional	true false
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
Accessibility			
setinputlabel	If set to TRUE then the first label control in the form group is used as label for the following input controls. This association is understood by creenreaders. Default is FALSE.	Optional	true false
namesronly	If set to TRUE then the name of the form group is only made accessible to screenreaders. It is not visually rendered. Default is FALSE.	Optional	true false
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:LISTGROUP

A list group displays a number of items as a vertical list. Use LISTGROUP to selectively display a certain number of items.

No scrollbar or pagination is applied. For huge item numbers, consider using grid controls instead.

You can create listgroups with simple readonly items or listgroups with items that can be activated, and that can trigger events on the server and on the client.

Basic			
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
changeindexprop	Name of the adapter parameter providing a value which indicates whether the control should be refreshed with new data on the client or not. A different value than the previous triggers the refresh. It does not need to be a higher value.	Optional	
Binding			
disabledprop	Name of the adapter parameter that dynamically defines if the control is disabled or enabled at runtime. If the value at runtime is set to TRUE the control is visible but disabled. In COLTABAREA controls this property is only supported for IE.	Optional	
methodprop	Name of the adapter parameter that dynamically defines the name of the event that is sent to the adapter when the user selects the item.	Optional	
textprop	Name of the adapter parameter which dynamically provides the text for the marker at runtime.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
itemstyleclassesprop	Name of the adapter parameter that dynamically provides CSS style classes	Optional	

	separated by a blank. These classes are applied to the item.		
badgestyleclassesprop	Name of the adapter parameter that dynamically provides CSS style classes separated by a blank. These classes are applied to badge of the item.	Optional	
iconstyleclassesprop	Name of the adapter parameter that dynamically provides CSS style classes separated by a blank. These classes are applied to the icon of the item.	Optional	
textstyleclassesprop	Name of the adapter parameter that dynamically provides CSS style classes separated by a blank. These classes are applied to the text of the item.	Optional	
Appearance			
itemstyle	CSS style definition, which is applied to all items in the list Examples: border: 1px solid #FF0000 background-color: #808080 You can combine style settings by separating them with a semicolon.	Optional	
itemstyleclasses	CSS style classes separated by a blank. These classes are applied to all items in the list.	Optional	list-group-item-primary list-group-item-secondary list-group-item-success list-group-item-danger list-group-item-warning list-group-item-info list-group-item-light list-group-item-dark
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are:	Optional	

	border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
styleclasses	CSS style classes separated by a blank.	Optional	list-group-flush
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
badgeprop	Name of the adapter parameter which dynamically provides the text of the badge for an item at runtime.	Optional	
badgeposition	Position where a badge is rendered. Valid values are right and left. Default is right.	Optional	right left
iconurlprop	Name of the adapter parameter which dynamically provides the url of the icon for an item at runtime.	Optional	
iconposition	Position where an icon is rendered. Valid values are right and left. Default is left.	Optional	right left

badgestyleclasses	CSS style classes separated by a blank. These classes are applied to the badge of the items.	Optional	
iconstyleclasses	CSS style classes separated by a blank. These classes are applied to the icon of the items.	Optional	
iconstyle	CSS style definition that is directly passed into this control. It is applied to the icon of the items.	Optional	
textstyleclasses	CSS style classes separated by a blank. These classes are applied to the text of the items	Optional	
textstyle	CSS style definition that is directly passed into this control. It is applied to the text of the items.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:SIDEBARCONTAINER, BMOBILE:SIDEBAR, BMOBILE:SIDEBARGROUP, BMOBILE:HORIZONTALBAR, BMOBILE:CONTENT

These containers support frequently used patterns for modern responsive pages. Additional controls like `BMOBILE:TOGGLER`, `BMOBILE:SIDEBARGROUP`, `BMOBILE:BARTEXT` support corresponding functionality for flexible rendering of bars and arbitrary menus and controls inside the bars. You can put all kinds of containers like rows, panels or complete pages into the `BMOBILE:CONTENT` container.

When dragging the `BMOBILE:SIDEBARCONTAINER` control from the palette to your page layout, several controls are arranged as sub-controls under the `BMOBILE:SIDEBARCONTAINER`. You can arrange the controls differently, replace, add, remove containers and style them. You can add all kind of content as child nodes of the `BMOBILE:CONTENT`. You can also use the `BMOBILE:HORIZONTALBAR` without `BMOBILE:SIDEBARCONTAINER`.

The NaturalAjaxDemos contain a running example. These containers are not supported for Bootstrap 3.

The responsive view of the Natural Ajax Demos itself is an example for a usage of the side navigation controls.

- Properties for BMOBILE:SIDEBARCONTAINER
- Properties for BMOBILE:SIDEBAR
- Properties for BMOBILE:SIDEBARGROUP
- Properties for BMOBILE:HORIZONTALBAR

- Properties for BMOBILE:CONTENT

Properties for BMOBILE:SIDEBARCONTAINER

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	bg-light ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-* mt-* mb-* my-* border border-primary border border-secondary border border-dark border border-light
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions	Optional	

	are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		

Properties for BMOBILE:SIDEBAR

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
toggleid	A string value which can be used in the BMOBILE:TOGGLER to toggle the visibility. The specified id must be unique within this layout.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	bg-dark bg-light bg-primary bg-secondary border border-primary border border-secondary border border-dark border border-light
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
title	Text that is shown as tooltip for the control.	Optional	

	Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.		
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

Properties for BMOBILE:SIDEBARGROUP

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-*
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	

Properties for BMOBILE:HORIZONTALBAR

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	fixed-bottom bg-dark navmenu-dark bg-light navmenu-light navmenu-light navmenu-dark bg-primary bg-secondary
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	

Properties for BMOBILE:CONTENT

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	bg-light ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-* mt-* mb-* my-* border border-primary border border-secondary border border-dark border border-light
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser	Optional	

	and select the "View source" or "View frame's source" function.		

BMOBILE:TABPANE, BMOBILE:VERTICALTABPANE and BMOBILE:TAB

Use these controls to implement responsive tab controls. Inside a BMOBILE:TABPANE and a BMOBILE:VERTICALTABPANE you can define BMOBILE:TAB containers representing the individual tab pages between which you can navigate. All HTML code for all tabs will be generated into one HTML page.

- Properties for BMOBILE:TABPANE
- Properties for BMOBILE:VERTICALTABPANE
- Properties for BMOBILE:TAB

Properties for BMOBILE:TABPANE

Basic			
navmode	There are several rendering modes. For example set this property to nav-pills if you want the tabs to be rendered as pills.	Optional	nav-tabs nav-pills
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	col-* col-sm-* col-md-* col-lg-* col-xl-*

			border border-primary border border-secondary border border-dark border border-light
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
aspectratio	Defines the proportional relationship between width and height of the control. Example: 4by3	Optional	1by1 16by9 21by9 4by3
width	Width of the control. There are three possibilities to define the width: (A) You do not define a width at all. In this case the width of the control will either be a default width or - in case of container controls - it will follow the width that is occupied by its content. (B) Pixel sizing: just input a number value (e.g. "100"). (C) Percentage sizing: input a percantage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a width this control can reference. If you specify this control to have a width of 50% then the parent element (e.g. an ITR-row) may itself define a width of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.	Optional	100 120 140 160 180 200 50% 100%
height	Height of the control. There are three possibilities to define the height: (A) You do not define a height at all. As consequence the control will be rendered with its default height. If the control is a container control (containing) other controls then the height of the control will follow the height of its content. (B) Pixel sizing: just input a number value (e.g. "20").	Optional	100 150 200 250 300 250

	(C) Percentage sizing: input a percentage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a height this control can reference. If you specify this control to have a height of 50% then the parent element (e.g. an ITR-row) may itself define a height of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.		400 50% 100%
withcollapse	If set to true a small button is added to hide and show the navigation tabs.	Optional	true false

Properties for BMOBILE:VERTICALTABPANE

Basic			
navmode	There are several rendering modes. For example set this property to nav-pills if you want the tabs to be rendered as pills.	Optional	nav-tabs nav-pills
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	
panecolstyle	Inline CSS style settings applied to the pane.	Optional	
panecolstyleclasses	CSS style classes separated by a blank applied to the pane. For responsive pages it is recommended to apply one of the col-* classes to define the width.	Optional	col-* col-sm-* col-md-* col-lg-*

			col-xl-* border border-primary border border-secondary border border-dark border border-light
navcolstyle	Inline CSS style settings applied to the navigation tabs.	Optional	
navcolstyleclasses	CSS style classes separated by a blank applied to the navigation tabs. For responsive pages it is recommended to apply one of the col-* classes to define the width.	Optional	col-auto col col-* col-sm-* col-md-* col-lg-* col-xl-* offset-* offset-sm-* offset-md-* offset-lg-* offset-xl-* mx-auto btn-group btn-group-vertical
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
aspectratio	Defines the proportional relationship between width and height of the control. Example: 4by3	Optional	1by1 16by9 21by9 4by3

width	Width of the control. There are three possibilities to define the width: (A) You do not define a width at all. In this case the width of the control will either be a default width or - in case of container controls - it will follow the width that is occupied by its content. (B) Pixel sizing: just input a number value (e.g. "100"). (C) Percentage sizing: input a percantage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a width this control can reference. If you specify this control to have a width of 50% then the parent element (e.g. an ITR-row) may itself define a width of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.	Optional	100 120 140 160 180 200 50% 100%
height	Height of the control. There are three possibilities to define the height: (A) You do not define a height at all. As consequence the control will be rendered with its default height. If the control is a container control (containing) other controls then the height of the control will follow the height of its content. (B) Pixel sizing: just input a number value (e.g. "20"). (C) Percentage sizing: input a percentage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a height this control can reference. If you specify this control to have a height of 50% then the parent element (e.g. an ITR-row) may itself define a height of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.	Optional	100 150 200 250 300 250 400 50% 100%
withcollapse	If set to true a small button is added to hide and show the navigation tabs.	Optional	true false

Properties for BMOBILE:TAB

Basic			
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
openmethod	Name of the event that is sent to the adapter when the user does a "tab" selection. The index of the "tab" that is opened can be transferred to the adapter by using the property OPENEDINDEXPROP.	Optional	
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080	Optional	

	You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
styleclasses	CSS style classes separated by a blank.	Optional	bg-light ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-* mt-* mb-* my-* border border-primary border border-secondary border border-dark border border-light
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	

BMOBILE:TABSUBPAGES, BMOBILE:VERTICALTABSUBPAGES, BMOBILE:STRAIGHTTAB and BMOBILE:PAGER

The controls implement responsive tab controls. A BMOBILE:TABSUBPAGES control and a BMOBILE:VERTICALTABSUBPAGES control can have static tabs and dynamically defined tabs. The static tabs are added via BMOBILE:STRAIGHTTAB controls at design time. The HTML code is generated into the page holding the BMOBILE:TABSUBPAGES/BMOBILE:VERTICALSUBPAGES control.

- Properties for BMOBILE:TABSUBPAGES
- Properties for BMOBILE:VERTICALTABSUBPAGES
- Properties for BMOBILE:STRAIGHTTAB
- Properties for BMOBILE:PAGER

For the Adapter Interface and Built-In Events see the corresponding sections in *ROWTABSUBPAGES and STRAIGHTTABPAGE*.

In addition, the adapter interface may optionally contain a STRAIGHTTABCOUNT and/or a level field:

```
2 STRAIGHTTABCOUNT (I4)
2 TABITEMS (1:*)
3 LEVEL (I4)
```

STRAIGHTTABCOUNT

The count of static tabs. This is useful to conveniently calculate the index in the array of the dynamically defined tabs.

LEVEL

Drop down menus are supported. The level defines whether it is a sub item in a dropdown menu or a root item. By adding an optional BMOBILE:PAGER, short cut links for the previous clicked tabs will be added.

For more information see the corresponding samples in the NaturalAjaxDemos.

Properties for BMOBILE:TABSUBPAGES

Basic			
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
navmode	There are several rendering modes. For example set this property to nav-pills if you want the tabs to be rendered as pills.	Optional	nav-tabs nav-pills
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	bg-light ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-* mt-* mb-* my-* border border-primary

			border border-secondary border border-dark border border-light
dropdownstyle	Supported options are menu and tree.	Optional	menu tree
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
aspectratio	Defines the proportional relationship between width and height of the control. Example: 4by3	Optional	1by1 16by9 21by9 4by3
width	Width of the control. There are three possibilities to define the width: (A) You do not define a width at all. In this case the width of the control will either be a default width or - in case of container controls - it will follow the width that is occupied by its content. (B) Pixel sizing: just input a number value (e.g. "100"). (C) Percentage sizing: input a percantage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a width this control can reference. If you specify this control to have a width of 50% then the parent element (e.g. an ITR-row) may itself define a width of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.	Optional	100 120 140 160 180 200 50% 100%
height	Height of the control. There are three possibilities to define the height: (A) You do not define a height at all. As consequence the control will be rendered with its default height. If the control is a container control (containing) other controls then the height of the control will follow the height of its content.	Optional	100 150 200 250 300

	(B) Pixel sizing: just input a number value (e.g. "20"). (C) Percentage sizing: input a percentage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a height this control can reference. If you specify this control to have a height of 50% then the parent element (e.g. an ITR-row) may itself define a height of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.		250 400 50% 100%
triggerserver	Flag indicating whether the adapter should be triggered if the user switches between pages. If set to true, method trigger() inside the TABSUBPAGESInfo object is called - before switching the page. Therefore the adapter can abort a page switch - maybe a user has to enter some data first on the current page before switching to another one.	Optional	true false
withcollapse	If set to true a small button is added to hide and show the navigation tabs.	Optional	true false
withdropdown	If set to true tabs can have drop-down menus. An additional Natural field level is generated.	Optional	true false

Properties for BMOBILE:VERTICALTABSUBPAGES

Basic			
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
navmode	There are several rendering modes. For example set this property to nav-pills if you want the tabs to be rendered as pills.	Optional	nav-tabs nav-pills
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon.	Optional	

	Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
styleclasses	CSS style classes separated by a blank.	Optional	
panecolstyle	Inline CSS style settings applied to the pane.	Optional	
panecolstyleclasses	CSS style classes separated by a blank applied to the pane. For responsive pages it is recommended to apply one of the col-* classes to define the width.	Optional	col-* col-sm-* col-md-* col-lg-* col-xl-* border border-primary border border-secondary border border-dark border border-light
navcolstyle	Inline CSS style settings applied to the navigation tabs.	Optional	
navcolstyleclasses	CSS style classes separated by a blank applied to the navigation tabs. For responsive pages it is recommended to apply one of the col-* classes to define the width.	Optional	col-auto col col-* col-sm-* col-md-* col-lg-* col-xl-* offset-* offset-sm-* offset-md-* offset-lg-*

			offset-xl-* mx-auto btn-group btn-group-vertical
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
aspectratio	Defines the proportional relationship between width and height of the control. Example: 4by3	Optional	1by1 16by9 21by9 4by3
width	Width of the control. There are three possibilities to define the width: (A) You do not define a width at all. In this case the width of the control will either be a default width or - in case of container controls - it will follow the width that is occupied by its content. (B) Pixel sizing: just input a number value (e.g. "100"). (C) Percentage sizing: input a percantage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a width this control can reference. If you specify this control to have a width of 50% then the parent element (e.g. an ITR-row) may itself define a width of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.	Optional	100 120 140 160 180 200 50% 100%
height	Height of the control. There are three possibilities to define the height: (A) You do not define a height at all. As consequence the control will be rendered with its default height. If the control is a container control (containing) other controls then the height of the control will follow the height of its content. (B) Pixel sizing: just input a number value (e.g. "20").	Optional	100 150 200 250 300 250 400

	(C) Percentage sizing: input a percentage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a height this control can reference. If you specify this control to have a height of 50% then the parent element (e.g. an ITR-row) may itself define a height of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.		50% 100%
withcollapse	If set to true a small button is added to hide and show the navigation tabs.	Optional	true false
withdropdown	If set to true tabs can have drop-down menus. An additional Natural field level is generated.	Optional	true false
triggerserver	Flag indicating whether the adapter should be triggered if the user switches between pages. If set to true, method trigger() inside the TABSUBPAGESInfo object is called - before switching the page. Therefore the adapter can abort a page switch - maybe a user has to enter some data first on the current page before switching to another one.	Optional	true false

Properties for BMOBILE:STRAIGHTTAB

Basic			
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
invisiblemode	This property has three possible values:	Optional	invisible

	(1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.		disabled
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	bg-light ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-* mt-* mb-* my-* border border-primary

			border border-secondary border border-dark border border-light
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	

Properties for BMOBILE:PAGER

Basic			
styleclasses	CSS style classes separated by a blank.	Optional	
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
maxcount	Maximum number of pager buttons. Each pager button holds a link for the last clicked tab.	Optional	

7 Responsive Grids

BMOBILE:ICONCOL

An icon column in a responsive grid.

Properties

Basic			
iconurl	URL of image that is displayed inside the control. Any image type (.gif, .jpg, ...) that your browser does understand is valid. Use the following options to specify the URL: (A) Define the URL relative to your page. Your page is generated directly into your project's folder. Specifiying "images/xyz.gif" will point into a directory parallel to your page. Specifying "../HTMLBasedGUI/images/new.gif" will point to an image of a neighbour project. (B) Define a complete URL, like "http://www.softwareag.com/images/logo.gif".	Optional	
iconurlprop	Name of adapter parameter that provides as value the URL of the image that is shown inside the control.	Optional	
method	Name of the event that is sent to the adapter when clicking on the control.	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	

titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
styleclasses	CSS style classes separated by a blank.	Optional	icon-svg-primary ml-* mr-*
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	

njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	

BMOBILE:SIMPLECOL

A column in a responsive grid.

Properties

Basic			
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
visible	If set to FALSE the column is not visible in the browser but the corresponding data is still accessable from within the Natural application. Example usage is an "id column".	Optional	true false
displayonly	If set to true, the FIELD will not be accessible for input. It is just used as an output field.	Optional	true false
colprop	Name of the adapter parameter that dynamically defines the grid column value.	Obligatory	
flush	Flushing behaviour of the input control. By default an input into the control is registered within the browser client - and communicated to the server adapter object when a user e.g. presses a button. By using the FLUSH property you can change this behaviour. Setting FLUSH to "server" means that directly after changing the input a synchronization with the server adapter is triggered. As consequence you directly can react inside your adapter logic onto the change of the corresponding value. - Please be aware of that during the synchronization always all changed properties - also the	Optional	screen server

	ones that were changed before - are transferred to the adapter object, not only the one that triggered the synchonization. Setting FLUSH to "screen" means that the changed value is populated inside the page. You use this option if you have redundant usage of the same property inside one page and if you want to pass one changed value to all its representation directly after changing the value.		
flushmethod	When the data synchronization of the control is set to FLUSH="server" then you can specify an explicit event to be sent when the user updates the content of the control. By doing so you can distinguish on the server side from which control the flush of data was triggered.	Optional	
datatype	By default, the control is managing its content as string. By explicitly setting a datatype you can define that the control will format the data coming from the server: if the field has datatype "date" and the user inputs "010304" then the input will be translated into "01.03.2004" (or other representation, dependent on date format settings). Please note: the datatype "float" is named a bit misleading - it represents any decimal format number. The server side representation may be a float value, but also can be a double or a BigDecimal property.	Optional	date float int long time timestamp color xs:decimal xs:double xs:date xs:dateTime xs:time ---------- N n.n P n.n string n L xs:boolean xs:byte xs:short

Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	

BMOBILE:SIMPLEGRID

A responsive grid.

If the grid has been configured for server-side scrolling and sorting, a data structure is generated that contains fields controlling server-side scrolling and sorting. In addition, specific server-side scrolling events are triggered. The data structure is identical to the corresponding data structure in non-responsive grids.

For more information see section on controls that support *Server-Side Scrolling and Sorting*.

For details see the corresponding samples in the NaturalAjaxDemos.

Adapter Interface (Server-Side Scrolling and Sorting)

For a grid

```
<bmobile:simplegrid gridprop="lines" serverside="true" ...>
```

the following data structure is generated.

```
1 LINESINFO
2 ROWCOUNT (I4)
2 SIZE (I4)
2 SORTPROPS (1:*)
3 ASCENDING (L)
3 PROPNAME (U) DYNAMIC
2 TOPINDEX (I4)
```

Built-in Events (Server-Side Scrolling and Sorting)

Scrolling Events (Natural Server-Side Scrolling and Sorting only)

```
value-of-gridprop.onTopindexChanged
```

Properties

Basic		
gridprop	Name of the adapter parameter that represents the control in the adapter.	Optional
width	Width of the control. There are three possibilities to define the width: (A) You do not define a width at all. In this case the width of the control will either be a default width or - in case of container controls - it will follow the width that is occupied by its content. (B) Pixel sizing: just input a number value (e.g. "100"). (C) Percentage sizing: input a percantage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a width this control can reference. If you specify this control to have a width of 50% then the parent element (e.g. an ITR-row) may itself define a width of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.	Optional
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional
source	The kind of data source like string, file, url.	Optional
sourcelocation	The source location. Depends on the kind of source. Examples: ./autocomplete/myfile, http://myremotedatasource...	Optional
sourcelocationprop	Name of the adapter parameter that specifies the sourcelocation dynamically at runtime.	Optional
changeindexprop	Name of the adapter parameter providing a value which indicates whether the control should be refreshed with new data on the client or not. A different value than the previous triggers the refresh. It does not need to be a higher value.	Optional

selectprop	Name of the adapter parameter representing the selected item	Optional	
selectonclick	When clicking an item in a row, the row is marked as selected and rendered in a different color. If the property selectprop has been set, the corresponding Natural data fields are filled with the values of the selected row. If you don't want this, set this property to FALSE.	Optional	true false
features	Customize the rendering of the grid. Example: "autoWidth:falseinfo:falsepaging:falsesearching:falseordering:falselengthChange:false". For the supported features see the datatables documentation.	Optional	lengthC orderin paging searchi info:fal
triggersearchprop	The name of the adapter parameter which dynamically defines the search value at runtime. Set this property if you want to set the search value and trigger the search automatically from your Natural program.	Optional	
Appearance			
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	table-st table-b table-b table-d table-st w-100 vw-100
withkeyboardfocus	Set this property to TRUE to enable keyboard navigation for columns, rows and pages.	Optional	true false

frozencolumnsleft	Number of columns, which should be horizontally frozen to the left.	Optional
frozencolumnsright	Number of columns, which should be horizontally frozen to the right.	Optional
Scrolling and Sorting		
serverside	When set to true Server-Side Scrolling and Sorting is done. Per default Web Server-Side Scrolling is used. To switch on Natural Server-Side Scrolling: Apply a size value at runtime in the corresponding generated grid info data structure.	Optional
sortcol	Index of the initial sorted column. Index starts with 0.	Optional
sortorder	Sort order (asc or desc) of the initial sorted column.	Optional
scroller	When set to TRUE a scrollbar is used instead of a pager. This requires to also set the scrollheight property.	Optional
scrollheight	If scroller is not set to TRUE, this property is ignored. Use this property to set the scrolling height of the grid.	Optional
rowcount	If scroller is set to TRUE this property is ignored. Use this property to set the inital count of rows per page for the pager.	Optional

rowcountmenu	Use this property to customize the drop-down menu for the row count values per page. Example: 10203040 This property is ignored if scroller is used instead of pager.	Optional	
serverwait	Time in milliseconds the browser client will wait for the requested server items. Allowed values are 200 - 1000. Default is 200. Only used for server-side scrolling and sorting.	Optional	200 300 400 500 600 700
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:SIMPLEHEADERCOL

A header column in a responsive grid.

Properties

Basic			
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
titletextid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080	Optional	

	You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
styleclasses	CSS style classes separated by a blank.	Optional	d-none d-md-block d-none d-lg-block text-uppercase font-italic font-weight-bold font-weight-bolder font-weight-light font-weight-lighter text-center text-right text-left text-truncate
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	

BMOBILE:SIMPLEHEADERROW

A row container which contains the header columns in a responsive grid.

Properties

Basic			
styleclasses	CSS style classes separated by a blank.	Optional	
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000	Optional	

	background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	

BMOBILE:SIMPLEROW

A row container which contains the columns in a responsive grid.

Properties

Basic			
onclickmethod	Name of the event that is sent to the adapter when the user clicks.	Optional	
ondblclickmethod	Name of the event that is sent to the adapter when the user double clicks.	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	

8 Responsive Trees

BMOBILE:DATATREE

A responsive data tree control. Use this control to show tree data structures with a depth > 2 and/or many items. For navigation purposes use the BMOBILE:NAVMENU control instead.

When a node is opened, the control also supports dynamically loading subtrees: Set property `dynamicloading="true"`.

In case the subnodes of the opened node have not yet been loaded, the built-in event `value-of-valueprop.reactOnToggle` will be triggered.

To switch on multiselection, set property `singleselect="false"`.

As default, the event `value-of-valueprop.reactOnSelect` is sent to Natural when an item is selected or unselected. When the escape key is pressed, all items will be deselected. In this case the event `value-of-valueprop.reactOnClearSelection` is sent to Natural.

To prevent neither events from being sent to Natural on each selection change, set the property `triggerserver="false"`.

Adapter Interface

For a BMOBILE:DATATREE control with `valueprop="mytree"` the following adapter interface is generated:

```
1 MYTREE (1:*)
  2 LEVEL (I4) /* level starts with 1
  2 OPENED (I4) /* 0: closed, 1: opened, 2: end node
  2 SELECTED (L) /* TRUE or FALSE whether the item is selected
  2 TEXT (A) DYNAMIC /* text of the node
```

You can dynamically set tooltip texts on nodes from within your Natural program. For a BMOBILE:DATATREE with the following property settings ...

```
<bmobile:datatree valueprop="mytree" titleprop="mytooltip" ...
```

the following adapter interface is generated:

```
1 MYTREE (1:*)
  2 LEVEL (I4) /* level starts with 1
  2 MYTOOLTIP (A) DYNAMIC
  2 OPENED (I4) /* 0: closed, 1: opened, 2: end node
  2 SELECTED (L) /* TRUE or FALSE whether the item is selected
  2 TEXT (A) DYNAMIC /* text of the node
```

Built-in Events

`value-of-valueprop.reactOnSelect`	triggered when the selection on nodes changes in the user interface
`value-of-valueprop.reactOnToggle`	triggered when the `dynamicloading` is switched on and the subnodes of the opened node have not yet been loaded
`value-of-valueprop.reactOnClearSelection`	triggered when the escape key is pressed and all items are deselected

Optionally, reacting to double click events is possible:

Set property `ondblclickmethod="myondblclick"`. This will trigger `value-of-valueprop.myondblclick` when a node is double clicked.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
triggerserver	Per default the event reactOnSelect is sent to Natural when the selection of an item is changed. Set this property to "false" if you don't want this event to be sent.	Optional	true false
openonselect	If set to TRUE not only a click on the corresponding icons but also the selection of the text will automatically open the tree node. Default is TRUE.	Optional	true false
Binding			
valueprop	(already explained above)		
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	

ondblclickmethod	Name of the event that is sent to the adapter when the user double clicks.	Optional	
oncontextmenumethod	Name of the event that is sent to the adapter when the user presses the right mouse button in an empty area of the client tree.	Optional	
Appearance			
styleclasses	CSS style classes separated by a blank.	Optional	bg-light ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-* mt-* mb-* my-* border border-primary border border-secondary border border-dark border border-light
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080	Optional	

	You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
dynamicloading	If set to "true" then you indicate to the tree control that not all tree information may be loaded when initializing the tree (i.e. the tree collection on server side). As consequence the tree control will pass the "toggle-event" to the server - in case the subnodes of a certain nodes are not yet loaded. In the case the toggle event is passed to the server, the method onToggle() is called inside the tree item.	Optional	true false
hscroll	Set this property if you did define a limitted width for the surrounding container. Default is that contents is cut ("hidden"). You can define that scrollbars are shown if the content is exceeding the control's container ("auto"). Or scrollbars can be shown always ("scroll").	Optional	auto scroll hidden
size	Set this property to render the tree smaller or larger. Valid values are "sm" and "lg".	Optional	sm lg
singleselect	If set to "true" then only one item can be selected. If set to "false" then multiple icons can be selected.	Optional	true false
iconclassopened	Icon of a tree node that has subnodes and that is currently showing its nodes. The icon is defined as css class. You can use the Bootstrap Icons library. Example: bi-folder2-open.	Optional	
iconclassclosed	Icon of a tree node that has subnodes and that is currently not showing its nodes. The icon is defined as css class. You can use the Bootstrap Icons library. Example: bi-folder2.	Optional	
iconclassendnode	Icon of a tree node that is an end node (leaf node). The icon is defined as css class. You can use the Bootstrap Icons library. Example: bi-file-richtext.	Optional	

titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

9 Responsive Menus

BMOBILE:NAVBAR

A responsive navigation bar.

Properties

Basic			
menuprop	Name of the adapter parameter that represents the control in the adapter.	Obligatory	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	fixed-bottom bg-dark navmenu-dark bg-light navmenu-light navmenu-light navmenu-dark bg-primary bg-secondary
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
brandprop	Name of the adapter parameter that dynamically defines a brand image.	Optional	

brandstraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	

BMOBILE:NAVMENU

A menu container you can add to the BMOBILE:SIDEBAR or BMOBILE:HORIZONTALBAR container. The generated Natural Adapter Interface is identical to the Adapter Interface of the BMOBILE:NAVTREE:

Adapter Interface

For a BMOBILE:NAVMENU control with valueprop="mymenu" the following adapter interface is generated:

```
1 NAVMENU (1:*)
  2 LEVEL (I4) /* level starts with 1
  2 OPENED (I4) /* 0:normal node; 2: end node
  2 SELECTED (L) /* TRUE or FALSE whether the item is selected
  2 TEXT (A) DYNAMIC /* text of the node
```

Built-in Events

For a BMOBILE:NAVMENU control with valueprop="mymenu" the event mymenu.onSelectMenuItem is triggered when selecting an end node.

Properties

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
styleclasses	CSS style classes separated by a blank.	Optional	bg-light ml-* mr-* mx-* mx-sm-* mx-md-* mx-lg-* mx-xl-* mt-* mb-*

			my-* border border-primary border border-secondary border border-dark border border-light
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this	Optional	

	attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.		
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

XCIPOPUPMENU - Enable Dynamic Menus

XCIPOPUPMENU enables context menus (right-click) and dynamic menus (buttons and icons). Depending on the context, the Natural application dynamically generates the menus during execution. There is only one instance of XCIPOPUPMENU needed in each page.

Context menus are supported in the following controls:

- NATPAGE
- BMOBILE:DATATREE
- BMOBILE:PANEL
- BMOBILE:CARD
- BMOBILE:FFIELD

Additionally, you can use the available icons/buttons to open a dynamic menu at any time. This is done by filling out the XCIPOPUPMENU data structure in this event from within the Natural program.

Accessibility

Access to menus only through a right mouse click does not meet the accessibility rules. However, since this method is popular, it's good practice to provide access to the menus both by right-click and a visual button/icon. Use the same event name for the right mouse click and the button/icon method to avoid extra coding in the Natural program.

Note: Adapter Interface, Built-In Events and Properties are the same as the regular context menus as described in *XCIPOPUPMENU - Enable Context Menus*.

10 Responsive Chart Controls

The controls can be integrated into mobile pages and into other pages. The charts are built using the tool chart.js, see *http://www.chartjs.org/*

RCHART and RCHARTDATA

The RCHART control supports rendering the following charts:

- line charts
- bar charts
- horizontal bar charts

An RCHART control can have several RCHARTDATA controls as sub controls. Each RCHARTDATA control describes rendering and data for the datasets shown in the chart.

Example

Several examples and corresponding description are provided in the Natural for Ajax demos.

Properties for RCHART

Basic			
rcharttype	Type of the chart. Examples: bar,horizontalBar,line.	Optional	bar horizontalBar line
rcharttypeprop	Name of the adapter parameter that provides as value the type of the chart. Valid values are line, bar, horizontalBar	Optional	
labels	Semicolon separated list. Example: 2015;2016;2017. In a bar chart these are the labels shown for the x-axis. In a horizontal bar chart these are the labels shown for the y-axis.	Optional	
labelstextid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
labelsprop	Name of the adapter parameter, which contains the label values. The field is generated as child of the valueprop field.	Optional	label1;label2;label3

valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
styleclasses	CSS style classes separated by a blank.	Optional	
stackedxaxis	If set to true the bars or lines of the chart are stacked on the x-axis.	Optional	true false
stackedyaxis	If set to true the bars or lines of the chart are stacked on the y-axis.	Optional	true false
selectedlabelprop	Name of the adapter parameter to which the value of the selected label is set on click.	Optional	
changeindexprop	Name of the adapter parameter providing a value which indicates whether the control should be refreshed with new data on the client or not. A different value than the previous triggers the refresh. It does not need to be a higher value.	Optional	
showvalueinchart	Show the values in the chart. Per default the values are shown as tooltip.	Optional	true false
showvaluepos	If set to inside the values are shown inside the chart. If set to outside the values are set outside the chart. Default is inside.	Optional	inside outside
showtooltip	If set to false tooltips are disabled. Default is true.	Optional	true false

showvaluefontfamily	The font family which is used to show the value.	Optional	
showvaluefontstyle	The font style which is used to show the value.	Optional	
showvaluefontsize	The font size which is used to show the value.	Optional	1 2 3 int-value
showvaluefontcolor	Color of the control. Value must follow format "#rrggbb", e.g. #000000 for black.	Optional	#FF0000 #00FF00 #0000FF #FFFFFF #808080 #000000
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
BarOptions			
xaxisscalelabel	The text for the label of the scale for this axis.	Optional	
xaxisscaletextid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
yaxisscalelabel	The text for the label of the scale for this axis.	Optional	
yaxisscaletextid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
xaxisbarthickness	Width of the bars in pixels. If not set, the bars are sized automatically.	Optional	20 30 40 50 60

xaxisbarpercentage	Percent (0-1) of the available width each bar should be within the category percentage. 1.0 will take the whole category width and put the bars right next to each other.	Optional	0.4 0.5 0.7 0.8 0.9 1.0
xaxiscategorypercentage	Percent (0-1) of the available width (the space between the gridlines for small datasets) for each data-point to use for the bars.	Optional	0.5 0.6 0.7 0.8 0.9 1.0
yaxisbarthickness	Height of the bar in pixels. If not set, the bars are sized automatically.	Optional	20 30 40 50 60
LineOptions			
showlines	If set to false the line is not drawn for this dataset.	Optional	true false
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	
width	Width of the control. There are three possibilities to define the width: (A) You do not define a width at all. In this case the width of the control will either be a default width or - in case of container controls - it will follow the width that is occupied by its content.	Optional	100 120 140 160 180

	(B) Pixel sizing: just input a number value (e.g. "100"). (C) Percentage sizing: input a percantage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a width this control can reference. If you specify this control to have a width of 50% then the parent element (e.g. an ITR-row) may itself define a width of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.		200 50% 100%
height	Height of the control. There are three possibilities to define the height: (A) You do not define a height at all. As consequence the control will be rendered with its default height. If the control is a container control (containing) other controls then the height of the control will follow the height of its content. (B) Pixel sizing: just input a number value (e.g. "20"). (C) Percentage sizing: input a percentage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a height this control can reference. If you specify this control to have a height of 50% then the parent element (e.g. an ITR-row) may itself define a height of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.	Optional	100 150 200 250 300 250 400 50% 100%

Properties for RCHARTDATA

Basic			
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
label	The text for the label of this dataset.	Optional	
labeltextid	Multi language dependent text that is displayed inside the control. The "textid"	Optional	

	is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".		
datatype	By default, the control is managing its content as string. By explicitly setting a datatype you can define that the control will format the data coming from the server: if the field has datatype "date" and the user inputs "010304" then the input will be translated into "01.03.2004" (or other representation, dependent on date format settings). Please note: the datatype "float" is named a bit misleading - it represents any decimal format number. The server side representation may be a float value, but also can be a double or a BigDecimal property.	Optional	date float int long time timestamp color xs:decimal xs:double xs:date xs:dateTime xs:time ---------- N n.n P n.n string n L xs:boolean xs:byte xs:short
backgroundcolor	The fill color of the bars or the fill color under the lines or the fill color of the arcs depending on the chart type.	Optional	#ffff00 rgb(255, 255, 0) hsl(60, 100%, 50%)
borderwidth	Border width in pixels.	Optional	2 4

			6

bordercolor	Border color.	Optional	#ffff00
			rgb(255, 255, 0)
			hsl(60, 100%, 50%)

onclickmethod	The event which is triggered in the Natural program when for instance a bar of a bar chart is clicked.	Optional	
legendclickmethod	Name of the event which is triggered when clicking on a legend.	Optional	
Bar			

hoverbackgroundcolor	Background color when hovered.	Optional	#ffff00
			rgb(255, 255, 0)
			hsl(60, 100%, 50%)

hoverborderwidth	Border width in pixel when hovered.	Optional	2 4 6

hoverbordercolor	Border color when hovered.	Optional	#ffff00
			rgb(255, 255, 0)
			hsl(60, 100%, 50%)

Line			
borderdash	Length and spacing of dashes separated by semicolon. Example: 102	Optional	10;2

pointbordercolor	The border color for points.	Optional	#ffff00
			rgb(255, 255, 0)
			hsl(60, 100%, 50%)

pointbackgroundcolor	The fill color for points	Optional	#ffff00
			rgb(255, 255, 0)
			hsl(60, 100%, 50%)

pointborderwidth	The width of the point border in pixels	Optional	2 4

			6
pointradius	The radius of the point shape. If set to 0, nothing is rendered.	Optional	7 15
pointhoverradius	The radius of the point when hovered.	Optional	7 15
pointhitradius	The pixel size of the non-displayed point that reacts to mouse events.	Optional	7 15

pointhoverbackgroundcolor	Point background color when hovered.	Optional	#ffff00
			rgb(255, 255, 0)
			hsl(60, 100%, 50%)

pointhoverbordercolor	Point border color when hovered.	Optional	#ffff00
			rgb(255, 255, 0)
			hsl(60, 100%, 50%)

pointhoverborderwidth	Border width of point when hovered	Optional	2 4 6
pointstyle	The style of point. Options are : circle, triangle, rect, rectRounded, rectRot, cross, crossRot, star, line, and dash.	Optional	circle triangle rect rectRounded rectRot cross crossRot star line dash

steppedline	If true, the line is shown as a stepped line.	Optional	true false
Binding Bar			
labelprop	Name of the adapter parameter, which contains the label value. The field is generated as child of the valueprop field of the RCHART control.	Optional	
backgroundcolorprop	The name of the adapter parameter which provides the backgroundcolor value.	Optional	
borderwidthprop	The name of the adapter parameter which provides the borderwidth value	Optional	
bordercolorprop	The name of the adapter parameter which provides the bordercolor value	Optional	
hoverbackgroundcolorprop	The name of the adapter parameter which provides the hoverbackgroundcolor value.	Optional	
hoverborderwidthprop	The name of the adapter parameter which provides the hoverborderwidth value.	Optional	
hoverbordercolorprop	The name of the adapter parameter which provides the hoverbordercolor value.	Optional	
Binding Line			
labelprop	(already explained above)		
backgroundcolorprop	(already explained above)		
borderwidthprop	(already explained above)		
bordercolorprop	(already explained above)		
borderdashprop	The name of the adapter parameter which provides the borderdash value	Optional	
pointbordercolorprop	The name of the adapter parameter which provides the pointbordercolor value	Optional	
pointbackgroundcolorprop	The name of the adapter parameter which provides the pointbackgroundcolor value	Optional	
pointborderwidthprop	The name of the adapter parameter which provides the pointborderwidth value	Optional	
pointradiusprop	The name of the adapter parameter which provides the pointradius value	Optional	
pointhoverradiusprop	The name of the adapter parameter which provides the pointhoverradius value.	Optional	
pointhitradiusprop	The name of the adapter parameter which provides the pointhitradius value	Optional	

pointhoverbackgroundcolorprop	The name of the adapter parameter which provides the pointhoverbackgroundcolor value	Optional	
pointhoverbordercolorprop	The name of the adapter parameter which provides the pointhoverbordercolor value	Optional	
pointhoverborderwidthprop	The name of the adapter parameter which provides the pointhoverborderwidth value	Optional	
pointstyleprop	The name of the adapter parameter which provides the pointstyle value	Optional	
steppedlineprop	The name of the adapter parameter which provides the steppedline value	Optional	

RPIECHART

The RPIECHART control supports rendering the following charts:

- pie charts
- doughnut charts

Example

Several examples and corresponding description are provided in the Natural for Ajax demos.

Properties

Basic			
rcharttype	Type of the chart. Valid values: pie, doughnut.	Optional	pie doughnut
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
data	A semicolon separated list with the data for the arcs. Example: 10;30;100	Optional	
labels	Semicolon separated list. Example: 2015;2016;2017. In a bar chart these are the labels shown for the x-axis. In a horizontal bar chart these are the labels shown for the y-axis.	Optional	label1;label2;label3
labelstextid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime.	Optional	

	Do not specify a "name" inside the control if specifying a "textid".		
showvalueinchart	Show the values in the chart. Per default the values are shown as tooltip.	Optional	true false
showvaluefontfamily	The font family which is used to show the value.	Optional	
showvaluefontstyle	The font style which is used to show the value.	Optional	
showvaluefontsize	The font size which is used to show the value.	Optional	1 2 3 int-value
showvaluefontcolor	Color of the control. Value must follow format "#rrggbb", e.g. #000000 for black.	Optional	#FF0000 #00FF00 #0000FF #FFFFFF #808080 #000000
showtooltip	If set to false tooltips are disabled. Default is true.	Optional	true false
showpercentage	If set to true the value is shown in percentage. Default is false.	Optional	true false

backgroundcolor	The fill color of the bars or the fill color under the lines or the fill color of the arcs depending on the chart type.	Optional	#ffff00
			rgb(255, 255, 0)
			hsl(60, 100%, 50%)

borderwidth	Border width in pixels.	Optional	2 4 6

bordercolor	Border color.	Optional	#ffff00
			rgb(255, 255, 0)

			hsl(60, 100%, 50%)

hoverbackgroundcolor	Background color when hovered.	Optional	#ffff00
			rgb(255, 255, 0)
			hsl(60, 100%, 50%)

hoverborderwidth	Border width in pixel when hovered.	Optional	2 4 6

hoverbordercolor	Border color when hovered.	Optional	#ffff00
			rgb(255, 255, 0)
			hsl(60, 100%, 50%)

rotation	Starting angle to draw arcs from. Default is -0.5 * Math.PI.	Optional	-0.5 -2
circumference	Sweep to allow arcs to cover. Default is 2 * Math.PI.	Optional	2 6
animaterotate	If true, will animate the rotation of the chart.	Optional	true false
animatescale	If true, will animate scaling the Doughnut from the centre.	Optional	true false
animateselection	Set this to an integer value > 0 if you want the selected slice to have a different radius. Example: A value of 10 means that the selected slice has a 10% bigger radius than the unselected slices.	Optional	5 10
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080	Optional	

	You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
styleclasses	CSS style classes separated by a blank.	Optional	
onclickmethod	The event which is triggered in the Natural program when for instance a bar of a bar chart is clicked.	Optional	
legendclickmethod	Name of the event which is triggered when clicking on a legend.	Optional	
Binding			
rcharttypeprop	Name of the adapter parameter that provides as value the type of the chart. Valid values are pie and doughnut.	Optional	
dataprop	The name of the adapter parameter which provides the data for the arcs at runtime. The value must be a semicolon separated list. Example: 10;20;30	Optional	
labelsprop	Name of the adapter parameter, which contains the label values as semicolon separated list. Example: 2015;2016;2017.	Optional	
backgroundcolorprop	The name of the adapter parameter which provides the backgroundcolor value.	Optional	
borderwidthprop	The name of the adapter parameter which provides the borderwidth value	Optional	
bordercolorprop	The name of the adapter parameter which provides the bordercolor value	Optional	
hoverbackgroundcolorprop	The name of the adapter parameter which provides the hoverbackgroundcolor value.	Optional	
hoverborderwidthprop	The name of the adapter parameter which provides the hoverborderwidth value.	Optional	
hoverbordercolorprop	The name of the adapter parameter which provides the hoverbordercolor value.	Optional	
rotationprop	The name of the adapter parameter which provides the rotation value	Optional	
circumferenceprop	The name of the adapter parameter which provides the circumference value	Optional	
animaterotateprop	The name of the adapter parameter which provides the animaterotate value	Optional	

animatescaleprop	The name of the adapter parameter which provides the animatescale value	Optional	
selectedlabelprop	Name of the adapter parameter to which the value of the selected label is set on click.	Optional	
changeindexprop	Name of the adapter parameter providing a value which indicates whether the control should be refreshed with new data on the client or not. A different value than the previous triggers the refresh. It does not need to be a higher value.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	
width	Width of the control. There are three possibilities to define the width: (A) You do not define a width at all. In this case the width of the control will either be a default width or - in case of container controls - it will follow the width that is occupied by its content. (B) Pixel sizing: just input a number value (e.g. "100"). (C) Percentage sizing: input a percantage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a width this control can reference. If you specify this control to have a width of 50% then the parent element (e.g. an ITR-row) may itself define a width of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.	Optional	100 120 140 160 180 200 50% 100%
height	Height of the control. There are three possibilities to define the height: (A) You do not define a height at all. As consequence the control will be rendered with its default height. If the control is a container control (containing) other controls then the height of the control will follow the height of its content. (B) Pixel sizing: just input a number value (e.g. "20").	Optional	100 150 200 250 300 250 400

	(C) Percentage sizing: input a percentage value (e.g. "50%"). Pay attention: percentage sizing will only bring up correct results if the parent element of the control properly defines a height this control can reference. If you specify this control to have a height of 50% then the parent element (e.g. an ITR-row) may itself define a height of "100%". If the parent element does not specify a width then the rendering result may not represent what you expect.		50% 100%

Customizing Charts

It's possible to customize the rendering of the charts in a separate options file. This enables the use of a similar rendering for many charts in an application. Apply this options file to your page by setting the property `chartconfigfile` in the `NATPAGE` tag. For an example see the NaturalAjax-Demos.

Migration to chartjs 4.4.3

RCHART and RPIECHART are based on chartjs (see **https://www.chartjs.org/**). From Natural for Ajax 9.3.2, chartjs 2 changes to chartjs 4.4.3. When using a custom options file – property `chartconfigfile` in the `NATPAGE` tag – then you must migrate this custom options file to the chartjs 4.4.3 (see **https://www.chartjs.org/docs**). In case of migration questions, please contact support.

Without custom options files, there may be only small rendering changes. Chartjs 4.4.3 improves the responsive rendering of charts. It now also considers the height of the container during the resizing. The size of your chart could look different with chartjs 4.4.3 compared to chartjs 2. You may need to adjust the size/width settings of the container accordingly. Check the samples in the NaturalAjaxDemos. They make use of the new enhanced responsiveness. In case of questions, please contact support.

11 Responsive Media Controls

BMOBILE:VIDEO

The `BMOBILE:VIDEO` control supports the integration of a video, a web cam or a camera into a responsive container.

Example

Several examples and corresponding description are provided in the Natural for Ajax demos.

Properties for BMOBILE:VIDEO

Basic			
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
videourl	URL of the video file	Optional	
videotype	Type of the video format. Default is video/mp4.	Optional	video/mp4 video/ogg video/webm
videotypeprop	Name of the adapter parameter that dynamically defines the video format at runtime. Default value of the video format is video/mp4.	Optional	
videocontrols	Set this property to true if you want the controls for starting, pausing, resuming...of the video to be shown.	Optional	true false
autoplay	If set to true the video automatically starts playing when the page is loaded.	Optional	true false
autoplayprop	Name of the adapter parameter that dynamically defines if a video automatically starts playing. Default is FALSE.	Optional	
aspectratio	Defines the proportional relationship between width and height of the control. Example: 4by3	Optional	1by1 16by9 21by9 4by3
playsinline	Some mobile browsers enter fullscreen mode for videos. Set this to TRUE to not enter fullscreen mode. This is not supported in all browsers.	Optional	true false

comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.	Optional	
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	

BMOBILE:MEDIAUPLOAD, BMOBILE:MEDIAPREVIEW, BMOBILE:MEDIAPREVIEWBUTTON and BMOBILE:MEDIAUPLOADBUTTON

These controls implement the upload of a picture or image taken from a `BMOBILE:VIDEO` control (video, web cam, camera). The picture or image is uploaded as a BLOB via the `XCIOBJECT` control.

When dragging the `BMOBILE:MEDIAUPLOAD` control from the palette to your page layout, several controls are arranged as sub-controls under the `BMOBILE:MEDIAUPLOAD`. You can arrange the controls differently, change the text for panes and buttons, replace the panes by other controls and style them according to your needs. You have to keep the following controls as sub-controls:

- `BMOBILE:MEDIAPREVIEWBUTTON`
- `BMOBILE:MEDIAUPLOADBUTTON`
- `BMOBILE:MEDIAPREVIEW`
- `BMOBILE:VIDEO`

You also need to add an NJX:OBJECT control to your page. The Adapter Interface and Built-in Events are described below for the following layout definition:

```
<bmobile:mediaupload valueprop="mediaupload" >
```

Adapter Interface

```
1 MEDIAUPLOAD
  2 CONTENTID (A) DYNAMIC
1 XCIOBJECTS (1:*)
  2 CONTENT (B) DYNAMIC
  2 CONTENTID (A) DYNAMIC
  2 CONTENTTYPE (A) DYNAMIC
```

The MEDIAUPLOAD.CONTENTID field contains the content ID of the uploaded image in the XCIOBJECTS data structure

Built-in Events

For the example definition above, the event mediaupload.onUpload is triggered when the upload button is pressed.

Example

Several examples and corresponding description are provided in the Natural for Ajax demos.

Properties for BMOBILE:MEDIAUPLOAD

Basic			
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
mediatype	Default is camera. If you want the picture to be taken from a video file instead of the camera device, set video.	Optional	video camera
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are	Optional	

	bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.		
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	

Properties for BMOBILE:MEDIAPREVIEW

Basic			
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
previewstyle	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
previewstyleclasses	CSS style classes separated by a blank.	Optional	col-auto col col-* col-sm-* col-md-* col-lg-* col-xl-*

			offset-* offset-sm-* offset-md-* offset-lg-* offset-xl-* mx-auto btn-group btn-group-vertical
aspectratio	Defines the proportional relationship between width and height of the control. Example: 4by3	Optional	1by1 16by9 21by9 4by3

Properties for BMOBILE:MEDIAPREVIEWBUTTON

Basic			
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
type	The type of the button like reset or submit.	Optional	button submit file reset
renderaslink	If set to "TRUE" the control is rendered as a link.	Optional	true false

title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
Appearance			
styleclasses	CSS style classes separated by a blank.	Optional	btn-default btn-primary btn-info btn-success btn-warning btn-danger btn-sm btn-lg btn-icon-sm btn-icon-lg btn-responsive btn-outline-primary btn-outline-info btn-outline-success btn-outline-warning btn-outline-danger close mx-auto
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080	Optional	

	You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.		
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
Binding			
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

Properties for BMOBILE:MEDIAUPLOADBUTTON

Basic			
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
type	The type of the button like reset or submit.	Optional	button submit file reset
renderaslink	If set to "TRUE" the control is rendered as a link.	Optional	true false
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
Appearance			
styleclasses	CSS style classes separated by a blank.	Optional	btn-default btn-primary btn-info btn-success btn-warning btn-danger btn-sm btn-lg btn-icon-sm

			btn-icon-lg btn-responsive btn-outline-primary btn-outline-info btn-outline-success btn-outline-warning btn-outline-danger close mx-auto
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false

titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
Binding			
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

BMOBILE:IMAGEFILEUPLOAD, BMOBILE:IMAGEPREVIEW, BMOBILE:IMAGEPREVIEWBUTTON and BMOBILE:IMAGEUPLOADBUTTON

When dragging the `BMOBILE:IMAGEFILEUPLOAD` control from the palette to your page layout, several controls are arranged as sub-controls under the `BMOBILE:IMAGEFILEUPLOAD` control. You can arrange the controls differently, change the text, replace the container controls by other containers and style them according to your needs. You must keep the following controls as sub-controls:

- `BMOBILE:IMAGEPREVIEWBUTTON`
- `BMOBILE:IMAGEUPLOADBUTTON`
- `BMOBILE:IMAGEPREVIEW`

You also need to add an `NJX:OBJECT` control to your page. When pressing the Upload button, an event is triggered in the Natural program.

The Adapter Interface and Built-in Events are described below for the following layout definition:

```
<bmobile:imagefileupload valueprop="imagefileupload" fileinfoprop="myfileinfo" >
```

Adapter Interface

```
DEFINE DATA LOCAL
1 IMAGEFILEUPLOAD
  2 CONTENTID (A) DYNAMIC
1 MYFILEINFO (A) DYNAMIC
1 XCIOBJECTS (1:*)
  2 CONTENT (B) DYNAMIC
  2 CONTENTID (A) DYNAMIC
  2 CONTENTTYPE (A) DYNAMIC
```

The `IMAGEFILEUPLOAD.CONTENTID` field contains the content ID of the uploaded image in the `XCIOBJECTS` data structure. The client side filename is used as content ID. In this example, a `fileinfoprop` property is defined. The corresponding `IMAGEFILEUPLOAD.MYFILEINFO` field will contain information such as the file name and the file size.

The maximum allowed size for upload depends on the configuration of your application server. In a Tomcat installation per default only files less than 2 MB are allowed for upload. You can change this limit in your application server. If you want to upload big files to Natural you also need to increase the Natural configuration parameter Buffer Sizes/Work Area Size correspondingly.

Built-in Events

For the example definition above, the event `imagefileupload.onUpload` is triggered when the upload button is pressed.

Example

Several examples and corresponding description are provided in the Natural for Ajax demos.

Properties for BMOBILE:IMAGEFILEUPLOAD

Basic			
valueprop	Name of the adapter parameter that provides the content of the control.	Obligatory	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
fileinfoprop	Name of the adapter parameter that contains information of the file like name and size.	Optional	
Natural			
njx:natname	If a Natural variable with a name not valid for Application Designer (for instance #FIELD1) shall be bound to the control, a different name (for instance HFIELD1) can be bound instead. If the original name (in this case #FIELD1) is then specified in this attribute, the original name is generated into the parameter data area of the Natural adapter and a mapping between the two names is generated into the PROCESS PAGE statement of the	Optional	

	Natural adapter. This mapping must not break a once defined group structure. If for instance a grid control that is bound to a name of GRID1 contains fields that are bound to FIELD1 and FIELD2 respectively, the corresponding njx:natname values may be #GRID1.#FIELD1 and #GRID1.#FIELD2, but not #GRID1.#FIELD1 and #MYGRID1.#FIELD2.		
njx:natstringtype	If the control shall be bound to a Natural system variable of string format with the attribute njx:natsysvar, this attribute indicates the format of the string, A (code page) or U (Unicode). The default is A.	Optional	
njx:natcomment	The value of this attribute is generated as comment line into the parameter data area of the Natural adapter, before the field name. The Map Converter, for instance, uses this attributes to indicate a generated statusprop variable to which field the statusprop belongs.	Optional	

Properties for BMOBILE:IMAGEPREVIEW

Basic			
previewstyle	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
previewstyleclasses	CSS style classes separated by a blank.	Optional	col-auto col col-* col-sm-* col-md-* col-lg-* col-xl-* offset-*

			offset-sm-* offset-md-* offset-lg-* offset-xl-* mx-auto btn-group btn-group-vertical
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	

Properties for BMOBILE:IMAGEPREVIEWBUTTON

Basic			
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
type	The type of the button like reset or submit.	Optional	button submit file reset
renderaslink	If set to "TRUE" the control is rendered as a link.	Optional	true false
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	

Appearance			
styleclasses	CSS style classes separated by a blank.	Optional	btn-default btn-primary btn-info btn-success btn-warning btn-danger btn-sm btn-lg btn-icon-sm btn-icon-lg btn-responsive btn-outline-primary btn-outline-info btn-outline-success btn-outline-warning btn-outline-danger close mx-auto
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	

invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
Binding			
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

Properties for BMOBILE:IMAGEUPLOADBUTTON

Basic			
name	Text that is displayed inside the control. Please do not specify the name when using the multi language management - but specify a "textid" instead.	Optional	
textid	Multi language dependent text that is displayed inside the control. The "textid" is translated into a corresponding string at runtime. Do not specify a "name" inside the control if specifying a "textid".	Optional	
comment	Comment without any effect on rendering and behaviour. The comment is shown in the layout editor's tree view.	Optional	
type	The type of the button like reset or submit.	Optional	button submit file reset
renderaslink	If set to "TRUE" the control is rendered as a link.	Optional	true false
title	Text that is shown as tooltip for the control. Either specify the text "hard" by using this TITLE property - or use the TITLETEXTID in order to define a language dependent literal.	Optional	
Appearance			
styleclasses	CSS style classes separated by a blank.	Optional	btn-default btn-primary btn-info btn-success btn-warning btn-danger btn-sm btn-lg btn-icon-sm

			btn-icon-lg btn-responsive btn-outline-primary btn-outline-info btn-outline-success btn-outline-warning btn-outline-danger close mx-auto
style	CSS style definition that is directly passed into this control. With the style you can individually influence the rendering of the control. You can specify any style sheet expressions. Examples are: border: 1px solid #FF0000 background-color: #808080 You can combine expressions by appending and separating them with a semicolon. Sometimes it is useful to have a look into the generated HTML code in order to know where direct style definitions are applied. Press right mouse-button in your browser and select the "View source" or "View frame's source" function.	Optional	
invisiblemode	This property has three possible values: (1) "invisible": the control is not visible without occupying any space. (2) "disabled": the control is deactivated: it is "grayed" and does not show any roll over effects any more. (3)"cleared": the control is not visible but it still occupies space.	Optional	invisible disabled cleared
straighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false

titlestraighttext	If the text of the control contains HTML tags then these are by default interpreted by the browser. Specifiying STRAIGHTTEXT as "true" means that the browser will directly render the characters without HTML interpretation. Example: if you want to output the source of an HTML text then STRAIGHTTEXT should be set to "true".	Optional	true false
Binding			
visibleprop	Name of the adapter parameter that provides the information if this control is displayed or not. As consequence you can control the visibility of the control dynamically.	Optional	
nameprop	Name of adapter parameter which dynamically provides the text that is shown inside the control.	Optional	
titleprop	Name of the adapter parameter that dynamically defines the title of the control. The title is displayed as tool tip when ther user moves the mouse onto the control.	Optional	
Miscellaneous			
testtoolid	Use this attribute to assign a fixed control identifier that can be later on used within your test tool in order to do the object identification	Optional	

12 Controls for Responsive and Non-Responsive Pages

The following controls and hot keys can be used in responsive as well as in non-responsive scenarios:

AUTOCOMPLETE
OPENSTREETMAP
REPORT2
TIMER
XCIDATADEF - Data Definition
XCICONTEXT
Extended Hot Key Management
Function Key Handling
NJX:OBJECTS
NJX:SESSIONPARAMS
NJX:REQUESTCONTEXT
NJX:TRIGGEREVENT
NJX:XCIOPENPOPUP
NJX:EVENTDATA

13 Styling a Responsive Page

Responsive Pages Basics

Responsive Page Layout

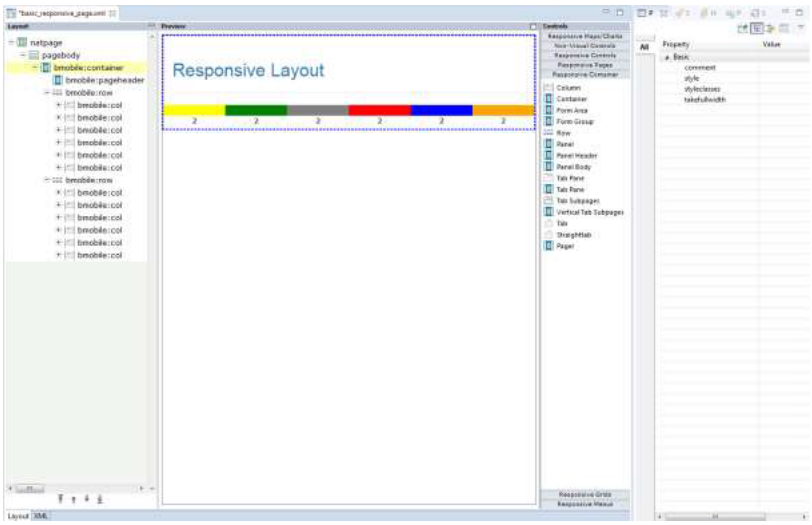
Responsive pages adapt the layout to the device. The page renders well on a variety of devices and window or screen sizes without designing different pages for different devices.

Responsive pages are based on the Bootstrap framework 4.6 (refer to **https://getbootstrap.com/docs/4.6/**).

Responsiveness is achieved via CSS (Cascading Style Sheets) and the Bootstrap grid system. The Bootstrap grid system is made up of:

- Containers
- An unlimited number of rows per container
- A maximum of 12 columns per row

The following shows the basic layout of a responsive page in NJX:



You usually have one `bmobile:container` control. Under this you place several `bmobile:row` containers as subnodes. Each row is divided into a maximum of 12 columns. The `bmobile:col` control spans 1-12 columns. All `bmobile:col` controls of a `bmobile:row` should not span more than 12 columns altogether.

In the example above the `bmobile:rows` each have 6 `bmobile:col` controls. Each `bmobile:col` spans 2 columns on every device. The number of columns spanned by a `bmobile:col` is specified via CSS. The corresponding CSS style class is set as value in the property `styleclasses`.

Bootstrap supports the setting of device-dependent style classes. The naming convention is:

- *none* (for phones - screens less than 576px wide)
- sm (for phones - screens equal to or greater than 576px wide)
- md (for tablets - screens equal to or greater than 778px wide)
- lg (for desktops - screens equal to or greater than 992px wide)
- xl (for wide desktops - screens equal to or greater than 1200px wide)

The `class col-6` defines that the control spans 6 columns on an extra small device. Classes for different devices can be combined. Each class scales up, so if you wish to set the same widths for extra small, small (=sm) and medium (=md) devices you only need to specify the extra small class – like col-6.

Based on this you place your controls into rows/cols so that the layout adapts to the different sizes of different devices.

Example:

On a large device like a desktop, you want to arrange several input controls side by side in one row:

But on a small device like a smartphone you want to arrange the input controls underneath each other:

For the example above the following classes have been specified in the NJX layout:

```
<bmobile:row>
     <bmobile:col styleclasses="col-12 col-md-6">
          <bmobile:flabel name="Firstname"></bmobile:flabel>
          <bmobile:ffield valueprop="firstname"></bmobile:ffield>
     </bmobile:col>
     <bmobile:col styleclasses="col-12 col-md-6">
          <bmobile:flabel name="Lastname"></bmobile:flabel>
          <bmobile:ffield valueprop="lastname"></bmobile:ffield>
     </bmobile:col>
</bmobile:row>
```

It defines a row with 2 `bmobile:col` controls. Each control spans 12 columns on extra small and small devices and 6 columns on medium and larger devices. It's sufficient to specify the classes for the extra small (col-12) and medium (col-md-6) devices. When 12 columns are reached the next control is rendered underneath.

The styleclasses Property

Rendering including responsiveness is based on CSS. The responsive controls of NJX are built with Bootstrap which brings a set of style classes for its components.

Many of the style classes are applied automatically to the controls. You don't need to do anything or even know about them.

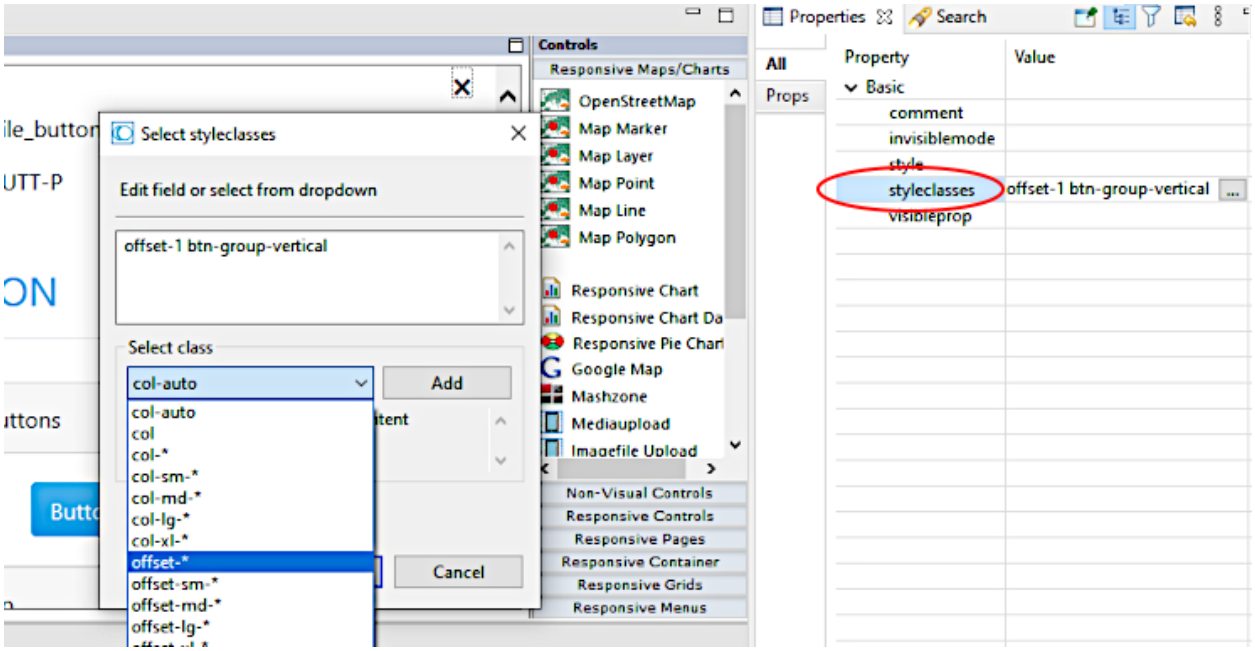
But especially the Bootstrap framework also supports many style classes which you can additionally apply to use the powerful features of Bootstrap. You can set these classes as values of the `styleclasses` property in the corresponding control.

- Using Bootstrap Style Classes
- Using Own Style Classes

Using Bootstrap Style Classes

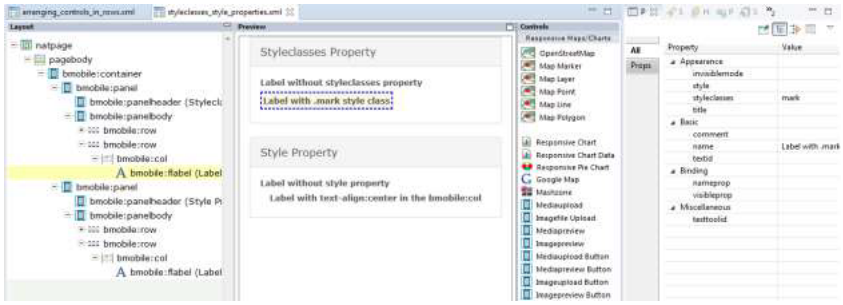
Some of the most popular Bootstrap classes for a control are shown in the Properties view of the Layout Painter. Clicking on the button to the right of the styleclasses property, opens a dialog. You can select from the suggested styleclasses. The text below the selected class explains its usage. Add one, or several classes. Classnames of any classes can be applied when separated by a blank.

The following shows an example from the NaturalAjaxDemos:



You can also add general, control-independent style classes from Bootstrap which are not in the drop-down box.

Below is an example for the Bootstrap .mark style class:



Here you find a complete list of the Bootstrap classes: **https://www.w3schools.com/bootstrap4/bootstrap_ref_all_classes.asp**.

The current version of Natural for Ajax is based on Bootstrap 4.6.

Using Own Style Classes

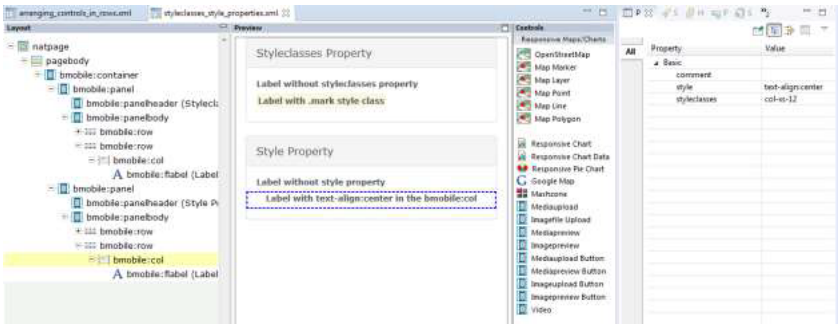
Like with non-responsive pages you can also apply an additional CSS file to a layout page via setting the property `addstylesheetfile` in the `NATPAGE` control. Then you can also use any of your own CSS classes from your stylesheet file in the `styleclasses` property.

The style Property

Settings in the style property overwrite the style classes. The style details of style classes are defined in a .css style sheet file. You can easily change the .css file without changing the layouts. Also, you just define a style class once and re-use it in many layouts. When using the style property, the style is set hard coded in the controls. We recommend using style classes whenever possible. There are some rare situations in which you want to adapt the style just for a few controls in a single layout. In these cases, you use the style property.

Example:

In the example below you use a `style="text-align:center"` to center text.



Another situation in which you might want to use the style property is in macro controls. A macro control is defined in a central location and just re-used. This allows to change the value of a style property in only one place and re-use the macro control in many layouts.

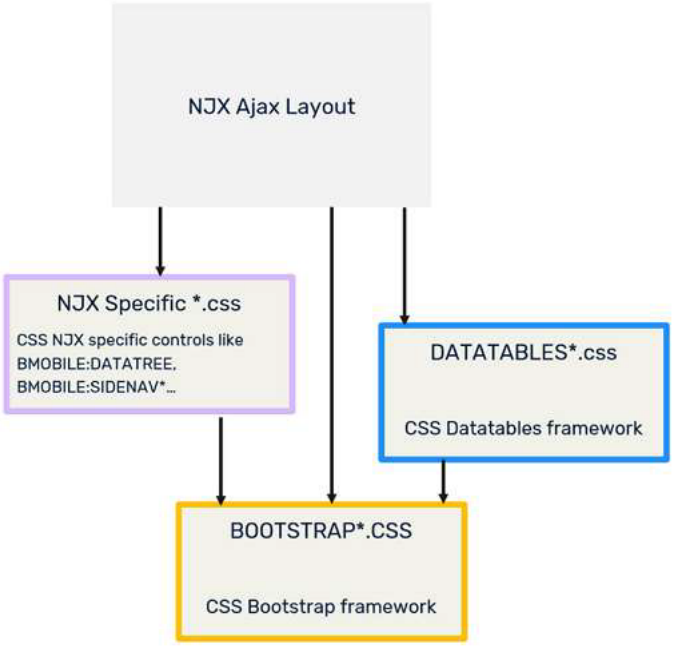
Stylesheets of an NJX Application

Besides the Bootstrap style classes, NJX itself defines some NJX-specific style classes. Ultimately, the responsive grids are built with the DataTables framework, which also brings a set of style classes.

A responsive NJX page which contains responsive grids automatically includes the following style sheet files:

- A Bootstrap style sheet file, which contains the style classes for all Bootstrap components.
- A DataTables style sheet file, which contains the style classes for grids.

- A style sheet file, which contains NJX-specific style classes.
- Optional: An own additional stylesheet.



The Bootstrap Stylesheet

NJX contains a default Bootstrap CSS file with the name *bootstrap.min.css*. This is automatically applied to each responsive page layout.

The DataTables Stylesheets

NJX uses DataTables (**https://datatables.net/**) for the responsive grids. It includes 2 alternative CSS files to render the `BMOBILE:SIMPLEGRID` control:

1. `dataTables.bootstrap4.css.min`: Includes style classes for styling based on Bootstrap 4. It integrates well with the Bootstrap CSS. For instance, the buttons of the grid are styled according to the applied Bootstrap theme.
2. `jquery.dataTables.css.min`: Includes style classes for styling based on the JQuery UI.

Per default NJX uses the `dataTables.bootstrap4.min.css`. But you can change this default per layout page. Simply set the url of the `jquery.dataTables.css` in the `datatablesstylesheetfile` property of the NATPAGE tag.

The style classes are applied automatically to the controls. You don't need to know about these classes or even set them in the `styleclasses` property. It's all done for you by the NJX framework.

The NJX-Specific Stylesheets

NJX provides style classes to render controls. For non-responsive page layouts, the file *<mywebapp>/cis/styles/CIS_DEFAULT.css* is applied per default. For responsive page layouts, NJX applies the file *<mywebapp>/cis/styles/responsive/BMOBILE4_Default.css* per default.

Some of the style classes in *BMOBILE4_Default.css* adapt the style classes defined for Bootstrap and/or DataTables slightly. Some of the defined style adds new classes to render NJX controls like the `BMOBILE:DATATREE` and the `BMOBILE:SIDEBAR*` controls or adds helper classes, which you can use in the `styleclasses` property to adapt the rendering correspondingly.

The single style settings are described directly in the file `BMOBILE4_Default.css` as comments.

Important: DO NOT MODIFY THE *BMOBILE4_Default.css* DIRECTLY! Instead, follow the customization guide in the next section to adapt settings.

Applying your Specific Application Style

In most cases you want to apply your own specific style to your application – with your company or product's colors and shapes. The following describes the steps:

1. Set your Bootstrap theme.
2. Rebuild your NJX-specific Style Classes with your Bootstrap theme and set the adapted NJX-specific classes.
3. Optional: Customize your NJX-specific Style Classes.
4. Optional: Set your Datatables theme. Usually this is not required because the Datatables style automatically adapts very well to the Bootstrap theme.
5. Optional: Add your own additional style sheet.

- Set your Bootstrap Theme
- Rebuild, Customize and Set an NJX-Specific CSS File

- Set your DataTables Theme

Set your Bootstrap Theme

NJX uses Bootstrap components to implement the responsive NJX controls. All Bootstrap style classes for the existing Bootstrap components are included in a .css file. Variations of this .css file exist which apply different looks and feels. These variations are called themes. One theme might define a blue button color and another theme might define a grey button color or rounded corners. NJX includes the Cerulean theme from **https://bootswatch.com/cerulean/**for Bootstrap version 4 as default.

How to Create or Get a Bootstrap Theme

If you want to use a different theme in your NJX applications, you basically have 3 options:

1. Download a free theme. Several providers of free themes exist. One example is **https://bootswatch.com**.
2. Buy a theme from corresponding theme providers.
3. Create your own theme. To create your own theme, some theme builder tools exist. An example is **https://bootstrap.build/**

In all 3 cases the result is a .css file containing the corresponding Bootstrap classes. Normally the name for the minified file is *bootstrap.min.css*.

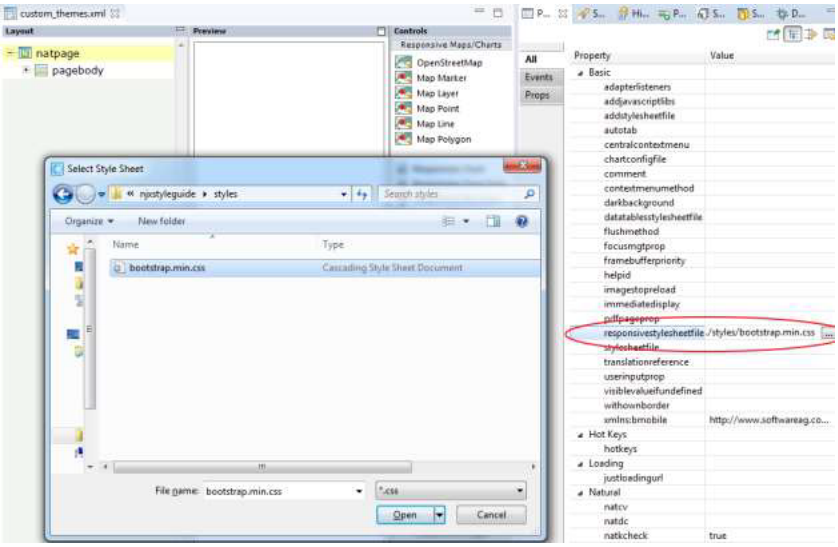
Note: We cannot guarantee that any downloadable samples or output produced by such third-party services or tools will be fully compatible. Before using and downloading, please check the licenses under which the web service, the tool or the output are provided by the authors.

How to Set a Bootstrap Theme in NJX

Per default, NJX uses the Bootstrap theme *<mywebapp>/HTMLBasedGUI/bootstrap4/css/boostrap.min.css*.

If you want to set a different Bootstrap theme in your responsive page layout, do the following:

1. In your NaturalONE project, place the *bootstrap.min.css* into the *styles* subfolder of your User Interface Component. If you have several User Interface Components, create a "Global User Interface Component" – as described in the NaturalONE documentation - and place it there.
2. If you only want to set this theme for a single layout and not the complete application you can use the `responsivestylesheetfile` property in the NATPAGE to set your Bootstrap theme as shown in the example below:



3. If you want to set your own Bootstrap theme for the whole application, you can create a corresponding NATPAGE template – as described in the documentation *NaturalONE > Ajax Developer > Getting Started with the Layout Painter > Creating Custom Layout Templates* – and set the `responsivestylesheetfile` property in your template. Alternatively, you can set the attribute `defaultresponsivecss` in the `cisconfig.xml` file as shown below:

```
<cisconfig ↩
defaultresponsivecss="../myuserinterfacecomponent/styles/mybootstrap.css"
```

   For more information on how to work with *cisconfig.xml* files in NaturalONE, see the documentation *NaturalONE > Ajax Developer > Getting Started with Ajax Developer > Using Ajax Configuration Files*.

4. If you change `defaultresponsivecss` in the *cisconfig.xml* file, you need to rebuild the User Interface Components in your Natural ONE projects.

NJX Versions and Bootstrap Versions

NJX versions will be upgraded to higher Bootstrap versions from time to time. Please check the release notes if a new Bootstrap version has been applied. In case a new Bootstrap version has been applied, it is strongly recommended to replace your custom Bootstrap themes with the corresponding themes for this version. It is not guaranteed that the NJX with the new Bootstrap version will work with Bootstrap themes of lower Bootstrap versions.

Bootstrap Themes and SASS

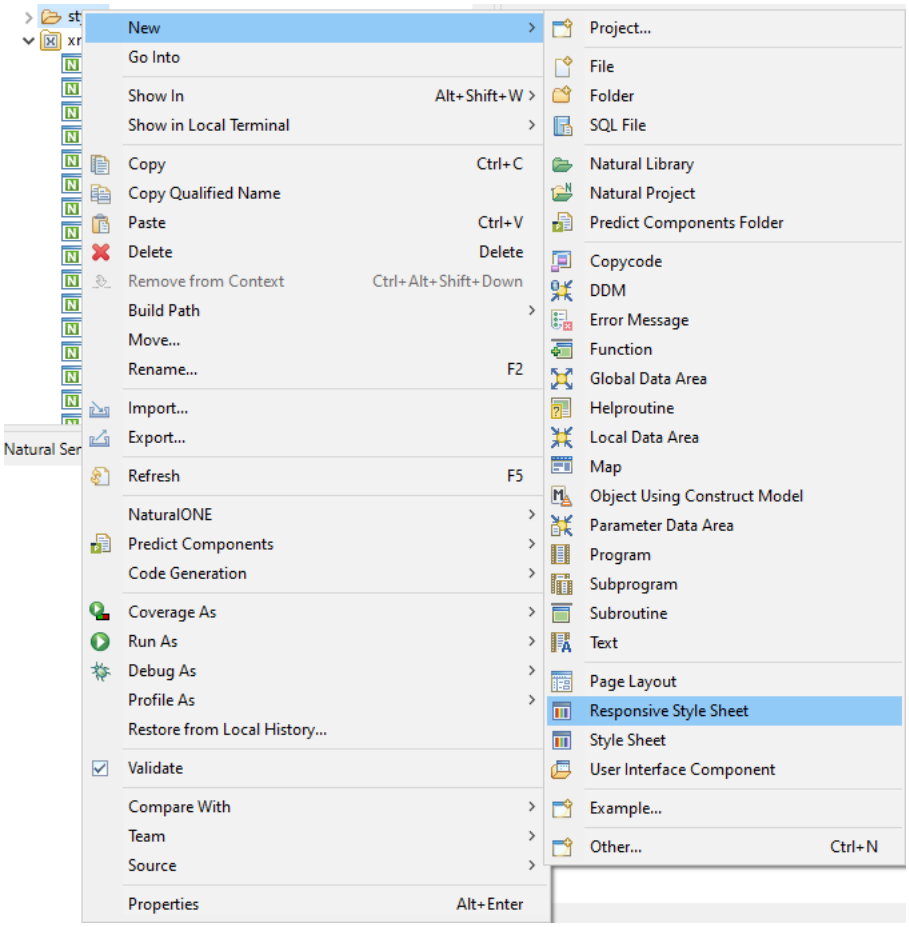
Bootstrap supports *Syntactically Awesome Style Sheets* (**SASS**). This allows you to adapt Bootstrap themes to your needs by setting single variables. The big advantage is that you simply need to set the variables and don't need to rewrite or overwrite the CSS classes themselves. A Bootstrap theme usually also consists of a file with the name *_variables.scss*. This file contains a set of variables you can customize and these variables can be used by other style sheets. This allows you to simply rebuild the NJX-specific style classes with the specific settings of your theme, as explained in the next section. Be sure to create or download the *_variables.scss* file for your theme.

Rebuild, Customize and Set an NJX-Specific CSS File

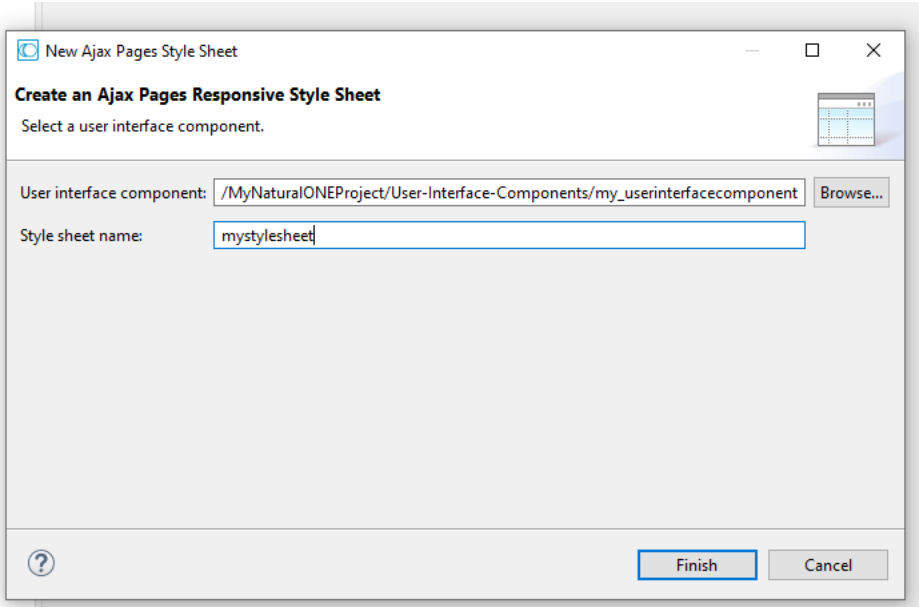
The default style classes in *BMOBILE4_Default.css* match the style of the default Bootstrap theme used in NJX. If you are using a different Bootstrap theme you usually need to create a stylesheet file which matches the style (colors, fonts, etc.) of your custom Bootstrap theme. You don't need to modify any CSS directly because the NJX-specific style classes are based on the Bootstrap SASS variables. You simply need to rebuild the NJX-specific CSS file.

How to Rebuild an NJX-Specific CSS File

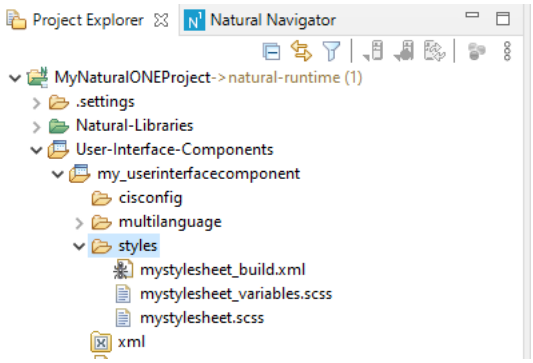
In your NaturalONE, open the context menu (right-click) and then select "New/Responsive Style Sheet" as shown below:



Enter a name for your CSS file in the opened wizard and press “Finish”:



This will create the following files in the *./styles* subfolder of your User Interface Component:



The table below explains the purposes of the three files in the *./styles* subfolder:

File name	Purpose
mystylesheet_build.xml	Ant script which generates the NJX-specific CSS file using the *mystylesheet_variables.scss* and *mystylesheet.scss* files.
mystylesheet_variables.scss	SASS variable settings in case you would like to customize the NJX-specific CSS (optional).
mystylesheet.scss	The main SASS file which contains all the imports for the generation. You only need to adapt the first import for your specific Bootstrap theme as described below.

The file *mystylesheet.scss* is opened automatically in an Eclipse editor. The first import statement imports the *_variables.scss* file of the default Bootstrap theme of NJX. You need to adapt the path to the *_variables.scss* file of your Bootstrap theme.

Example:

If you copied your theme to the *./styles/mytheme* subfolder of your User Interface Component, you would change the line:

```
@import ↩
"C:/myworkspace/.naturalone/apachetomcat/webapps/cisnatural/HTMLBasedGUI/bootstrap4/scss/bootswatch_cerulean/variables";
```

to

```
@import "mytheme/variables";
```

That's all you need to change in the *mystylesheet.scss* files. For a further example, have a look at the *mydarklynjx.css* in the *njxdemos/styles* folder of the NaturalAjaxDemos.

To generate a CSS file from the SASS files, you need a SASS compiler. Currently NJX does not include a SASS compiler. NJX itself uses the SASS compiler **https://github.com/sass/dart-sass**, which can be downloaded via npm (see **https://sass-lang.com/dart-sass**). Be sure to use a Bootstrap 4.6

compatible SASS compiler as described here: **https://getbootstrap.com/docs/4.6/getting-started/build-tools/#sass**.

The *mystylesheet_build.xml* file is a ready-to-use Ant script for generating the CSS file. All you need to set is the path of your SASS compiler as Variable when running the Ant script.

Example:

```
ant -Dsass=c:/mynpm/npm/sass.cmd
```

The Ant script will create the NJX-specific CSS file *mystylesheet.css* for your Bootstrap theme.

How to Customize an NJX-Specific CSS

Besides regenerating the NJX-specific CSS so that it reflects your Bootstrap theme, you can also customize the NJX-specific CSS classes. Instead of modifying the classes directly, the customization is done via SASS variables. The file *./cis/styles/responsive/scss/_njxvariables.scss* of your NJX installation contains several variables for the NJX-specific CSS.

If you want to change specific settings, do the following:

1. Copy the specific variable definition you want to change from the *_njxvariables.scss* file into your *mystylesheet_variables.scss* file.
2. Adapt the settings.
3. Rebuild the NJX-specific CSS by running the Ant script *mystylesheet_build.xml* as described above.

You'll find two commented-out examples in the *mystylesheet_variables.scss file*:

```
// Examples for BMOBILE:SIMPLEGRID control
                // Show the edit buttons on hover
                // $njx-simplegrid-edit-onhover: true;
                // change color for selected lines to orange
                // $njx-simplegrid-select-bg: rgba($orange, .3);
```

How to Set an NJX-Specific CSS File

If you want to set your NJX-specific CSS file in your responsive page layout, do the following:

1. For a single layout you can use the `stylesheetfile` property in the NATPAGE.
2. If you want to set it for the whole application, you can create a corresponding NATPAGE template – as described in the documentation *NaturalONE > Ajax Developer > Getting Started with the Layout Painter > Creating Custom Layout Templates* – and set the `styleseheetfile` property in your template. Alternatively, you can set the attribute `defaultbmobilecss` in the *cisconfig.xml* file as shown below:

```
<cisconfig ↩
defaultmobilecss="../myuserinterfacecomponent/styles/BMOBILE_Mystyle.css"
```

For more information on how to work with *cisconfig.xml* files in NaturalONE, see the documentation *NaturalONE > Ajax Developer > Getting Started with Ajax Developer > Using Ajax Configuration Files*.

3. If you changed the `defaultbmobilecss` in the *cisconfig.xml* file, then you need to rebuild your User Interface Components in your NaturalONE projects.

NJX Versions and NJX-Specific CSS Versions

Newer NJX versions often bring new style classes for the new supported features. If you created a custom NJX style sheet file as described above, be sure to check the release notes for more information. Upgrading from NJX 9.1.2 and earlier (Bootstrap 3) to NJX 9.1.3 (Bootstrap 4) requires you to upgrade your style sheet file as described above.

Set your DataTables Theme

Per default, NJX uses the DataTables theme *<mywebapp>/HTMLBasedGUI/datatables/css/dataTables.bootstrap4.min.css*. This renders the responsive grids using the Bootstrap style. As an alternative, you can set the file *<mywebapp>/HTMLBasedGUI/datatables/css/jquery.dataTables.css* as DataTables theme. This renders the responsive grids using the jquery style.

How to Create or Get a DataTables Theme

If you want to customize the rendering for either the “Bootstrap” or the “jquery” styling variant, you can create your own DataTables theme. DataTables provide an online theme creator tool to create own themes with your preferred colors and styles. It also provides downloads of customized stylesheets. For more information see **https://datatables.net/manual/styling/** and **https://datatables.net/download/**.

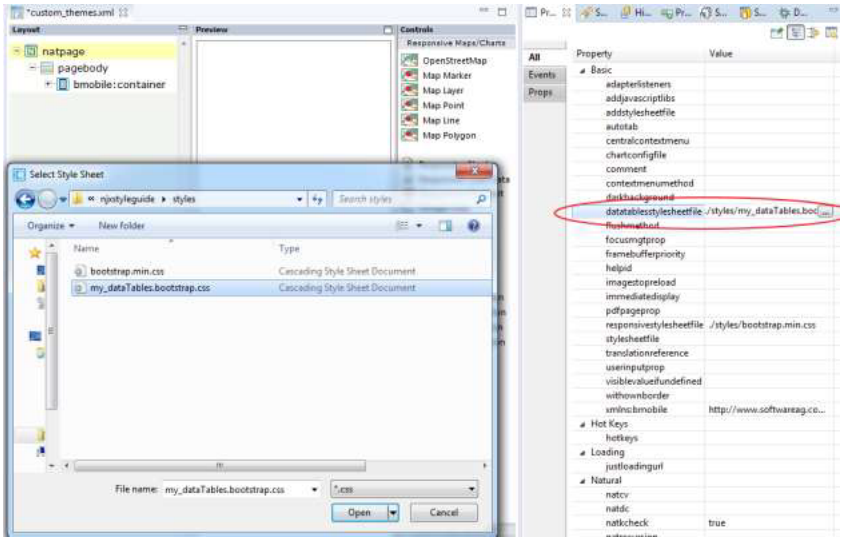
The result is a .css file containing the corresponding DataTables style classes.

Note: We cannot guarantee that any downloadable samples or output produced by such third-party services or tools will be fully compatible. Before using and downloading, please check the licenses under which the web service, the tool or the output are provided by the authors.

How to Set a DataTables Theme in NJX

If you want to set a different DataTables theme in your responsive page layout do the following:

1. In your NaturalONE project, place the corresponding *.css* file in the *styles* subfolder of your User Interface Component. If you have several User Interface Components, create a "Global User Interface Component" – as described in the NaturalONE documentation - and place the *.css* file there.
2. For a single layout, you can use the `datatablesstylesheetfile` property in the NATPAGE to set your DataTables theme as shown in the example below:



3. If you want to set your own DataTables theme for the whole application, you can create a corresponding NATPAGE template – as described in the documentation *NaturalONE > Ajax Developer > Getting Started with the Layout Painter > Creating Custom Layout Templates* – and set the `datatablesstylesheetfile` property in your template. Alternatively, you can set the attribute `defaultdatatablescss` in the *cisconfig.xml* file as shown below:

```
<cisconfig ↩
defaultdatatablecss="../myuserinterfacecomponent/styles/mydatatables.css"
```

   For more information on how to work with *cisconfig.xml* files in NaturalONE, see the documentation *NaturalONE > Ajax Developer > Getting Started with Ajax Developer > Using Ajax Configuration Files*.

4. If you changed the `defaultdatatablescss` in the *cisconfig.xml* file, you need to rebuild your User Interfaces in your NaturalONE projects.

NJX Versions and DataTables Versions

NJX versions will be upgraded to higher DataTables versions from time to time. Please check the release notes if a new DataTable version has been applied. In case a new DataTable version has been applied, it is strongly recommended to replace your custom DataTables themes by corresponding themes for this version. It is not guaranteed that the NJX with the new DataTables version will work with DataTables themes of lower DataTables versions.

Hints

- Do NOT edit Bootstrap or DataTables themes directly. Otherwise, you need to manually apply these changes for each and every version upgrade. If you have for instance your Bootstrap theme, but just want to modify some settings, then use the SASS variables as described above for the customization.
- Only if this is not possible you could add the corresponding rules to an own additional stylesheet file and set this file in the property `addstylesheetfile` of the `NATPAGE` control in your layout page. You need to use the `!important` statement. The example below changes the font size for buttons in the Bootstrap *.btn* style class:

```
.btn
{
   font-size: 18px !important;
}
```

- Prefer using the `styleclasses` property over the `style` property.
- If you see that you are creating many own additional style classes or having lots of additional style settings directly in your layouts, then consider using a different Bootstrap theme instead.
- Prefer using themes over creating own style classes.
- Always place your custom CSS files in the *styles* subfolder of one User Interface Component. Prefer using a “Global User Interface Component” for this.
- Prefer using the *cisconfig.xml* settings (`defaultbmobilecss`, `defaultresponsivecss` and `defaultdatatablescss`) over using the corresponding NATPAGE properties in all your layouts.