

[xwiki.org](https://www.xwiki.org)

XWiki Syntaxes (XWiki.org)

21-26 Minuten

The XWiki Syntax 2.0 has proven to be quite useful and robust in general; however since its introduction a few shortcomings have been found. The corresponding improvements have been consolidated in XWiki Syntax 2.1. Some new features of this syntax are:

- Homogenize the link and image syntax for better clarity, consistency and extensibility.
- Added ability to display icons, to embed images via the Data URI scheme, to link to files using the UNC notation and to link to relative URLs.

Since XWiki Syntax 2.1 is based on XWiki Syntax 2.0 all syntax from XWiki Syntax 2.0 is valid unless the 2.1 specifications suggest differently.

In addition to these XWiki-specific syntaxes we've also changed our underlying rendering engine in XWiki Enterprise version 1.7 (was Radeox previously) in favor of our own engine which is superset wrapper around [Wikimodel](#) and [Doxia](#) (and possibly others in the future). This has allowed us to provide other syntaxes in the wiki: [MediaWiki](#), [Confluence](#), [JSPWiki](#), [Creole](#), [TWiki](#) and [more](#).

XWiki Syntax 2.1 corrects some errors or ambiguous syntax entered by the user as shown in the examples in the table below.

Description	Example of invalid or ambiguous syntax	Fixed XWiki Syntax 2.1
Unclosed text styles	**bold	**bold**
Two standalone elements not separated by 2 new lines	table cell * list item	table cell * list item
Two standalone elements not separated by 2 new lines	paragraph ---- paragraph	paragraph ---- paragraph
Ignored new line at beginning of document	<new line at beginning of document> paragraph	paragraph
Not closed heading syntax	=== heading	=== heading ===

The following other syntaxes are implemented in XWiki Enterprise 1.6 and later:

- [JSPWiki](#)

- [MediaWiki](#)
- [Confluence](#)
- [TWiki](#)
- [Creole 1.0](#)
- [XHTML 1.0](#)

The implementation for these syntaxes is not fully finished yet. For example support for links is not working perfectly yet. We also need to define if we want to extend the original syntaxes to support XWiki-specific features like ability to link to another sub-wiki.

Paragraphs are text elements separated by 2 or more new lines.

In XWiki Syntax 2.1 new lines are honored which is not the case in XWiki Syntax 1.0 and in Creole Syntax.

Feature	XWiki Syntax 2.1	Result
Simple paragraph	This is a paragraph	This is a paragraph
Paragraph on multiple lines	Paragraph on multiple lines	Paragraph on multiple lines
Two paragraphs	Paragraph one Paragraph two	Paragraph one Paragraph two
Parametrized paragraph	(% style="text-align:center; color:blue" %) Centered and blue paragraph	Centered and blue paragraph
Different style on some portion of the paragraph content	paragraph with (% style="color:red" %) red(%%) different style inside	paragraph with red text inside

Feature	XWiki Syntax 2.1	Result
Standard headings	= level 1 =	
	== level 2 ==	
	=== level 3 ===	
	==== level 4 ====	
	===== level 5 =====	
	===== level 6 =====	
Parameterized headings	(% style="color:blue" %) = heading =	

Headings with XWiki Syntax === Heading with **bold** ===

New in XWiki Syntax 2.1 over XWiki Syntax 1.0:

- Spaces are allowed just after the syntax symbols (for example in XWiki Syntax 1.0, this was not possible: `* bold *`).
- Use double symbols when there was only a single symbol in XWiki Syntax 1.0 so that it's less likely that the user will mistakenly use them in text.
- Ability to span several lines (wasn't possible in XWiki Syntax 1.0).

Feature	XWiki Syntax 2.1	Result
Bold	**bold**	bold
Underline	<u>__underline__</u>	<u>underline</u>
Italics	<i>//italic//</i>	<i>italic</i>
Striked out	--strike--	strike
Monospace	<code>##monospace##</code>	monospace
Superscript	some ^{^^superscript^^} some	some ^{superscript}
Subscript	some _{„subscript,„} some	some _{subscript}
There must be 4 or more dashes.		

Note that this is different from Creole where exactly 4 dashes are required.

Feature	XWiki Syntax 2.1	Result
Simple horizontal line	----	
Parametrized horizontal line	(% style="color:blue" %)	

Some of the mentioned styles do not work on all browsers. For a comprehensive list follow [this link](#).

Feature	XWiki Syntax 2.1	Result
Bulleted list	* item 1	• item 1
	** item 2	• item 2
	*** item 3	• item 3
	* item 4	• item 4
Numbered list	1. item 1	1. item 1
	11. item 2	1. item 2
	111. item 3	1. item 3
	1. item 4	2. item 4
Mixed list	1. item 1	1. item 1
	1*. item 2	• item 2
	1*. item 3	• item 3
	1. item 4	2. item 4
Square list	(% style="list-style-type: square" %)	• item 1
	* item 1	• item 2
	* item 2	
Disc list	(% style="list-style-type: disc" %)	• item 1
	* item 1	• item 2
	* item 2	
Lowercase Alphabetical list	(% style="list-style-type: lower-alpha" %)	• item 1
	* item 1	• item 2
	* item 2	

	(% style="list-style-type: upper-alpha" %)	• item 1
Uppercase Alphabetical list	* item 1	• item 2
	* item 2	
	(% style="list-style-type: lower-roman" %)	• item 1
Lowercase Roman list	* item 1	• item 2
	* item 2	
	(% style="list-style-type: upper-roman" %)	• item 1
Uppercase Roman list	* item 1	• item 2
	* item 2	
	(% style="list-style-type: lower-greek" %)	• item 1
Lowercase Greek list	* item 1	• item 2
	* item 2	
	(% style="list-style-type: upper-greek" %)	• item 1
Uppercase Greek list	* item 1	• item 2
	* item 2	
	(% style="list-style-type: hiragana" %)	• item 1
Hiragana list	* item 1	• item 2
	* item 2	
	(% style="list-style-type: hiragana-iroha" %)	• item 1
Hiragana Iroah list	* item 1	• item 2
	* item 2	
	(% style="list-style-type: katakana" %)	• item 1
Katakana list	* item 1	• item 2
	* item 2	
	(% style="list-style-type: katakana-iroha" %)	• item 1
Katakana Iroha list	* item 1	• item 2
	* item 2	
	(% style="list-style-type: armenian" %)	• item 1
Armenian list	* item 1	• item 2
	* item 2	
	(% style="list-style-type: hebrew" %)	• item 1
Hebrew list	* item 1	• item 2
	* item 2	


Georgian list	(% style="list-style-type:	
	georgian" %)	• item 1
	* item 1	• item 2
CJK ideographic list	(% style="list-style-type:	
	cjk-ideographic" %)	• item 1
	* item 1	• item 2
	* item 2	

Feature	XWiki Syntax 2.1	Result
Standard	; term	term
definition	: definition	definition
Nested definitions	; term 1	term 1
	: definition 1	definition 1
	; term 2	term 2
	:: definition 2	definition 2
Parametrized	(% style="color:blue"	
definition	%)	term
	; term	definition
	: definition	

A new line is a carriage return. A line break is a forced new line that can appear anywhere in the text.

In XWiki Syntax 2.1 new lines are honored which is not the case in XWiki Syntax 1.0 and in Creole Syntax.

Feature	XWiki Syntax 2.1	Result
Line break	Line\\New line	Line New line
New line	Line New line	Line New line
Absolute		
link to		
page	[[PageA.PageB]]	PageB
PageB		
located in		
PageA		
Relative		
link to		
page	[[PageA]] or [[.PageA]]	PageA
PageA		
from the		
current		
page		

Relative link to page PageB in PageA from the current page	<code>[[.PageA.PageB]]</code>	PageB
Link with a label	<code>[[label>>PageA]]</code> XWiki Syntax is supported inside link labels.	label
Link with wiki syntax in the label	<code>[[**bold label**>>PageA]]</code>	bold label
Link on an image	<code>[[image:PageA@img.png>>PageA]]</code>	
Absolute link to page PageB located in PageA in wiki WikiA	<code>[[WikiA:PageA.PageB]]</code>	PageB
Link that opens in a new window	<code>[[PageA target="_blank"]]</code>	PageA
Implicit link to a URL	This is a URL: <code>http://xwiki.org</code>	This is a URL: http://xwiki.org
Explicit link to a URL	<code>[[http://xwiki.org]]</code>	http://xwiki.org
Explicit link to a URL with a label	<code>[[XWiki>>http://xwiki.org]]</code>	XWiki
Link to an email address	<code>[[john@smith.net>>mailto:john@smith.net]]</code>	john@smith.net
Link to an attachment on the current page	<code>[[attach:img.png]]</code>	img.png
Link to an attachment in a different	<code>[[attach:PageA.PageB@img.png]]</code>	img.png

page

Link to an

Anchor in `[[PageA.PageB|anchor="anchor"]]`

[PageB](#)

a page

`[[PageA.PageB| |anchor="HMyheading"]]`

Link to a

Heading in

a page

When you add a Heading, an anchor named "H" followed by the heading title with only alpha characters is created. For example, for a Heading named "My heading", the generated anchor will be "HMyheading".

[PageB](#)

Link to an

anchor in

the current

page

`[[label>>|anchor="anchor"]]`

[label](#)

Link to a

page with

a query

string

`[[PageA.PageB|queryString="param1=value1¶m2=value2"]]`

[PageB](#)

Link to the

current

page with

a query

string

`[[label>>|queryString="param1=value1¶m2=value2"]]`

[label](#)

The part in () is required, while the parts in [] are optional.

The full format of a link is **[label>>] (resource) [[parameters]**

- **label:** An optional string which will be displayed to the user as the link name when rendered. The label may contain XWiki Syntax. If no label is specified a default label will be generated. The generation pattern can be changed, see the [Admin Guide](#).
Example: My Page
- **resource:** A required string with the link reference in one of the following forms
- **URL:** Any URL in the form of **[url:] (protocol://path)**. Examples: `http://xwiki.org`, `url:https://svn.xwiki.org/`
- **url:** An optional string identifying the resource as an URL.
- **Wiki page** reference in the form **(doc:) [[wikiName:] spaceNameList.] (pageName)**. Examples: `doc:Welcome`, `doc:Main.Welcome`, `doc:mywiki:Main.Welcome`
- **doc:** A required string identifying the resource as an XWiki terminal page. A non-terminal page can also be referenced this way, but it must append its `.WebHome` part (e.g. `doc:Sandbox.WebHome`).
- **wikiName:** An optional string containing the name of a virtual wiki. The link will point to a page inside that virtual wiki. If no wiki is specified, the current wiki is used. Example: `mywiki`.
- **spaceNameList:** An optional dot-separated list of wiki Space names. If no space is specified the current space is used.

Examples: Main, A.B, A.B.C

- **pageName**: A required string containing the name of the linked wiki page. Example: Welcome
- **Wiki space** Since 7.4.1 reference in the form (**space:**) **[wikiName:] (spaceNameList)**. Examples: space:Main, space:mywiki:Main, space:A.B.C
- **space**: A required string identifying the resource as an XWiki non-terminal page (i.e. a space).
- **wikiName**: An optional string containing the name of a virtual wiki. The link will point to a page inside that virtual wiki. If no wiki is specified, the current wiki is used. Example: mywiki
- **spaceNameList**: A required list of dot-separated wiki Space names pointing to the final linked wiki Space (or non-terminal page). Examples: Main, A.B, A.B.C
- **InterWiki page** reference in the form **interwiki: (interWikiAlias:) (pageName)**. Example: interwiki:wikipedia:XWiki
- **interwiki**: A required string identifying the resource as an InterWiki link.
- **interWikiAlias**: An optional [Inter Wiki](#) alias as defined in the InterWiki Map (see the [Admin Guide](#)). Example: wikipedia
- **pageName**: A required string containing the name of the linked page. Example: XWiki
- **Attachment** reference in the form **attach: [wikiPageName@] (attachmentName)**. Examples: attach:img.png, attach:mywiki:Main.WebHome@img.png, attach:mywiki:Main@img.png
- **attach**: A required string identifying the resource as attachment.
- **wikiPageName**: An optional string referencing the (terminal or non-terminal) page that holds the attachment. This is resolved identically to "Untyped", below.
- **attachmentName**: Name of the attachment as it is stored in the wiki. Example: photo.png
- **Email address** in the form **mailto: (emailAddress) (#anchor is not valid)**. Example: mailto:john@smith.com
- **mailto**: A required string identifying the resource as email.
- **emailAddress**: Targeted email address. Example: john@smith.com
- **Relative path** reference on the server in the form **path: (relPath)**. Example: path:\$doc.getURL('reset') produces target address http://server.domain.com/xwiki/bin/reset/Space/Page where /xwiki/bin/reset/Space/Page is produced by \$doc.getURL('reset').
- **path**: A required string identifying the resource as a relative path.
- **relPath**: A required string containing the relative path of the resource on the server that shall be linked.
- **UNC (Windows Explorer)** reference in the form **unc: (path)**. The link is rendered as a file:// link. Examples: unc:C:\Windows\,

unc:\\myserver\\path\\img.png, unc:home/user/somefile

- **unc:** A required string identifying the resource as a UNC (Windows Explorer) path.
- **path:** A required string containing the local path of resource accessible by the user. Examples: C:\\Windows\\, \\myserver\\path\\img.png, home/user/somefile
- **Untyped:** If none of the above mentioned resource types are specified (i.e. no type: resource prefix was specified in the link), then the link will be treated as a link to an XWiki terminal or non-terminal page using the following algorithm:
- **Terminal page** in the current space, *only* if it exists. Example: [[A]] is resolved to the equivalent of [[doc:currentSpace.A]]
- **Non-terminal page** Since 7.4.1 in the current space. Example: [[A]] is resolved to the equivalent of [[space:currentSpace.A]], which is the equivalent of [[doc:currentSpace.A.WebHome]]
- If the current page is non-terminal and the previous 2 checks above did not find an existing page, 2 additional checks are made:
- **Terminal page** Since 7.4.1 as sibling in the parent space, *only* if it exists. Example: The [[B]] link inside the non-terminal page A.C is resolved to the equivalent of [[doc:A.B]]
- **Non-terminal page** Since 7.4.1 as sibling in the parent space, regardless if it exists or not. Example: The [[B]] link inside the non-terminal page A.C is resolved to the equivalent of [[space:A.B]], which is the equivalent of [[doc:A.B.WebHome]]
- **Note1 - Absolute links:** Since 7.4.1 If the untyped link has 2 or more dot-separated components specified (i.e. that look like a space name and a page name), the above algorithm will resolve the page relative to the current wiki, and not the current space. Example: [[A.B]] can be resolved to either [[doc:currentWiki:A.B]] (if it exists) or to [[space:currentWiki:A.B]] (equivalent of [[doc:currentWiki:A.B.WebHome]]) and not to [[doc:currentWiki:currentSpace.A.B]] or [[doc:currentWiki:currentSpace.A.B.WebHome]].
- **Note2 - Special handling of .WebHome:** Since 7.4.1 If the untyped link ends in .WebHome, it will *always* be handled as a terminal page. Example: [[A.WebHome]] will always be resolved to the equivalent of [[doc:A.WebHome]] and not to [[doc:A.WebHome.WebHome]].
- **parameters:** An optional list of space-separated parameters passed to the link. Example: queryString="mydata1=5&mydata2=Hello" anchor="HTableOfContents" target="_blank"
- **queryString:** An optional query string for specifying parameters that will be appended to the link target address and used in the rendered URL. Example: url:http://domain.com/path|queryString="mydata1=5&mydata2=Hello" produces target address http://domain.com/path?mydata1=5&mydata2=Hello
- **anchor:** An optional anchor name pointing to an anchor defined in

the referenced link. Note that in XWiki anchors are automatically created for headings. Example: url:http://domain.com/path||anchor="HTableOfContents" produces target address http://domain.com/path#HTableOfContents

- **target:** An optional parameter that allows to open link target in new window. Example: target="_blank"

Allows to easily create content in table format. Parameters for table, row or cell are also supported in XWiki Syntax 2.1.

Feature	XWiki Syntax 2.1	Result
Standard table	<code> =Title 1 =Title 2</code>	Title 1 Title 2
	<code> Word 1 Word 2</code>	
	or	Word Word 1 2
	<code>!=Title 1!=Title 2</code>	
	<code>!!Word 1!!Word 2</code>	
Parametrized table	<code>(% style="background-color:red;align=center" %)</code>	Title 1 Title 2
	<code> =Title 1 =(% style="background-color:yellow" %)Title 2</code>	
	<code> Word 1 Word 2</code>	Word Word 1 2
Filterable Sortable table	<code>{{velocity}} \$xwiki.ssfx.use("js/xwiki/table/table.css") \$xwiki.jsfx.use("js/xwiki/table/tablefilterNsort.js", true) {{/velocity}}</code>	Cell 11 Cell 12
	<code>(% class="grid sortable filterable doOddEven" id="tableid" %)</code>	Cell 21 Cell 22
	<code>(% class="sortHeader" %) =Title 1 =Title 2</code>	
	<code> Cell 11 Cell 12 Cell 21 Cell 22</code>	

For improved features see the [Livetable Macro](#).

The part in () is required, while the parts in { } are optional.

The full format of an image is either **image: (reference)** or **[[image: (reference) {|parameters}]]**

- **image:** A required string identifying the resource as image.
- **reference:** The reference to the image that shall be displayed in one of the following forms:
- **URL:** Any URL to an image in the form of **protocol://path /imageName**. Example: http://domain.org/path/img.png

- **Attachment** reference in the form **{{{wikiName:} spaceNameList.} pageName@} (imageName)**
- **wikiName**: An optional string containing the name of a virtual wiki. The image reference will point to an image attached to a page inside that virtual wiki. If no wiki is specified, the current wiki is used. Example: mywiki.
- **spaceNameList**: An optional dot-separated list of wiki Space names. If no space is specified the current space is used. Examples: Main, A.B, A.B.C
- **pageName**: An optional string containing the name of the wiki page to which the referenced image is attached. Example: Welcome
- **imageName**: A required string containing the name of the image attached to a page as it is stored in the wiki. Example: myImage.png
- **Icon** reference in the form **(icon:) (iconName)**. Example: **icon:accept**
- **icon**: A required string identifying the image reference as an icon from the [XWiki Icon Set](#).
- **iconName**: A required string identifying the icon referenced. Example: accept
- **Data URI** in the form **(data:) (content)**. Example:
data:image/png;base64,iVBORw0KGgoAAAANSUheUgAAAAUAAAAFCAYAAACNbybIAA//8/w38GIAXDIBKE0DHxgljNBAAO9TXL0Y4OHwAAAABJRU5ErkJggg==
- **data**: A required string identifying the image as being specified inline using the [Data URI scheme](#).
- **content**: The encoded image. Example:
image/png;base64,iVBORw0KGgoAAAANSUheUgAAAAUAAAAFCAYAAACNbybIAAAHEIEQ//8/w38GIAXDIBKE0DHxgljNBAAO9TXL0Y4OHwAAAABJRU5ErkJggg==
- **parameters**: An optional list of space-separated parameters passed to the image. Example: width="800" height="600" alt="img.png" title="My nice image"
- **HTML attributes**: All attributes defined by the HTML standard will be added to the rendered HTML tag.
- **style**: CSS style information that should be applied to the image. Examples: style="float:right;height:50" (image on right side, height 50 px), style="display:block;margin-left:auto;margin-right:auto; width:80%" (image centered, width 80% of block width), style="vertical-align:bottom" (text starts at bottom of picture)
- **height**: A parameter that defines the height of the displayed image. The value should be presented either in pixel (example: height="80") or in pixel related to the height of the block containing the image (example: height="40%").
- **width**: A parameter that defines the width of the displayed image. The value should be presented either in pixel (example: width="80") or in pixel related to the width of the block containing the image (example: width="40%").

- **title:** A parameter that defines the title the displayed image which will be visible when hovering the mouse trigger over the image, for instance. Example: title="My nice image"
- **alt:** A parameter that defines which text should be displayed if the browser is not able to display the image. Since this is a required HTML attribute XWiki will use the file name instead if the alt parameter is not defined. Example: alt="img.png"
- **More:** A more in depth explanation on the HTML tag including more attributes can be reviewed [on w3.org](https://www.w3.org/).
- **queryString:** Allows queries to be passed to the server when creating the download link for the referenced image. Example: queryString="width=100&height=800&keepAspectRatio=true" (**keepAspectRatio=true will fail if the width and height parameters are specified in addition to queryString!**)

Allow to enter content that will not be formatted (in other words the XWiki Syntax will not be taken into account).

Feature	XWiki Syntax 2.1	Result
Verbatim inline	Some verbatim {{{**[[not rendered]]**}}} content	Some verbatim **[[not rendered]]** content
Verbatim block	<pre> {{{ multi line **verbatim** content }}}</pre>	<pre> multi line **verbatim** content</pre>

Allows to quote some text.

Feature	XWiki Syntax 2.1	Result
Simple quote	<pre> > john said this I said ok</pre>	<pre> (john said this I said ok</pre>
Nested quotes	<pre> > john said this >> marie answered that I said ok</pre>	<pre> (john said this (marie answered that I said ok</pre>

Groups can be used to insert another document inline directly into the current document. This allows for example to insert complex elements or style inside a list item, inside a table cell or a paragraph. Groups are delimited by the following syntactic elements: (((...))). One Group can contain another Group and there is no limit of imbrication.

XWiki Syntax 2.1	Result		
=Header 1 =Header 2 =Header 3	Header 1	Header 2	Header 3
Cell One (((= Embedded document =	Cell One	Some embedded paragraph.	Cell Three
Some embedded paragraph.		<ul style="list-style-type: none"> list item one 	

```

* list item one
* list item two
  ** sub-item 1
  ** sub-item 2
))) | Cell Three

Next paragraph in the
top-level document

(% class="myClass"
style="color:blue"
%)( (blue paragraphs
inside my group

inside myClass)))

```

Allows to escape XWiki Syntax.

Feature	XWiki Syntax 2.1	Result
Escape a character	This is not a ~ To enter a ~ character use a double escape: ~~	This is not a link
Escape longer text (also see "Verbatim")	{{ some longer text //without// formatting}}	some longer text //without// formatting

With XWiki Syntax 2.1 it's possible to pass parameters to the different syntax elements and also to blocks of text. This is used for example to style them. You can set any parameter key/value pair you want. The XHTML renderer will pass these parameters as XHTML attributes to the underlying XHTML representation of the different syntax elements.

XWiki Syntax 2.1	Generated XHTML
(% class="myClass" style="myStyle" id="myId" %) = heading =	<h1 class="myClass" style="myStyle" id="myId">heading</h1>

There is only one kind of macro in XWiki Syntax 2.1, which is called by the syntax: `{{macroname param1="value1" ... paramN="valueN"}}...{{/macroname}}`. For macros without content there's a short notation: `{{macroname param1="value1" ... paramN="valueN"/>`

Feature	XWiki Syntax 2.1	Result
Rendering Macro with a content	<code>{{code language="java"}} System.out.println("Hello World!"); {{/code}}</code>	System.out.println("Hello World!");
Rendering	<code>{{include</code>	The referenced page is

Macro		
without	reference="Space.Page"/}}	included in the current
content		page

Radeox macros cannot be used in XWiki Syntax 2.1. Thus they have been rewritten as Rendering macros.

For the full list of available macros check the [Extensions wiki](#).

In XWiki Syntax 2.1 HTML or XHTML must be entered by using the HTML macro.

XWiki Syntax 2.1 Result

```
{{html}}<b>bold</b>{{/html}}
```

bold

In XWiki Syntax 2.1, by default the HTML macro does not understand XWiki Syntax (other macros included since it's XWiki Syntax too). To enable it, use `{{html wiki="true"}}` .

In XWiki Syntax 1.0 it was possible to enter Velocity scripts anywhere directly in the page. This lead to issues for example when the user was involuntarily entering Velocity content. It was also performance hungry for pages not requiring Velocity content. There were several other technical limitations. Thus in XWiki Syntax 2.1 Velocity scripts must be entered using the velocity macro. Same goes for entering Groovy scripts.

Feature XWiki Syntax 2.1

	<code>{{velocity}}</code>
Velocity script	<code>#set (\$var = "whatever")</code>
	<code>{{/velocity}}</code>
	<code>{{groovy}}</code>
Groovy script	<code>def var = "whatever"</code>
	<code>{{/groovy}}</code>