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# FilterPlugin



## Description

This plugin allows to substitute and extract information from content by using regular expressions. There are three different types of new functions:

1. **FORMATLIST**: manipulate a list of items; it is highly configurable to define what constitutes a list and how to extract items from it
2. **SUBST**, **STARTSUBST/STOPSUBST**: substitute a pattern in a chunk of text
3. **EXTRACT**, **STARTEXTRACT/STOPEXTRACT**: extract a pattern from a text

While the START-STOP versions of SUBST and EXTRACT work on inline text, the normal versions process a source topic before including it into the current one.

## Syntax Rules

### SUBST

**Syntax:** `%SUBST{topic="..." ...}%`

insert a topic by processing its content.

- `topic="..."`: name of the topic text to be processed
- `text="..."`: text to be processed (has got higher precedence than 'topic')
- `pattern="..."`: pattern to be extracted or substituted
- `format="..."`: format expression or pattern substitute
- `header="..."`: header string prepended to output
- `footer="..."`: footer string appended to output
- `limit="<n>"` maximum number of occurrences to extract or substitute counted from the start of the text (defaults to 100000 aka all hits)
- `skip="<n>"` skip the first n occurrences
- `exclude="..."`: skip occurrences that match this regular expression
- `include="..."`: skip occurrences that don't match this regular expression
- `sort="on,off,alpha,num"` order of the formatted items (default "off")
- `expand="on,off"`: toggle expansion of markup before filtering (defaults to on)

### STARTSUBST, STOPSUBST

**Syntax:**

```
%STARTSUBST{...}%  
...  
%STOPSUBST%
```

substitute text given inline. see SUBST.

## EXTRACT

**Syntax:** %EXTRACT{topic="..." ...}%

extract text from a topic. see SUBST.

## STARTEXTTRACT, STOPEXTRACT

**Syntax:**

```
%STARTEXTTRACT{...}%  
...  
%STOPEXTRACT%
```

extract content given inline. see SUBST.

## FORMATLIST

**Syntax:** %FORMATLIST{"<list>" ...}%

formats a list of items. The <list> argument is separated into items by using a split expression; each item is matched against a pattern and then formatted using a format string while being separated by a separator string; the result is prepended with a header and appended with a footer in case the list is not empty.

- <list>: the list
- tokenize="...": regex to tokenize the list before splitting it up, tokens are inserted back again after the split stage has been passed
- split="...": the split expression (default ",")
- pattern="...": pattern applied to each item (default "\s(.\*)\s")
- format="...": the format string for each item (default "\$1")
- header="...": header string
- footer="...": footer string
- separator="...": string to be inserted between list items
- null="...": the format string to render the empty list
- limit="...": max number of items to be taken out of the list (default "-1")
- skip="...": number of list items to skip, not adding them to the result
- sort="on,off,alpha,num,nocase" order of the formatted items (default "off")
- reverse="on,off": reverse the sort order of the list
- unique="on,off": remove duplicates from the list
- exclude="...": remove list items that match this regular expression
- include="...": remove list items that don't match this regular expression
- selection="...": regular expression that a list item must match to be "selected"; if this matches the \$marker is inserted
- marker="...": string to be inserted when the selection regex matches; this will be inserted at the position \$marker as indicated in format.
- map="key1=value1,key2=value2, ...": this establishes a key-value hash available via the \$map() variable.

The pattern string shall group matching substrings in the list item to which you can refer to by using \$1, \$2, ... in the format string. Any format string (format, header, footer) may contain variables \$percent\$, \$nop, \$dollar and \$n. The variable \$index refers to the position number within the list being formatted; using \$count in the footer or header argument refers to the total number of list elements; \$marker is set if the selection regular expression matches the current item. The \$map(key) macro returns the value for "key" as specified in the map argument.

# MAKEINDEX

**Syntax:** %MAKEINDEX{ "<list>" ... }%

formats a list into a multi-column index like in MediaWiki's category topcis. MAKEINDEX insert capitals as headlines to groups of sorted items. It will try to balance all columns equally, and keep track of breaks to prevent "schusterkinder", that is avoid isolated headlines at the bottom of a column.

parameters:

- <list>: the list of items
- split="...": the split expression to separate the <list> into items (default ",")
- pattern="...": pattern applied to each item (default "(.\*)")
- cols="...": maximum number of cols to split the list into
- format="...": format of each list item (default "\$item")
- sort="on,off,alpha,num,nocase": sort the list (default "on")
- unique="on/off": removed duplicates (default "off")
- exclude="...": pattern to check against items in the list to be excluded
- include="...": pattern to check against items in the list to be included
- reverse="on/off": reverse the list (default "off")
- header="...": format string to prepend to the result
- footer="..." format string to be appended to the result

Like in FORMATLIST the `format` parameter can make use of \$1, \$2, ... variables to match the groupings defined in the `pattern` argument (like in `pattern="(.*);(.*);(.*)"`). The first matched grouping \$1 will be used as the \$item to sort the list.

In addition `header` and `footer` might contain the `$anchors` variable which will expand to a navigation to jump to the groups within the index.

## Examples

### EXTRACT Example 1: convert table into text

One of the uses of this plugin is to extract data from tables, which is useful for creating "database-like" wiki applications where data is stored in foswiki tables. While it is certainly possible to do that without this plugin the plugin makes these requests easier to create and maintain. Note, however, that best practice is to store database-like information using DataForms, so that you don't need to parse the format of the data to extract its records repeatedly.

**The table:**

Pos	Description	Hours
1	onsite troubleshooting	3
2	normalizing data to new format	10
3	testing server performance	5

**You type:**

```
%EXTRACT{topic="%TOPIC%" expand="off"
  pattern="^\\|\\s\\s(.*)\\s*\\|\\s*(.*)\\s*\\|\\s*(.*)\\s*\\|"
  format="    * it took $3 hours $2$n"
  skip="1"
}%
```

### Expected result (simulated):

- it took 3 hours onsite troubleshooting
- it took 10 hours normalizing data to new format
- it took 5 hours testing server performance

### Actual result (this site):

- it took 3 hours onsite troubleshooting
- it took 10 hours normalizing data to new format
- it took 5 hours testing server performance
- it took hours Michael Daum
- it took hours GPL (GNU General Public License)
- it took hours 8284 (2010-07-23)
- it took hours fixes wrapper for non-official api call to getAnchorName on foswiki-1.1
- it took hours ease `tokenize`; forward compatibility for newer foswikis
- it took hours added `include` counterpart to already existing `exclude` params; fixed SUBST not to forget about the non-matching tail of a char sequence
- it took hours added `$anchors` to MAKEINDEX (by Dirk Zimoch); added `nocase` option to FORMATLIST (by Dirk Zimoch); fixed null/empty string match in FORMATLIST
- it took hours sorting a list *before*, not *after*, formatting it in FORMATLIST
- it took hours added MAKEINDEX, added lazy compilation
- it took hours using `registerTagHandler()` as far as possible; enhanced parameters to EXTRACT and SUBST
- it took hours fixed SUBST, added skip parameter to FORMATLIST
- it took hours fixed `limit` parameter in FORMATLIST
- it took hours added `use strict`; and fixed revealed errors
- it took hours fixed SUBST not to cut off the rest of the text
- it took hours Initial version; added `expand` toggle
- it took hours none
- it took hours 5.005

## EXTRACT Example 2: convert text into table

Use CSS tags to format text comments as a tabular data (e.g., to allow sorting).

### The comments:

This is the first comment.

-- Michael Daum on 22 Aug 2005

This is the second comment.

-- Michael Daum on 22 Aug 2005

### You type:

```
%EXTRACT{
  topic="%TOPIC%" expand="off"
  pattern=".div class=\"text\">.*?[\r\n]+(.*?) [\r\n]+(?:.*?[\r\n]+)+?-- (.*?) on (.*?) [\r\n]+
  format=\"| $3 | $2 | $1 ... |$n\" header=\"|*Date*|*Author*|*Headline*|$n\"
}%
```

### Expected result (simulated):

Date	Author	Headline
------	--------	----------

Date	Author	Headline
22 Aug 2005	Michael Daum	This is the first comment. ...
22 Aug 2005	Michael Daum	This is the second comment. ...

**Actual result (this site):**

Date▲	Author	Headline
22 Aug 2005	Michael Daum	This is the first comment. ...
22 Aug 2005	Michael Daum	This is the second comment. ...

## MAKEINDEX example 1: creating an index from a chunk of text

compare with Philosophy articles needing attention

A B C D E F H I K L M N O P R S T U V W m p t

I			P
A			
<ul style="list-style-type: none"> <li>• Actualism</li> <li>• Alphabet of human thought</li> <li>• Alterity</li> <li>• Analytic philosophy</li> <li>• Analytic-synthetic distinction</li> <li>• Apologism</li> </ul>		<ul style="list-style-type: none"> <li>• Idolon tribus</li> <li>• Immanent evaluation</li> <li>• Individual</li> <li>• Inherence</li> </ul>	<ul style="list-style-type: none"> <li>• Postmodern philosophy</li> <li>• Post-structuralism</li> <li>• Problem of universals</li> <li>• Process philosophy</li> </ul>
	K	<ul style="list-style-type: none"> <li>• Kennisbank Filosofie Nederland</li> </ul>	R
B			<ul style="list-style-type: none"> <li>• Rational Animal</li> <li>• Rationalist movement</li> <li>• Relativism</li> </ul>
	L		
	<ul style="list-style-type: none"> <li>• Bundle theory</li> </ul>	<ul style="list-style-type: none"> <li>• Lazy Reason</li> <li>• Logicism</li> </ul>	S
C			<ul style="list-style-type: none"> <li>• Solipsism</li> <li>• Specters of Marx</li> <li>• Categories (Stoic)</li> <li>• Substance theory</li> </ul>
	M	<ul style="list-style-type: none"> <li>• Mad pain and Martian pain</li> <li>• Materialism</li> <li>• Meaning of life</li> <li>• Metakosmia</li> <li>• Metaphysical naturalism</li> <li>• Mike Lesser</li> <li>• Milesian school</li> <li>• Mind</li> <li>• Monism</li> <li>• Moral imperative</li> <li>• Mystical philosophy of antiquity</li> </ul>	T
D			<ul style="list-style-type: none"> <li>• Talk:Adam Weishaupt</li> <li>• Talk:The Art of Being Right</li> <li>• Truth-value link</li> </ul>
	<ul style="list-style-type: none"> <li>• De dicto and de re</li> <li>• Dialectical monism</li> <li>• Direct reference theory</li> <li>• Discourse ethics</li> <li>• Dualism</li> </ul>		U
			<ul style="list-style-type: none"> <li>• Utilitarianism</li> </ul>

<b>E</b>	<b>N</b>	<b>V</b>
<ul style="list-style-type: none"> <li>• Emergentism</li> <li>• Essence</li> <li>• Ethical naturalism</li> <li>• Exemplification</li> <li>• Existentialism</li> </ul>	<ul style="list-style-type: none"> <li>• Neomodernism</li> <li>• New England Transcendentalists</li> <li>• Nominalism</li> <li>• Non-archimedean time</li> <li>• Non-rigid designator</li> </ul>	<ul style="list-style-type: none"> <li>• Value judgment</li> </ul>
<b>F</b>	<b>O</b>	<b>W</b>
<ul style="list-style-type: none"> <li>• Fatalism</li> <li>• French materialism</li> <li>• Futilitarianism</li> </ul>	<ul style="list-style-type: none"> <li>• Ontic</li> <li>• Ontological reductionism</li> </ul>	<ul style="list-style-type: none"> <li>• World riddle</li> </ul>
<b>H</b>	<b>P</b>	<b>m</b>
<ul style="list-style-type: none"> <li>• Hermeneutics</li> <li>• Hypokeimenon</li> </ul>	<ul style="list-style-type: none"> <li>• Phenomenology</li> <li>• Philosophical realism</li> <li>• Philosophical skepticism</li> <li>• Indeterminacy (Philosophy)</li> <li>• Philosophy</li> </ul>	<ul style="list-style-type: none"> <li>• Libertarianism (metaphysics)</li> <li>• Species (metaphysics)</li> <li>• Universal (metaphysics)</li> </ul>
<b>I</b>		<b>p</b>
<ul style="list-style-type: none"> <li>• Identity and change</li> </ul>		<ul style="list-style-type: none"> <li>• Absolute (philosophy)</li> <li>• Accident (philosophy)</li> <li>• Difference (philosophy)</li> <li>• Multiplicity (philosophy)</li> <li>• Nature (philosophy)</li> <li>• Object (philosophy)</li> <li>• Pluralism (philosophy)</li> <li>• Self (philosophy)</li> </ul>
		<b>t</b>
		<ul style="list-style-type: none"> <li>• Preferentialism Present (time)</li> </ul>

## MAKEINDEX example 2: creating an index for a search result

<b>C</b>	<b>S</b>
<ul style="list-style-type: none"> <li>• CloudAnimation 24 Apr 2012 - 11:56 - wolangha</li> </ul>	<ul style="list-style-type: none"> <li>• SiteTopicActions 14 Aug 2010 - 20:08 - UrsBeyerle</li> </ul>
<b>I</b>	<b>T</b>
<ul style="list-style-type: none"> <li>• IACandFriends</li> </ul>	<ul style="list-style-type: none"> <li>• TWikiGuestSideBar 27 Sep 2008 - 10:44 - AdminUser</li> <li>• The day after tomorrow</li> </ul>

24 Jun 2009 - 15:09 -  
UrsBeyerle

17 Mar 2010 - 15:09 - wolangha

## W

## L

- LoginFailed  
22 May 2019 - 08:47 -  
UrsBeyerle

## O

- OpenSWIDI  
11 Sep 2012 - 11:14 -  
SvenKotlarski

## R

- RenderLdapUser  
28 Aug 2010 - 13:06 -  
UrsBeyerle

## S

- SiteButtons  
05 Feb 2024 - 16:47 -  
UrsBeyerle
- SiteLinks  
11 Aug 2010 - 15:13 -  
UrsBeyerle
- SiteSideBar  
02 Dec 2010 - 11:54 -  
UrsBeyerle

## Plugin Installation Instructions

You do not need to install anything in the browser to use this extension. The following instructions are for the administrator who installs the extension on the server.

Open configure, and open the "Extensions" section. Use "Find More Extensions" to get a list of available extensions. Select "Install".

If you have any problems, or if the extension isn't available in `configure`, then you can still install manually from the command-line. See <http://foswiki.org/Support/ManuallyInstallingExtensions> for more help.

## Plugin Info










Plugin Author:	Michael Daum
Copyright ©:	2005-2010, Michael Daum <a href="http://michaeldaumconsulting.com">http://michaeldaumconsulting.com</a>



License:	GPL (GNU General Public License)
Release:	2.03
Version:	8284 (2010-07-23)
Change History:	
23 Jul 2010:	fixes wrapper for non-official api call to getAnchorName on foswiki-1.1
07 Jun 2010:	fixed expanding standard escapes (\$n, \$percent, ...); improved examples in docu
12 Feb 2010:	ease tokenize; forward compatibility for newer foswikis
17 Nov 2009:	added tokenize pattern for FORMATLIST; fixed potential deep recursion in SUBST/EXTRACT
14 Sep 2009:	added include counterpart to already existing exclude params; fixed SUBST not to forget about the non-matching tail of a char sequence
17 Apr 2009:	converted to foswiki, added numerical sorting to MAKETEXT
08 Oct 2008:	added \$anchors to MAKEINDEX (by Dirk Zimoch); added nocase option to FORMATLIST (by Dirk Zimoch); fixed null/empty string match in FORMATLIST
20 Aug 2008:	added selection and marker to FORMATLIST, similar in use as VarWEBLIST
03 Jul 2008:	sorting a list <i>before</i> , not <i>after</i> , formatting it in FORMATLIST
08 May 2008:	added 'text' parameter to SUBST and EXTRACT; fixed SUBST as it was pretty useless before
07 Dec 2007:	added MAKEINDEX, added lazy compilation
14 Sep 2007:	added sorting for EXTRACT and SUBST
02 May 2007:	using registerTagHandler() as far as possible; enhanced parameters to EXTRACT and SUBST
05 Feb 2007:	fixed escapes in format strings; added better default value for max number of hits to prevent deep recursions on bad regexpressions
22 Jan 2007:	fixed SUBST, added skip parameter to FORMATLIST
18 Dec 2006:	using registerTagHandler for FORMATLIST
13 Oct 2006:	fixed limit parameter in FORMATLIST
31 Aug 2006:	added NO_PREFS_IN_TOPIC
15 Aug 2006:	added use strict; and fixed revealed errors
14 Feb 2006:	moved in FORMATLIST from the Foswiki:Extensions/NatSkinPlugin; added escape variables to format strings
06 Dec 2005:	fixed SUBST not to cut off the rest of the text
09 Nov 2005:	fixed deep recursion using expand="on"
22 Aug 2005:	Initial version; added expand toggle
Dependency:	\$Foswiki::Plugins::VERSION 1.024
CPAN Dependencies:	none
Other Dependencies:	none
Perl Version:	5.005
Plugin Home:	Foswiki:Extensions/FilterPlugin
Support:	Foswiki:Support/FilterPlugin

Edit | Attach | Print version | History: %REVISIONS% | Backlinks | Raw View | More topic actions  
Topic revision: r3 - 07 Jun 2010 - 10:16:07 - ProjectContributor

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- User Tools

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- ☐ System

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