

# Wiki Processors

Processors are WikiMacros that provide alternative markup formats for the Wiki engine. Processors can be thought of as *macro functions to process user-edited text*.

Wiki processors can be used in any Wiki text throughout Trac, such as:

- syntax highlighting or for rendering text verbatim
- rendering Wiki markup inside a context such as <div> or <span> blocks or within <td> or <th> table cells
- using an alternative markup syntax, like raw HTML and Restructured Text or ?textile

## Using Processors

To use a processor on a block of text, first delimit the lines using a Wiki *code block*:

```
{{{
The lines
that should be processed...
}}}
```

Immediately after the {{{ or on the line just below, add #! followed by the *processor name*:

```
{{{
#!processorname
The lines
that should be processed...
}}}
```

This is the "shebang" notation, familiar to most UNIX users.

Besides their content, some Wiki processors can also accept *parameters*, which are then given as `key=value` pairs after the processor name and on the same line. If `value` has to contain space, as it's often the case for the `style` parameter, a quoted string can be used (`key="value with space"`).

As some processors are meant to process Wiki markup, it's quite possible to *nest* processor blocks. You may want to indent the content of nested blocks for increased clarity, this extra indentation will be ignored when processing the content.

## Examples

### Wiki Markup

### Display

#### Example 1: Inserting raw HTML

```
{{{
#!html
<h1 style="color: grey">This is raw HTML</h1>
}}}
```

**This is raw HTML**

#### Example 2: Highlighted Python code in a <div> block with custom style

```
{{{#!div style="background: #ffd; border: 3px ridge"
This is an example of embedded "code" block:
This is an example of embedded "code" block:
```

```
{{{
#!python
def hello():
```

```
def hello():
    return "world"
```

## Wiki Markup

## Display

```
return "world"
}}
}}
```

**Example 3:** Searching tickets from a wiki page, by keywords.

```
{{{
#!html
<form action="/query" method="get"><div>
<input type="text" name="keywords" value="~" size="30"/>
<input type="submit" value="Search by Keywords"/>
<!-- To control what fields show up use hidden fields
<input type="hidden" name="col" value="id"/>
<input type="hidden" name="col" value="summary"/>
<input type="hidden" name="col" value="status"/>
<input type="hidden" name="col" value="milestone"/>
<input type="hidden" name="col" value="version"/>
<input type="hidden" name="col" value="owner"/>
<input type="hidden" name="col" value="priority"/>
<input type="hidden" name="col" value="component"/>
-->
</div></form>
}}}
```

## Available Processors

The following processors are included in the Trac distribution:

<b>#!default</b>	Present the text verbatim in a preformatted text block. This is the same as specifying <i>no</i> processor name (and no #!).
<b>#!comment</b>	Do not process the text in this section, i.e. contents exist only in the plain text - not in the rendered page.
<b>#!rtl</b>	Introduce a Right-To-Left block with appropriate CSS direction and styling. ( <i>since 0.12.2</i> )
<b>HTML related</b>	
<b>#!html</b>	Insert custom HTML in a wiki page.
<b>#!htmlcomment</b>	Insert an HTML comment in a wiki page. ( <i>since 0.12</i> )
	Note that <code>#!html</code> blocks have to be <i>self-contained</i> , i.e. you can't start an HTML element in one block and close it later in a second block. Use the following processors for achieving a similar effect.
<b>#!div</b>	Wrap wiki content inside a <code>&lt;div&gt;</code> element.
<b>#!span</b>	Wrap wiki content inside a <code>&lt;span&gt;</code> element.
<b>#!td</b>	Wrap wiki content inside a <code>&lt;td&gt;</code> element. ( <i>since 0.12</i> )
<b>#!th</b>	Wrap wiki content inside a <code>&lt;th&gt;</code> element. ( <i>since 0.12</i> )
<b>#!tr</b>	Can optionally be used for wrapping <code>#!td</code> and <code>#!th</code> blocks, either for specifying row attributes or better visual grouping. ( <i>since 0.12</i> )
<b>#!table</b>	Can optionally be used for wrapping <code>#!tr</code> , <code>#!td</code> and <code>#!th</code> blocks, for specifying table attributes. One current limitation however is that tables cannot be nested. ( <i>since 0.12</i> ) See <a href="#">WikiHtml</a> for example usage and more details about these processors.

### Other Markups

<b>#!rst</b>	Trac support for Restructured Text. See <a href="#">WikiRestructuredText</a> .
<b>#!textile</b>	Supported if <a href="#">?Textile</a> is installed. See <a href="#">?a Textile reference</a> .

### Code Highlighting Support

```

#!c
#!cpp (C++)
#!python
#!perl
#!ruby
#!php
#!asp
#!java
#!js (Javascript)
#!sql
#!xml (XML or
HTML)
#!sh (Bourne/Bash
shell)

```

Trac includes processors to provide inline syntax highlighting for source code in various languages.

Trac relies on [Pygments](#) for syntax coloring.

See [TracSyntaxColoring](#) for information about which languages are supported and how to enable support for more languages.

Since 1.1.2 the default, coding highlighting and MIME-type processors support the argument `lineno` for adding line numbering to the code block. When a value is specified, as in `lineno=3`, the numbering will start at the specified value. When used in combination with the `lineno` argument, the `marks` argument is also supported for highlighting lines. A single line number, set of line numbers and range of line numbers are allowed. For example, `marks=3`, `marks=3-6`, `marks=3, 5, 7` and `marks=3-5, 7` are all allowed. The specified values are relative to the numbered lines, so if `lineno=2` is specified to start the line numbering at 2, `marks=2` will result in the first line being highlighted.

Using the MIME type as processor, it is possible to syntax-highlight the same languages that are supported when browsing source code.

### MIME Type Processors

Some examples:

```

{{{#!text/html
<h1>text</h1>
}}}

```

The result will be syntax highlighted HTML code:

```
<h1>text</h1>
```

The same is valid for all other [mime types supported](#).

**#!diff** has a particularly nice renderer:

```

{{{#!diff
--- Version 55
+++ Version 56
@@ -115,8 +115,9 @@
     name='TracHelloWorld', version='1.0',
     packages=find_packages(exclude=['*.tests*']),
-    entry_points = ""
-    [trac.plugins]
-    helloworld = myplugins.helloworld
-    "",
+    entry_points = {
+    'trac.plugins': [
+    'helloworld = myplugins.helloworld',
+    ],
+    },
+    )
}}}

```

## •Version

```

115 115     name='TracHelloWorld', version='1.0',
116 116     packages=find_packages(exclude=['*.tests*']),
117     entry_points = ""
118     [trac.plugins]
119     helloworld = myplugins.helloworld
120     "",
117     entry_points = {
118     'trac.plugins': [
119     'helloworld = myplugins.helloworld',
120     ],
121     },
121 122 )

```

Line numbers can be added to code blocks and lines can be highlighted (*since 1.1.2*).

```
{{#!python lineno=3 marks=3,9-10,16
def expand_markup(stream, ctxt=None):
    """A Genshi stream filter for expanding `genshi.Markup` events.

    Note: Expansion may not be possible if the fragment is badly
    formed, or partial.
    """
    for event in stream:
        if isinstance(event[1], Markup):
            try:
                for subevent in HTML(event[1]):
                    yield subevent
            except ParseError:
                yield event
        else:
            yield event
}}}
```

#### Line

```
3 def expand_markup(stream, ctxt=None):
4     """A Genshi stream filter for expanding `genshi.Markup` events.
5
6     Note: Expansion may not be possible if the fragment is badly
7     formed, or partial.
8     """
9     for event in stream:
10         if isinstance(event[1], Markup):
11             try:
12                 for subevent in HTML(event[1]):
13                     yield subevent
14             except ParseError:
15                 yield event
16         else:
17             yield event
```

For more processor macros developed and/or contributed by users, visit the [?Trac Hacks](#) community site.

Processors are implemented using the same interfaces as Wiki macros, only the usage syntax differs. To develop a processor, see [WikiMacros#DevelopingCustomMacros](#).

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See also: [WikiMacros](#), [WikiHtml](#), [WikiRestructuredText](#), [TracSyntaxColoring](#), [WikiFormatting](#), [TracGuide](#)