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Modul:String/Doku

Dies ist die Dokumentationsseite für Modul:String

Vorlage:Lmd

This module is intended to provide access to basic string functions.

Most of the functions provided here can be invoked with named parameters, unnamed parameters, or a mixture. If named parameters are used, Mediawiki will automatically remove any leading or trailing whitespace from the parameter. Depending on the intended use, it may be advantageous to either preserve or remove such whitespace.

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Global options

ignore_errors

If set to 'true' or 1, any error condition will result in an empty string being returned rather than an error message.

error_category

If an error occurs, specifies the name of a category to include with the error message. The default category is Vorlage:Clc.

no_category

If set to 'true' or 1, no category will be added if an error is generated.

Unit tests for this module are available at Module:String/testcases.

len

This function returns the length of the target string.

Usage:

```
{{#invoke:String|len|target_string}}
```

OR

```
{{#invoke:String|len|s= target_string }}
```

Parameters:

s
: The string whose length to report

Examples:

- `{{#invoke:String|len| abcdefghi }}` → 11
- `{{#invoke:String|len|s= abcdefghi }}` → 9

sub

This function returns a substring of the target string at specified inclusive, one-indexed indices.

Usage:

```
{{#invoke:String|sub|target_string|start_index|end_index}}
```

OR

```
{{#invoke:String|sub|s= target_string |i= start_index |j= end_index }}
```

Parameters:

s
: The string to return a subset of

i
: The first index of the substring to return, defaults to 1.

j
: The last index of the string to return, defaults to the last character.

The first character of the string is assigned an index of 1. If either i or j is a negative value, it is interpreted the same as selecting a character by counting from the end of the string. Hence, a value of -1 is the same as selecting the last character of the string.

If the requested indices are out of range for the given string, an error is reported. To avoid error messages, use Vorlage:Ml instead.

Examples:

- `"{{#invoke:String|sub| abcdefghi }}"` → " abcdefghi "

- `"{{#invoke:String|sub|s= abcdefghi }}"` → "abcdefghi"
- `"{{#invoke:String|sub| abcdefghi | 3 }}"` → "bcdefghi "
- `"{{#invoke:String|sub|s= abcdefghi |i= 3 }}"` → "cdefghi"
- `"{{#invoke:String|sub| abcdefghi | 3 | 4 }}"` → "bc"
- `"{{#invoke:String|sub|s= abcdefghi |i= 3 |j= 4 }}"` → "cd"

sublength

This function implements the features of Vorlage:Tl and is kept in order to maintain these older templates. It returns a substring of the target string starting at a specified index and of a specified length.

Usage:

```
{{#invoke:String|sublength|s= target_string |i= start_index |len= length }}
```

Parameters:

s
: The string

i
: The starting index of the substring to return. The first character of the string is assigned an index of 0.

len
: The length of the string to return, defaults to the last character.

Examples:

- `{{#invoke:String|sublength|s= abcdefghi }}` → abcdefghi
- `{{#invoke:String|sublength|s= abcdefghi |i= 3 }}` → defghi
- `{{#invoke:String|sublength|s= abcdefghi |i= 3 |len= 4 }}` → defg

match

This function returns a substring from the source string that matches a specified pattern.

Usage:

```
{{#invoke:String|match|source_string|pattern_string|start_index|match_number|
plain_flag|nomatch_output}}
```

OR

```
{{#invoke:String|match|s= source_string |pattern= pattern_string |start=
start_index |match= match_number |plain= plain_flag |nomatch= nomatch_output
}}
```

Parameters:

s
: The string to search

pattern
: The pattern or string to find within the string

start
: The index within the source string to start the search. The first character of the string has index 1. Defaults to 1.

match
: In some cases it may be possible to make multiple matches on a single string. This specifies which match to return, where the first match is match= 1. If a negative number is specified then a match is returned counting from the last match. Hence match = -1 is the same as requesting the last match. Defaults to 1.

plain
: Boolean flag indicating that pattern should be understood as plain text and not as a Scribunto ustring pattern (a unicode-friendly Lua-style regular expression). Defaults to false (to change: `plain=true`)

nomatch
: If no match is found, output the "nomatch" value rather than an error.

ignore_errors
: If no match is found and ignore_errors=true, output an empty string rather than an error.

If the match_number or start_index are out of range for the string being queried, then this function generates an error. An error is also generated if no match is found. If one adds the parameter ignore_errors=true, then the error will be suppressed and an empty string will be returned on any failure.

For information on constructing Lua patterns, a form of regular expression, see:

- Scribunto patterns
- Scribunto Unicode string patterns

Examples:

- `{{#invoke:String|match| abc123def456 |%d+}}` → 123
- `{{#invoke:String|match|s= abc123def456 |pattern= %d+ }}` → 123
- `{{#invoke:String|match| abc123def456 |%d+|6}}` → 23
- `{{#invoke:String|match|s= abc123def456 |pattern= %d+ |start= 6 }}` → 3
- `{{#invoke:String|match|s= abc123def456 |pattern= %d+ |start= 6 |match= 2 }}` → 456
- `{{#invoke:String|match|s= abc123%d+ |pattern= %d+ }}` → 123
- `{{#invoke:String|match|s= abc123%d+ |pattern= %d+ |plain= true }}` → %d+
- `{{#invoke:String|match|s= abc |pattern= %d }}` → **String Module Error: Match not found**
- `{{#invoke:String|match|s= abc |pattern= %d |nomatch= No numeric characters in string }}` → No numeric characters in string
- `{{#invoke:String|match|s= abc |pattern= %d |ignore_errors= true }}` →
- `{{#invoke:String|match|s= 0012001200 |pattern= 0*(%d*) }}` → 12001200

pos

This function returns a single character from the target string at position pos.

Usage:

```
{{#invoke:String|pos|target_string|index_value}}
```

OR

```
{{#invoke:String|pos|target= target_string |pos= index_value }}
```

Parameters:

target
: The string to search

pos
: The index for the character to return

The first character has an index value of 1.

If one requests a negative value, this function will select a character by counting backwards from the end of the string. In other words pos = -1 is the same as asking for the last character.

A requested value of zero, or a value greater than the length of the string returns an error.

Examples:

- `{{#invoke:String|pos| abcdefghi | 4 }}` → c
- `{{#invoke:String|pos|target= abcdefghi |pos= 4 }}` → d

str_find

This function duplicates the behavior of Vorlage:Tl, including all of its quirks. This is provided in order to support existing templates, but is NOT RECOMMENDED for new code and templates. New code is recommended to use the "find" function instead.

Returns the first index in "source" that is a match to "target". Indexing is 1-based, and the function returns -1 if the "target" string is not present in "source".

Important Note: If the "target" string is empty / missing, this function returns a value of "1", which is generally unexpected behavior, and must be accounted for separately.

Usage:

```
{{#invoke:String|str_find|source_string|target_string}}
```

OR

```
{{#invoke:String|str_find|source= source_string |target= target_string }}
```

Parameters:

source
: The string to search

target
: The string to find within source

Examples:

- `{{#invoke:String|str_find| abc123def }}` → 1
- `{{#invoke:String|str_find|source= abc123def }}` → 1
- `{{#invoke:String|str_find| abc123def |123}}` → 5
- `{{#invoke:String|str_find|source= abc123def |target= 123 }}` → 4
- `{{#invoke:String|str_find| abc123def |not}}` → -1

find

This function allows one to search for a target string or pattern within another string.

Usage:

`{{#invoke:String|find|`*source_string*`|`*target_string*`|`*start_index*`|`*plain_flag*`}}`

OR

`{{#invoke:String|find|source=` *source_string* `|target=` *target_string* `|start=` *start_index* `|plain=` *plain_flag* `}}`

Parameters:

source
: The string to search

target
: The string or pattern to find within source

start
: The index within the source string to start the search, defaults to 1

plain
: Boolean flag indicating that target should be understood as plain text and not as a Scribunto ustring pattern (a unicode-friendly Lua-style regular expression); defaults to true

This function returns the first index >= "start" where "target" can be found within "source". Indices are 1-based. If "target" is not found, then this function returns 0. If either "source" or "target" are missing / empty, this function also returns 0.

This function should be safe for UTF-8 strings.

Examples:

- `{{#invoke:String|find|abc123def|12}}` → 4
- `{{#invoke:String|find|source=abc123def|target=12}}` → 4
- `{{#invoke:String|find|source=abc123def|target=pqr}}` → 0
- `{{#invoke:String|find| abc123def |123}}` → 5

- `{{#invoke:String|find|source= abc123def |target= 123 }}` → 4
- `{{#invoke:String|find|source=abc123def|target=%d |start=3 |plain=false }}` → 4

When using unnamed parameters, preceding and trailing spaces are kept and counted:

- `{{#invoke:String|find| abc123def |c|false}}` → 5
- `{{#invoke:String|find|source= abc123def |target=c|plain=false}}` → 3
- `{{#invoke:string|find|abc 123 def|%s|plain=false}}` → 4

Testing for the presence of a string:

- `Vorlage:Pf` → Didn't find needle

Vorlage:Anchor

replace (gsub)

This function allows one to replace a target string or pattern within another string. To Lua programmers: this function works internally by calling Vorlage:Code.

Usage:

```
{{#invoke:String|replace|source_str|pattern_string|replace_string|
replacement_count|plain_flag}}
```

OR

```
{{#invoke:String|replace|source= source_string |pattern= pattern_string
|replace= replace_string |count= replacement_count |plain= plain_flag }}
```

Parameters:

source
: The string to search

pattern
: The string or pattern to find within source

replace
: The replacement text

count
: The number of occurrences to replace; defaults to all

plain
: Boolean flag indicating that pattern should be understood as plain text and not as a Scribunto ustring pattern (a unicode-friendly Lua-style regular expression); defaults to true

Examples:

- `"{{#invoke:String|replace| abc123def456 |123|XYZ}}"` → " abcXYZdef456 "
- `"{{#invoke:String|replace|source= abc123def456 |pattern= 123 |replace= XYZ }}"` → "abcXYZdef456"
- `"{{#invoke:String|replace| abc123def456 |%d+|XYZ|1|false}}"` → " abcXYZdef456 "

- `"{{#invoke:String|replace|source= abc123def456 |pattern= %d+ |replace= XYZ |count=1 |plain= false }}"` → "abcXYZdef456"
- `"{{#invoke:String|replace|source= abc123def456 |pattern= %d+ |replace= XYZ |plain= false }}"` → "abcXYZdefXYZ"
- `{{#invoke:String|replace|source= 0012001200 |pattern= ^0* |plain= false }}` → 12001200

rep

Repeats a string *n* times. A simple function to pipe string.rep to templates.

Usage:

`{{#invoke:String|rep|`*source*`|`*count*`}}`

Parameters:

source
: The string to repeat

count
: The number of repetitions.

Examples:

- `"{{#invoke:String|rep|hello|3}}"` → "hellohellohello"
- `"{{#invoke:String|rep| hello | 3 }}"` → " hello hello hello "

escapePattern

In a Lua pattern, changes a *class character* into a *literal character*. For example: in a pattern, character `.` catches "any character"; escapePattern will convert it to `%.`, catching just the literal character ".".

Usage:

- `{{#invoke:String|escapePattern|`*pattern_string*`}}`

Parameters:

pattern_string
: The pattern string to escape

Examples:

- `"{{#invoke:String|escapePattern|A.D.}}"` → "A%.D%."
- `"{{#invoke:String|escapePattern|10%}}"` → "10%%"

count

Counts the number of times a given pattern appears in the arguments that get passed on to this module. Counts disjoint matches only.

Usage:

```
{{#invoke:String|count|source_str|pattern_string|plain_flag}}
```

OR

```
{{#invoke:String|count|source= source_string |pattern= pattern_string|plain= plain_flag }}
```

Parameters:

source_string
: The string to count occurrences in

pattern
: The string or pattern to count occurrences of within source

plain
: Boolean flag indicating that pattern should be understood as plain text and not as a Scribunto ustring pattern (a unicode-friendly Lua-style regular expression); defaults to true

Examples:

- Count of 'a': `"{{#invoke:String|count|aabbcc|a}}"` → "2"
- Count occurrences of 'aba': `"{{#invoke:String|count|abababababab|aba}}"` → "2"
- Count of "either 'a' or 'c' ":`"{{#invoke:String|count|aabbcc|[ac]|plain=false}}"` → "4"
- Count of "not 'a' ": `"{{#invoke:String|count|aaabaaac|[^a]|plain=false}}"` → "2"
- Count of "starts with 'a' ": `"{{#invoke:String|count|aaabaaac|^a|plain=false}}"` → "1"

join

Joins all strings passed as arguments into one string, treating the first argument as a separator

Usage:

```
{{#invoke:String|join|separator|string1|string2|...}}
```

Parameters:

separator
: String that separates each string being joined together
Note that leading and trailing spaces are *not* stripped from the separator.

string1/string2/...
: Strings being joined together

Examples:

- `"{{#invoke:String|join|x|foo|bar|baz}}"` → "fooxbarxbaz"
- `"{{#invoke:String|join||a|b|c|d|e|f|g}}"` → "abcdefg"
- `"{{#invoke:String|join|,|a|b|c|d|e|f|g}}"` → "a,b,c,d,e,f,g"
- `"{{#invoke:String|join|, |a|b|c|d|e|f|g}}"` → "a, b, c, d, e, f, g"
- `"{{#invoke:String|join| – |a|b|c|d|e|f|g}}"` → "a – b – c – d – e – f – g"

The preceding example uses the html entity – but the unicode character also works.

endswith

Vorlage:For Usage:

```
{{#invoke:String|endswith|source_str|search_string}}
```

OR

```
{{#invoke:String|endswith|source= source_string |pattern= search_string}}
```

Returns "yes" if the source string ends with the search string. Use named parameters to have the strings trimmed before use. Despite the parameter name, *search_string* is not a Lua pattern, it is interpreted literally.

- `"{{#invoke:String|endswith|xxxyyy|y}}"` → "yes"
- `"{{#invoke:String|endswith|xxxyyy|z}}"` → ""

See also

Vorlage:String handling templates