

### Anchors

<b>^</b>	Start of string, or start of line in multi-line pattern
<b>\A</b>	Start of string
<b>\$</b>	End of string, or end of line in multi-line pattern
<b>\Z</b>	End of string
<b>\b</b>	Word boundary
<b>\B</b>	Not word boundary
<b>\&lt;</b>	Start of word
<b>\&gt;</b>	End of word

### Character Classes

<b>\c</b>	Control character
<b>\s</b>	White space
<b>\S</b>	Not white space
<b>\d</b>	Digit
<b>\D</b>	Not digit
<b>\w</b>	Word
<b>\W</b>	Not word
<b>\x</b>	Hexadecimal digit
<b>\O</b>	Octal digit

### POSIX

<b>[upper:]</b>	Upper case letters
<b>[lower:]</b>	Lower case letters
<b>[alpha:]</b>	All letters
<b>[alnum:]</b>	Digits and letters
<b>[digit:]</b>	Digits
<b>[xdigit:]</b>	Hexadecimal digits
<b>[punct:]</b>	Punctuation
<b>[blank:]</b>	Space and tab
<b>[space:]</b>	Blank characters
<b>[cntrl:]</b>	Control characters
<b>[graph:]</b>	Printed characters
<b>[print:]</b>	Printed characters and spaces
<b>[word:]</b>	Digits, letters and underscore

### Assertions

<b>?=</b>	Lookahead assertion
<b>?!</b>	Negative lookahead
<b>?&lt;=</b>	Lookbehind assertion
<b>?!= or ?&lt;!</b>	Negative lookbehind
<b>?&gt;</b>	Once-only Subexpression
<b>?()</b>	Condition [if then]
<b>?() </b>	Condition [if then else]
<b>?#</b>	Comment

### Quantifiers

<b>*</b>	0 or more	<b>{3}</b>	Exactly 3
<b>+</b>	1 or more	<b>{3,}</b>	3 or more
<b>?</b>	0 or 1	<b>{3,5}</b>	3, 4 or 5

Add a **?** to a quantifier to make it ungreedy.

### Escape Sequences

<b>\</b>	Escape following character
<b>\Q</b>	Begin literal sequence
<b>\E</b>	End literal sequence

"Escaping" is a way of treating characters which have a special meaning in regular expressions literally, rather than as special characters.

### Common Metacharacters

<b>^</b>	<b>[</b>	<b>.</b>	<b>\$</b>
<b>{</b>	<b>*</b>	<b>(</b>	<b>\</b>
<b>+</b>	<b>)</b>	<b> </b>	<b>?</b>
<b>&lt;</b>	<b>&gt;</b>		

The escape character is usually **\**

### Special Characters

<b>\n</b>	New line
<b>\r</b>	Carriage return
<b>\t</b>	Tab
<b>\v</b>	Vertical tab
<b>\f</b>	Form feed
<b>\xxx</b>	Octal character xxx
<b>\xhh</b>	Hex character hh

### Groups and Ranges

<b>.</b>	Any character except new line ( <b>\n</b> )
<b>(a b)</b>	a or b
<b>(...)</b>	Group
<b>(?:...)</b>	Passive (non-capturing) group
<b>[abc]</b>	Range (a or b or c)
<b>[^abc]</b>	Not (a or b or c)
<b>[a-q]</b>	Lower case letter from a to q
<b>[A-Q]</b>	Upper case letter from A to Q
<b>[0-7]</b>	Digit from 0 to 7
<b>\x</b>	Group/subpattern number "x"

Ranges are inclusive.

### Pattern Modifiers

<b>g</b>	Global match
<b>i *</b>	Case-insensitive
<b>m *</b>	Multiple lines
<b>s *</b>	Treat string as single line
<b>x *</b>	Allow comments and whitespace in pattern
<b>e *</b>	Evaluate replacement
<b>U *</b>	Ungreedy pattern
<b>*</b>	PCRE modifier

### String Replacement

<b>\$n</b>	nth non-passive group
<b>\$2</b>	"xyz" in <b>/(abc(xyz))\$/</b>
<b>\$1</b>	"xyz" in <b>/(?:abc)(xyz)\$/</b>
<b>\$`</b>	Before matched string
<b>\$'</b>	After matched string
<b>\$+</b>	Last matched string
<b>\$&amp;</b>	Entire matched string

Some regex implementations use **\** instead of **\$**.



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 Page 1 of 1.

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