

# Cheatography

## Regular Expressions Cheat Sheet

by Dave Child (DaveChild) via [cheatography.com/1/cs/5/](https://cheatography.com/1/cs/5/)

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

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

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

Assertions				
`?=`	Lookahead assertion			
`?!`	Negative lookahead			
`?<=`	Lookbehind assertion			
`?!=` or `?<!`	Negative lookbehind			
`?>`	Once-only Subexpression			
`?()`	Condition [if then]			
`?()	`	Condition [if then else]		
`?#`	Comment			
Quantifiers				
`*`	0 or more	`{3}`	Exactly 3	
`+`	1 or more	`{3,}`	3 or more	
`?`	0 or 1	`{3,5}`	3, 4 or 5	
Add a `?` to a quantifier to make it ungreedy.				
Escape Sequences				
`\`	Escape following character			
`\Q`	Begin literal sequence			
`\E`	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				
`^`	`[`	`.`	`$`	
`{`	`*`	`(`	`\`	
`+`	`)`	`	`	`?`
`<`	`>`			
The escape character is usually `\`				
Special Characters				
`\n`	New line			
`\r`	Carriage return			
`\t`	Tab			
`\v`	Vertical tab			
`\f`	Form feed			
`\xxx`	Octal character xxx			
`\xhh`	Hex character hh			
Groups and Ranges				
`.`	Any character except new line (`\n`)			
`(a	b)`	a or b		
`(...)`	Group			
`(?:...)`	Passive (non-capturing) group			
`[abc]`	Range (a or b or c)			
`[^abc]`	Not (a or b or c)			
`[a-q]`	Lower case letter from a to q			
`[A-Q]`	Upper case letter from A to Q			
`[0-7]`	Digit from 0 to 7			
`\x`	Group/subpattern number "x"			
Ranges are inclusive.				
Pattern Modifiers				
`g`	Global match			
`i *`	Case-insensitive			
`m *`	Multiple lines			
`s *`	Treat string as single line			
`x *`	Allow comments and whitespace in pattern			
`e *`	Evaluate replacement			
`U *`	Ungreedy pattern			
`*` PCRE modifier				
String Replacement				
`$n`	nth non-passive group			
`$2`	"xyz" in `/^(abc(xyz))$/`			
`$1`	"xyz" in `/^(?:abc)(xyz)$/`			
`$``	Before matched string			
`$'`	After matched string			
`$+`	Last matched string			
`$&`	Entire matched string			
Some regex implementations use `\` instead of `$`.				


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