Regular Expressions - Quick Reference Guide

Anchors

^	start of line
$	end of line
\b	word boundary
\B	not at word boundary
\A	start of subject
\G	first match in subject
\z	end of subject
\Z	end of subject or before newline at end

Non-printing characters

\a	alarm (BEL, hex 07)
\cx	"control-x"
\e	escape (hex 1B)
\f	formfeed (hex 0C)
\n	newline (hex 0A)
\r	carriage return (hex OD)
\t	tab (hex 09)
\ddd	octal code ddd
\xhh	hex code hh
\x{hhh..}	hex code hhh..

Generic character types

\d	decimal digit
\D	not a decimal digit
\s	whitespace character
\S	not a whitespace char
\w	"word" character
\W	"non-word" character

POSIX character classes

alnum	letters and digits
alpha	letters
ascii	character codes 0-127
blank	space or tab only
cntrl	control characters
digit	decimal digits
graph	printing chars -space
lower	lower case letters
print	printing chars +space
punct	printing chars -alnum
space	white space
upper	upper case letters
word	"word" characters
xdigit	hexadecimal digits

Literal Characters

Letters and digits match exactly	a x B 7 0
Some special characters match exactly	@ - = %
Escape other specials with backslash	\. \\ \$ \[

Character Groups

Almost any character (usually not newline)	.
Lists and ranges of characters	[▢]
Any character except those listed	[^▢]

Counts (add ? for non-greedy)

0 or more ("perhaps some")	▢*
0 or 1 ("perhaps a")	▢?
1 or more ("some")	▢+
Between "n" and "m" of	▢{n,m}
Exactly "n", "n" or more	▢{n}, ▢{n,}

Alternation

Either/or	▢|▢

Lookahead and Lookbehind

Followed by	▢(?=▢)
NOT followed by	▢(?!▢)
Following	(?<=▢)▢
NOT following	(?<!▢)▢

Grouping

For capture and counts	(▢)
Non-capturing	(?:▢)
Named captures	(?<name>▢)

Back references

Numbered	\n \gn \g{n}
Relative	\g{-n}
Named	\k<name>

Character group contents

x	individual chars
x-y	character range
[:class:]	posix char class
[^:class:]	negated class

Examples

[a-zA-Z0-9_]
[[:alnum:]_]

Comments

(?#comment)

Conditional subpatterns

(?(condition)yes-pattern)
(?(condition)yes|no-pattern)

Recursive patterns

(?n)	Numbered
(?0) (?R)	Entire regex
(?&name)	Named

Replacements

$n	reference capture

Case foldings

\u	upper case next char
\U	upper case following
\l	lower case next char
\L	lower case following
\E	end case folding

Conditional insertions

(?n:insertion)
(?n:insertion:otherwise)