

# Regex

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## Characters

\d	one digit from 0 to 9
\w	word character: ASCII letter, digit or underscore
\s	whitespace character: space, tab, newline, carriage return, vertical tab
\D	One character that is not a digit
\W	One character that is not a word character )
\S	One character that is not a whitespace character
\metachar	Escape a metacharacter “^ { + <[*]> . (   \$ \ ?   ”
\t	Tab
\r	Carriage return character
\n	Line feed character
\r\n	Line separator

## Quantifiers

a?	Zero or one of a
a*	Zero or more of a
a+	One or more of a
[0-9]+	One or more of 0-9
a{3}	Exactly 3 of a
a{3,}	3 or more of a
a{3,6}	Between 3 and 6 of a
a*	Greedy quantifier
a*?	Lazy quantifier
a*+	Possessive quantifier

## Character Classes

[abc]	A single character of: a, b or c
[^abc]	A character except: a, b or c
[a-z]	A character in the range: a-z
[^a-z]	A character not in the range: a-z
[0-9]	A digit in the range: 0-9
[a-zA-Z]	A character in the range: a-z or A-Z
[a-zA-Z0-9]	A character in the range: a-z, A-Z or 0-9
[\\x41]	A character at hex position 41 in the ASCII table, i.e. A

## Anchors

^	Start of string
\$	End of string
\\A	Start of string

\Z	End of string
\z	Absolute end of string
\b	A word boundary
\B	Non-word boundary
\G	Start of match

## Group Constructs

(...)	Capturing group: Match everything enclosed
(a b)	Capturing group: Match either a or b
(?P<Y>...)	Capturing group named Y
(?:...)	Non-capturing group: Matches and does not remember the match
(?>...)	Atomic group (non-capturing)
(? ...)	Duplicate subpattern group number

## Lookarounds

(?=...)	Positive Lookahead. x(?=y) Matches "x" only if "x" is followed by "y"
(?!...)	Negative Lookahead. x(?!=y) Matches "x" only if "x" is followed not by "y"
(?<=...)	Positive Lookbehind (?<=y)x Matches "x" only if "x" is preceded by "y"
(?<!...)	Negative Lookbehind (?<!y)x Matches "x" only if "x" is not preceded by "y"

## Cheat sheets

- <https://www.rexegg.com/regex-quickstart.html#classes>
- <https://quickref.me/regex.html>
- <https://www.datacamp.com/cheat-sheet/regular-expresso>

## Online Testers

- [Regextester](#)
- [Regexpr](#)

## Links

- [Fail2ban Regex](#)

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