

| Anchors | |
|---------|---------------------|
| ^ | Start of line + |
| \A | Start of string + |
| \$ | End of line + |
| \Z | End of string + |
| \b | Word boundary + |
| \B | Not word boundary + |
| \< | Start of word |
| \> | End of word |

| Sample Patterns | |
|--|--|
| ([A-Za-z0-9-]+) | Letters, numbers and hyphens |
| (\d{1,2}\V\d{1,2}\V\d{4}) | Date (e.g. 21/3/2006) |
| ([^\s]+(?:\.(jpg gif png)))\.\2) | jpg, gif or png image |
| (^[1-9]{1}\$ ^[1-4]{1}[0-9]{1}\$ ^50\$) | Any number from 1 to 50 inclusive |
| (#?([A-Fa-f0-9]){3}([A-Fa-f0-9]){3})?) | Valid hexadecimal colour code |
| ((?=\.*\d)(?=\.*[a-z])(?=\.*[A-Z]).{8,15}) | 8 to 15 character string with at least one upper case letter, one lower case letter, and one digit (useful for passwords). |
| (\w+@[a-zA-Z_]+?\.[a-zA-Z]{2,6}) | Email addresses |
| (\<(/?[^\>]+)\>) | HTML Tags |

| Character Classes | |
|-------------------|--------------------------|
| \c | Control character |
| \s | White space |
| \S | Not white space |
| \d | Digit |
| \D | Not digit |
| \w | Word |
| \W | Not word |
| \xhh | Hexadecimal character hh |
| \Oxxx | Octal character xxx |

| POSIX Character Classes | |
|-------------------------|--------------------------------|
| [:upper:] | Upper case letters |
| [:lower:] | Lower case letters |
| [:alpha:] | All letters |
| [:alnum:] | Digits and letters |
| [:digit:] | Digits |
| [:xdigit:] | Hexadecimal digits |
| [:punct:] | Punctuation |
| [:blank:] | Space and tab |
| [:space:] | Blank characters |
| [:cntrl:] | Control characters |
| [:graph:] | Printed characters |
| [:print:] | Printed characters and spaces |
| [:word:] | 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 |

| Note | |
|--|--|
| These patterns are intended for reference purposes and have not been extensively tested. Please use with caution and test thoroughly before use. | |

| Quantifiers | |
|-------------|-----------------------|
| * | 0 or more + |
| *? | 0 or more, ungreedy + |
| + | 1 or more + |
| +? | 1 or more, ungreedy + |
| ? | 0 or 1 + |
| ?? | 0 or 1, ungreedy + |
| {3} | Exactly 3 + |
| {3,} | 3 or more + |
| {3,5} | 3, 4 or 5 + |
| {3,5}? | 3, 4 or 5, ungreedy + |

| Special Characters | |
|--------------------|--------------------|
| \ | Escape Character + |
| \n | New line + |
| \r | Carriage return + |
| \t | Tab + |
| \v | Vertical tab + |
| \f | Form feed + |
| \a | Alarm |
| [\b] | Backspace |
| \e | Escape |
| \N{name} | Named Character |

| String Replacement (Backreferences) | |
|-------------------------------------|----------------------------|
| \$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 |
| \$_ | Entire input string |
| \$\$ | Literal "\$" |

| Ranges | |
|---------|---------------------------------------|
| . | Any character except new line (\n) + |
| (a b) | a or b + |
| (...) | Group + |
| (?:...) | Passive Group + |
| [abc] | Range (a or b or c) + |
| [^abc] | Not a or b or c + |
| [a-q] | Letter between a and q + |
| [A-Q] | Upper case letter + between A and Q + |
| [0-7] | Digit between 0 and 7 + |
| \n | nth group/subpattern + |

| Note | |
|-----------------------|--|
| Ranges are inclusive. | |

| Pattern Modifiers | |
|-------------------|---|
| g | Global match |
| i | Case-insensitive |
| m | Multiple lines |
| s | Treat string as single line |
| x | Allow comments and white space in pattern |
| e | Evaluate replacement |
| U | Ungreedy pattern |

| Metacharacters (must be escaped) | | |
|----------------------------------|---|---|
| ^ | [| . |
| \$ | { | * |
| (| \ | + |
|) | | ? |
| < | > | |

| Note | |
|--|--|
| Items marked + should work in most regular expression implementations. | |

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