RegExp Object

A regular expression is an object that describes a pattern of characters.

Regular expressions are used to perform pattern-matching and "search-and-replace" functions on text.

Syntax

var patt=new RegExp(pattern,modifiers);  
  
or more simply:  
  
var patt=/pattern/modifiers;

* pattern specifies the pattern of an expression
* modifiers specify if a search should be global, case-sensitive, etc.

For a tutorial about the RegExp object, read our [JavaScript RegExp Object tutorial](http://www.w3schools.com/js/js_obj_regexp.asp).

Modifiers

Modifiers are used to perform case-insensitive and global searches:

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| **Modifier** | **Description** |
| [i](http://www.w3schools.com/jsref/jsref_regexp_i.asp) | Perform case-insensitive matching |
| [g](http://www.w3schools.com/jsref/jsref_regexp_g.asp) | Perform a global match (find all matches rather than stopping after the first match) |
| m | Perform multiline matching |

Brackets

Brackets are used to find a range of characters:

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| **Expression** | **Description** |
| [[abc]](http://www.w3schools.com/jsref/jsref_regexp_charset.asp) | Find any character between the brackets |
| [[^abc]](http://www.w3schools.com/jsref/jsref_regexp_charset_not.asp) | Find any character not between the brackets |
| [0-9] | Find any digit from 0 to 9 |
| [A-Z] | Find any character from uppercase A to uppercase Z |
| [a-z] | Find any character from lowercase a to lowercase z |
| [A-z] | Find any character from uppercase A to lowercase z |
| [adgk] | Find any character in the given set |
| [^adgk] | Find any character outside the given set |
| (red|blue|green) | Find any of the alternatives specified |

Metacharacters

Metacharacters are characters with a special meaning:

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| **Metacharacter** | **Description** |
| [.](http://www.w3schools.com/jsref/jsref_regexp_dot.asp) | Find a single character, except newline or line terminator |
| [\w](http://www.w3schools.com/jsref/jsref_regexp_wordchar.asp) | Find a word character |
| [\W](http://www.w3schools.com/jsref/jsref_regexp_wordchar_non.asp) | Find a non-word character |
| [\d](http://www.w3schools.com/jsref/jsref_regexp_digit.asp) | Find a digit |
| [\D](http://www.w3schools.com/jsref/jsref_regexp_digit_non.asp) | Find a non-digit character |
| [\s](http://www.w3schools.com/jsref/jsref_regexp_whitespace.asp) | Find a whitespace character |
| [\S](http://www.w3schools.com/jsref/jsref_regexp_whitespace_non.asp) | Find a non-whitespace character |
| [\b](http://www.w3schools.com/jsref/jsref_regexp_begin.asp) | Find a match at the beginning/end of a word |
| [\B](http://www.w3schools.com/jsref/jsref_regexp_begin_not.asp) | Find a match not at the beginning/end of a word |
| \0 | Find a NUL character |
| [\n](http://www.w3schools.com/jsref/jsref_regexp_newline.asp) | Find a new line character |
| \f | Find a form feed character |
| \r | Find a carriage return character |
| \t | Find a tab character |
| \v | Find a vertical tab character |
| [\xxx](http://www.w3schools.com/jsref/jsref_regexp_octal.asp) | Find the character specified by an octal number xxx |
| [\xdd](http://www.w3schools.com/jsref/jsref_regexp_hex.asp) | Find the character specified by a hexadecimal number dd |
| [\uxxxx](http://www.w3schools.com/jsref/jsref_regexp_unicode_hex.asp) | Find the Unicode character specified by a hexadecimal number xxxx |

Quantifiers

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| **Quantifier** | **Description** |
| [n+](http://www.w3schools.com/jsref/jsref_regexp_onemore.asp) | Matches any string that contains at least one n |
| [n\*](http://www.w3schools.com/jsref/jsref_regexp_zeromore.asp) | Matches any string that contains zero or more occurrences of n |
| [n?](http://www.w3schools.com/jsref/jsref_regexp_zeroone.asp) | Matches any string that contains zero or one occurrences of n |
| [n{X}](http://www.w3schools.com/jsref/jsref_regexp_nx.asp) | Matches any string that contains a sequence of *X* *n*'s |
| [n{X,Y}](http://www.w3schools.com/jsref/jsref_regexp_nxy.asp) | Matches any string that contains a sequence of X to Y *n*'s |
| [n{X,}](http://www.w3schools.com/jsref/jsref_regexp_nxcomma.asp) | Matches any string that contains a sequence of at least X *n*'s |
| [n$](http://www.w3schools.com/jsref/jsref_regexp_ndollar.asp) | Matches any string with n at the end of it |
| [^n](http://www.w3schools.com/jsref/jsref_regexp_ncaret.asp) | Matches any string with n at the beginning of it |
| [?=n](http://www.w3schools.com/jsref/jsref_regexp_nfollow.asp) | Matches any string that is followed by a specific string n |
| [?!n](http://www.w3schools.com/jsref/jsref_regexp_nfollow_not.asp) | Matches any string that is not followed by a specific string n |

RegExp Object Properties

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| **Property** | **Description** |
| [global](http://www.w3schools.com/jsref/jsref_regexp_global.asp) | Specifies if the "g" modifier is set |
| [ignoreCase](http://www.w3schools.com/jsref/jsref_regexp_ignorecase.asp) | Specifies if the "i" modifier is set |
| [lastIndex](http://www.w3schools.com/jsref/jsref_regexp_lastindex.asp) | The index at which to start the next match |
| [multiline](http://www.w3schools.com/jsref/jsref_regexp_multiline.asp) | Specifies if the "m" modifier is set |
| [source](http://www.w3schools.com/jsref/jsref_regexp_source.asp) | The text of the RegExp pattern |

RegExp Object Methods

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| **Method** | **Description** |
| [compile()](http://www.w3schools.com/jsref/jsref_regexp_compile.asp) | Compiles a regular expression |
| [exec()](http://www.w3schools.com/jsref/jsref_regexp_exec.asp) | Tests for a match in a string. Returns the first match |
| [test()](http://www.w3schools.com/jsref/jsref_regexp_test.asp) | Tests for a match in a string. Returns true or false |