**Regular Expressions:**

Regular expressions are patterns that combination of characters. Regular expressions are used to perform pattern-matching.

**Syntax:**

/pattern/modifiers;

Example:

var patt = /w3public/i;

var re = /ab+c/;

Example explained:

* **/w3public/i**  is a regular expression.
* **w3public**  is a pattern (to be used in a search).
* **i**  is a modifier (modifies the search to be case-insensitive).

**Multiline search for "is" at the beginning of each line in a string:**

var str = "\nIs th\nis h\nis?";

var patt1 = /^is/gmi;

var result = str.match(patt1);

**Multiline search for "is" at the end of each line in a string:**

var str = "Is\nthis\nhis\n?";

var patt1 = /is$/gm;

var result = str.match(patt1);

**Brackets:**

Brackets are used to find a range of characters:

|  |  |
| --- | --- |
| **Expression** | **Description** |
| [[abc]](https://www.w3schools.com/jsref/jsref_regexp_charset.asp) | Find any character between the brackets i.e, find a, find b, find c |
| [[^abc]](https://www.w3schools.com/jsref/jsref_regexp_charset_not.asp) | Find any character NOT between the brackets |
| [[0-9]](https://www.w3schools.com/jsref/jsref_regexp_0-9.asp) | Find any character between the brackets (any digit) |
| [[^0-9]](https://www.w3schools.com/jsref/jsref_regexp_not_0-9.asp) | Find any character NOT between the brackets (any non-digit) |
| [(x|y)](https://www.w3schools.com/jsref/jsref_regexp_xy.asp) | Find any of the alternatives specified |

**Difference between [] and () in Regex:**

[] denotes **a character** **class**. And, () denotes **a capturing group**.

**[a-z0-9]** -- One character that is in the range of **a-z** OR **0-9**

**(a-z0-9)** -- Explicit capture of **a-z0-9**. No ranges.

1. **a** -- Can be captured by [a-z0-9].
2. **a-z0-9 --** Can be captured by (a-z0-9) and then can be referenced in a replacement and/or later in the expression.

. is the regex token for "any character.