

How to use *Regular Expressions* in JavaScript

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How to use Regular Expressions in JavaScript

VLIGHT

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Modifiers



😊 Description

Perform case-insensitive matching

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to do a case-  
insensitive search for "Youtube" in a  
string.</p>
```

```
<button
```

```
onclick="myFunction()">Test</button>
```

```
<p id="demo"></p>
```

```
<script>
```

```
function myFunction() {
```

```
    var str = "Visit youtube";
```

```
    var pattern = /Youtube/i;
```

```
    var result = str.match(pattern);
```

```
document.getElementById("demo").inner  
= result;
```

```
}
```

</script>

</body>

</html>

 **Output**

Youtube



😊 Description

Perform a global match (find all matches rather than stopping after the first match)

😊 Sample Code

```
<!DOCTYPE html>  
<html>  
<body>
```

<p>Click the button to do a global search for "Welcome" in a string.</p>

<button
 onclick="myFunction()">Test</button>
<p id="demo"></p>

```
<script>  
function myFunction() {  
  var str = "Welcome to my books!  
Again welcome";  
  var pattern = /Welcome/g;  
  var result = str.match(pattern);
```

```
document.getElementById("demo").innerHTML  
= result;  
}  
</script>
```

</body>

</html>

 **Output**

Welcome



😊 Description

Perform multiline matching

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to do a multiline
```

search for "Welcome" at the beginning of each line in a string.</p>

<button
onclick="myFunction()">Test</button>
<p id="demo"></p>

<script>
function myFunction() {
 var str = "\nWelcome to my books!
 \nWelcome again!";
 var pattern = /^Welcome/m;
 var result = str.match(pattern);

document.getElementById("demo").innerHTML
= result;
}
</script>

</body>

</html>

 **Output**

Welcome

Brackets

♥ [abc]

😊 Description

Find any character between the brackets

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to do a global  
search for the character "o" in a string.
```

```
</p>
```

```
<button
```

```
onclick="myFunction()">Test</button>
```

```
<p id="demo"></p>
```

```
<script>
```

```
function myFunction() {
```

```
    var str = "Welcome to my books!";
```

```
    var pattern = /[o]/g;
```

```
    var result = str.match(pattern);
```

```
document.getElementById("demo").inner
```

```
= result;
```

```
}
```


</script>

</body>

</html>

♣ **Output**

0,0,0,0

♥ [^abc]

😊 Description

Find any character NOT between the brackets

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

<p>Click the button to do a global search for characters NOT inside the brackets [o] in a string.</p>

<button

onclick="myFunction()">Test</button>

<p id="demo"></p>

<script>

function myFunction() {

var str = "Welcome to my books!";

var pattern = /^[^o]/g;

var result = str.match(pattern);

document.getElementById("demo").innerHTML = result;

}

</script>

</body>

</html>

Output

W,e,l,c,m,e, ,t, ,m,y, ,b,k,s,!

♥ [0-9]

😊 Description

Find any digit between the brackets

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to do a global
```

search for the numbers 1 to 4 in a string.

</p>

<button

onclick="myFunction()">Test</button>

<p *id*="demo"></p>

<script>

function myFunction() {

var str = "1234567890";

var pattern = /[3-5]/g;

var result = str.match(pattern);

document.getElementById("demo").inner
= result;

}

</script>

</body>

</html>

 **Output**

3,4,5

♥ `[^0-9]`

😊 Description

Find any digit NOT between the brackets

😊 Sample Code

```
<!DOCTYPE html>  
<html>  
<body>
```


<p>Click the button to do a global search for numbers that are NOT 1 to 4 in a string.</p>

<button
onclick="myFunction()">Test</button>

<p id="demo"></p>

<script>

```
function myFunction() {  
    var str = "1234567890";  
    var pattern = /^[^3-5]/g;  
    var result = str.match(pattern);
```

```
document.getElementById("demo").innerHTML  
= result;  
}  
</script>
```

</body>

</html>

Output

1,2,6,7,8,9,0

♥ (x|y)

☺ Description

Find any of the alternatives specified

☺ Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to do a global
```

search for any of the specified alternatives (2|0).

```
<button  
  onclick="myFunction()">Test</button>  
<p id="demo"></p>
```

```
<script>  
function myFunction() {  
  var str = "123456789024680";  
  var pattern = /(2|0)/g;  
  var result = str.match(pattern);
```

```
document.getElementById("demo").innerHTML  
= result;  
}  
</script>
```

```
</body>
```

</html>

 **Output**

2,0,2,0

Metacharacters



😊 Description

Find a single character, except newline or line terminator

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to do a global  
search for "W.l" in a string.</p>
```

```
<button  
onclick="myFunction()">Test</button>  
<p id="demo"></p>
```

```
<script>
```

```
function myFunction() {  
    var str = "Welcome to my books!  
Welcome again!";  
    var pattern = /W.l/g;  
    var result = str.match(pattern);
```

```
document.getElementById("demo").innerHTML  
= result;
```

```
}  
</script>
```

```
</body>
```

```
</html>
```

 **Output**

Wel, Wel



😊 Description

Find a word character

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to do a global
```

search for word characters in a string.

</p>

<button

onclick="myFunction()">Test</button>

<p *id*="demo"></p>

<script>

function myFunction() {

var str = "Welcome to my books!.";

var pattern = /\w/g;

var result = str.match(pattern);

document.getElementById("demo").inner
= result;

}

</script>

</body>

</html>

Output

W,e,l,c,o,m,e,t,o,m,y,b,o,o,k,s



😊 Description

Find a non-word character

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to do a global
```

search for non-word characters in a string.</p>

<button
onclick="myFunction()">Test</button>
<p id="demo"></p>

<script>
function myFunction() {
 var str = "Welcome to my books!.";
 var pattern = /\W/g;
 var result = str.match(pattern);

document.getElementById("demo").innerHTML
= result;
}
</script>

</body>

</html>

♣ Output

, , , ! , .



😊 Description

Find a digit

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to do a global
```

search for digits in a string.</p>

<button

onclick="myFunction()">Test</button>

<p *id*="demo"></p>

<script>

function myFunction() {

var str = "Welcome to my books! 2nd
3rd 4th";

var pattern = /\d/g;

var result = str.match(pattern);

document.getElementById("demo").inner
= result;

}

</script>

</body>

</html>

 **Output**

2,3,4



😊 Description

Find a non-digit character

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p id="demo">Click the button to do a
```

global search for non-digit characters in a string.</p>

<button
onclick="myFunction()">Test</button>

<script>
function myFunction() {
var str = "Welcome to my books! 2nd
3rd 4th";
var pattern = /\D/g;
var result = str.match(pattern);
document.getElementById("demo").inner
}
</script>

</body>
</html>

Output

W,e,l,c,o,m,e, ,t,o, ,m,y, ,b,o,o,k,s,!, ,n,d,
,r,d, ,t,h



😊 Description

Find a whitespace character

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to do a global
```

search for whitespace characters in a string.</p>

<button
onclick="myFunction()">Test</button>
<p id="demo"></p>

<script>
function myFunction() {
 var str = "Welcome to my books!";
 var pattern = /\s/g;
 var result = str.match(pattern);

document.getElementById("demo").innerHTML
= result;
}
</script>

</body>

</html>

♣ Output

, ,



😊 Description

Find a non-whitespace character

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to search for non-
```


whitespace characters in a string.</p>

<button

onclick="myFunction()">Test</button>

<p *id*="demo"></p>

<script>

function myFunction() {

var str = "Welcome to my books!";

var pattern = /\S/g;

var result = str.match(pattern);

document.getElementById("demo").inner
= result;

}

</script>

</body>

</html>

Output

W,e,l,c,o,m,e,t,o,m,y,b,o,o,k,s,!



😊 **Description**

Find a match at the beginning/end of a word

😊 **Sample Code**

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

<p>Click the button to do a global search for "boo" at the beginning or end of a word in a string.</p>

<button

onclick="myFunction()">Test</button>

<p *id*="demo"></p>

<script>

function myFunction() {

 var str = "Welcome to my books!
books.";

 var pattern = /\bboo/g;

 var result = str.match(pattern);

document.getElementById("demo").inner
= result;

}

</script>

</body>

</html>

 **Output**

boo,boo



😊 **Description**

Find a match not at the beginning/end of a word

😊 **Sample Code**

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

<p id="demo">Click the button to do a global search for "ok"

NOT at the beginning or end of a word in a string.</p>

<button
onclick="myFunction()">Test</button>

<script>

function myFunction() {

var str = "Welcome to my books!";

var pattern = /\Bok/g;

var result = str.match(pattern);

document.getElementById("demo").innerHTML

</script>

</body>

</html>

 **Output**

ok



😊 Description

Find a NUL character

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to return the
```

position where the NUL character was found in a string.</p>

<button

onclick="myFunction()">Test</button>

<p *id*="demo"></p>

<script>

function myFunction() {

 var str = "Hello JavaScript.\0It is awesome!";

 var pattern = /\0/;

 var result = str.search(pattern);

document.getElementById("demo").innerHTML = result;

}

</script>

</body>

</html>

 **Output**

17

♥ \n

😊 Description

Find a new line character

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to return the
```

position where the newline character was found in a string.</p>

```
<button  
  onclick="myFunction()">Test</button>  
<p id="demo"></p>
```

```
<script>  
function myFunction() {  
  var str = "JavaScript.\nIt is  
awesome!";  
  var pattern = /\n/;  
  var result = str.search(pattern);
```

```
document.getElementById("demo").inner  
= result;  
}  
</script>
```

</body>

</html>

 **Output**

11



☺ Description

Find a form feed character

☺ Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to return the
```

position where the form feed character was found in a string.</p>

```
<button  
  onclick="myFunction()">Test</button>  
<p id="demo"></p>
```

```
<script>  
function myFunction() {  
  var str = "JavaScript.\fIt is  
awesome!";  
  var pattern = /\f/;  
  var result = str.search(pattern);
```

```
document.getElementById("demo").innerHTML  
= result;  
}  
</script>
```


</body>

</html>

 **Output**

11



😊 Description

Find a carriage return character

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to return the
```

position where the carriage return character was found in a string.</p>

<button

onclick="myFunction()">Test</button>

<p *id*="demo"></p>

<script>

function myFunction() {

 var str = "JavaScript.\rIt is awesome!";

 var pattern = /\r/;

 var result = str.search(pattern);

document.getElementById("demo").innerHTML = result;

}

</script>

</body>

</html>

 **Output**

11



☺ Description

Find a tab character

☺ Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to return the
```

position where the tab character was found in a string.</p>

```
<button  
  onclick="myFunction()">Test</button>  
<p id="demo"></p>
```

```
<script>  
function myFunction() {  
  var str = "JavaScript.\tIt is  
awesome!";  
  var pattern = /\t/;  
  var result = str.search(pattern);
```

```
document.getElementById("demo").innerHTML  
= result;  
}  
</script>
```

</body>

</html>

 **Output**

11



😊 Description

Find a vertical tab character

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to return the
```


position where the vertical tab character was found in a string.</p>

```
<button  
  onclick="myFunction()">Test</button>  
<p id="demo"></p>
```

```
<script>  
function myFunction() {  
  var str = "JavaScript.\vIt is  
awesome!";  
  var pattern = /\v/;  
  var result = str.search(pattern);
```

```
document.getElementById("demo").inner  
= result;  
}  
</script>
```

</body>

</html>

 **Output**

11

♥ \xxx

😊 Description

Find the character specified by an octal number xxx

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

<p>Click the button to do a global search for octal number 127 (W) in a string.</p>

<button
onclick="myFunction()">Test</button>

<p id="demo"></p>

<script>

```
function myFunction() {  
    var str = "Welcome to my books!";  
    var pattern = /\127/g;  
    var result = str.match(pattern);
```

```
document.getElementById("demo").innerHTML  
= result;  
}  
</script>
```

</body>

</html>

 **Output**

W

♥ \xdd

😊 Description

Find the character specified by a hexadecimal number dd

😊 Sample Code

```
<!DOCTYPE html>  
<html>  
<body>
```

<p>Click the button to do a global search for the hexadecimal number 57 (W) in a string.</p>

<button
onclick="myFunction()">Test</button>
<p id="demo"></p>

<script>
function myFunction() {
 var str = "Welcome to my books!";
 var pattern = /\x57/g;
 var result = str.match(pattern);

 document.getElementById("demo").innerHTML
 = result;
}
</script>

</body>

</html>

 **Output**

W

♥ `\uxxxx`

😊 Description

Find the Unicode character specified by a hexadecimal number xxxx

😊 Sample Code

```
<!DOCTYPE html>  
<html>  
<body>
```

<p>Click the button to do a global search for the hexadecimal number 0057 (W) in a string.</p>

<button
onclick="myFunction()">Test</button>

<p id="demo"></p>

<script>

```
function myFunction() {  
    var str = "Welcome to my books!";  
    var pattern = /\u0057/g;  
    var result = str.match(pattern);
```

```
document.getElementById("demo").innerHTML  
= result;  
}  
</script>
```

</body>

</html>

 **Output**

W

Quantifiers

♥ **n+**

😊 **Description**

Matches any string that contains at least one n

😊 **Sample Code**

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to do a global  
search for at least one "o" in a string.
```

```
</p>
```

```
<button
```

```
onclick="myFunction()">Test</button>
```

```
<p id="demo"></p>
```

```
<script>
```

```
function myFunction() {
```

```
    var str = "Welcome to my books!";
```

```
    var pattern = /o+/g;
```

```
    var result = str.match(pattern);
```

```
document.getElementById("demo").inner  
= result;
```

```
}  
</script>
```

```
</body>
```

```
</html>
```

 **Output**

0,0,00

♥ n*

😊 Description

Matches any string that contains zero or more occurrences of n

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

<p>Click the button to do a global search for an "b", followed by zero or more "o" characters.</p>

<button
onclick="myFunction()">Test</button>
<p id="demo"></p>

```
<script>  
function myFunction() {  
    var str = "Welcome to my books!  
book";  
    var pattern = /bo*/g;  
    var result = str.match(pattern);  
  
    document.getElementById("demo").innerHTML  
= result;  
}  
</script>
```


</body>

</html>

 **Output**

boo,boo

♥ n?

😊 Description

Matches any string that contains zero or one occurrences of n

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

<p>Click the button to do a global search for a "5", followed by zero or one "0" characters.</p>

<button
onclick="myFunction()">Test</button>
<p id="demo"></p>

```
<script>
function myFunction() {
    var str = "51, 5000, 350, 35";
    var pattern = /50?/g;
    var result = str.match(pattern);

    document.getElementById("demo").innerHTML
    = result;
}
</script>
```

</body>

</html>

 **Output**

5,50,50,5

♥ $n\{X\}$

😊 Description

Matches any string that contains a sequence of X n's

😊 Sample Code

```
<!DOCTYPE html>  
<html>  
<body>
```

<p>Click the button to do a global search for a substring that contains a sequence of three digits.</p>

<button
onclick="myFunction()">Test</button>

<p id="demo"></p>

<script>

```
function myFunction() {  
    var str = "5,555,5555,555555";  
    var pattern = /\d{3}/g;  
    var result = str.match(pattern);
```

```
document.getElementById("demo").innerHTML  
= result;  
}  
</script>
```

</body>

</html>

Output

555,555,555,555

♥ $n\{X,Y\}$

😊 Description

Matches any string that contains a sequence of X to Y n's

😊 Sample Code

```
<!DOCTYPE html>  
<html>  
<body>
```


<p>Click the button to global search for a substring that contains a sequence of three to five digits.</p>

<button
onclick="myFunction()">Test</button>

<p id="demo"></p>

<script>

function myFunction() {

var str =

"5,55,555,5555,55555,55555555";

var pattern = /\d{3,5}/g;

var result = str.match(pattern);

document.getElementById("demo").innerHTML = result;

}

</script>

</body>

</html>

 **Output**

555,5555,55555,55555

♥ $n\{X,\}$

😊 Description

Matches any string that contains a sequence of at least X n's

😊 Sample Code

```
<!DOCTYPE html>  
<html>  
<body>
```

<p>Click the button to global search for a substring that contains a sequence of at least two digits.</p>

<button
onclick="myFunction()">Test</button>

<p id="demo"></p>

<script>

```
function myFunction() {  
    var str = "5,55,555,5555";  
    var pattern = /\d{2,}/g;  
    var result = str.match(pattern);
```

```
document.getElementById("demo").innerHTML  
= result;  
}  
</script>
```

</body>

</html>

 **Output**

55,555,5555

♥ n\$

😊 Description

Matches any string with n at the end of it

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>Click the button to global search for
```

"me" at the end of a string.</p>

<button

onclick="myFunction()">Test</button>

<p *id*="demo"></p>

<script>

function myFunction() {

var str = "Welcome to my books!

Welcome";

var pattern = /me\$/g;

var result = str.match(pattern);

document.getElementById("demo").inner

= result;

}

</script>

</body>

</html>

 **Output**

me

♥ ^n

😊 Description

Matches any string with n at the beginning of it

😊 Sample Code

```
<!DOCTYPE html>  
<html>  
<body>
```

<p>Click the button to do a global search for "Welcome" at the beginning of a string.</p>

<button
onclick="myFunction()">Test</button>

<p id="demo"></p>

<script>

```
function myFunction() {  
    var str = "Welcome to my books!";  
    var pattern = /^Welcome/g;  
    var result = str.match(pattern);
```

```
document.getElementById("demo").innerHTML  
= result;  
}  
</script>
```

</body>

</html>

 **Output**

Welcome

♥ ?=n

😊 Description

Matches any string that is followed by a specific string n

😊 Sample Code

```
<!DOCTYPE html>  
<html>  
<body>
```

<p>Click the button to global search for "is" followed by " all".</p>

<button
onclick="myFunction()">Test</button>

<p id="demo"></p>

<script>

```
function myFunction() {  
    var str = "Is this all you want?";  
    var pattern = /is(=? all)/;  
    var result = str.match(pattern);
```

```
document.getElementById("demo").innerHTML  
= result;  
}
```

</script>

</body>

</html>

 **Output**

is

♥ ?!n

😊 Description

Matches any string that is not followed by a specific string n

😊 Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

<p>Click the button to do a global, case insensitive search for "is" not followed by " all".</p>

<button
onclick="myFunction()">Test</button>

<p id="demo"></p>

<script>

```
function myFunction() {  
    var str = "Is this all, there is  
another...";
```

```
    var pattern = /is(?! all)/gi;  
    var result = str.match(pattern);
```

```
document.getElementById("demo").inner  
= result;  
}
```

</script>

</body>

</html>

 **Output**

Is,is

RegExp Object

Methods

♥ **exec()**

😊 **Description**

Tests for a match in a string. Returns the first match

😊 **Syntax**

RegExpObject.**exec**(string)

☺ Parameters

string: *Required*, the string to be searched

☺ Sample Code

```
<!DOCTYPE html>  
<html>  
<body>
```

<p>The exec() method returns the matched text if it finds a match, otherwise it returns null.</p>

<p>Click the button to search a string for the character "o".</p>

<button
onclick="myFunction()">Test</button>
<p id="demo"></p>

<script>

```
function myFunction() {  
    var str = "Welcome to my books!";  
    var pattern = new RegExp("o");  
    var result = pattern.exec(str);
```

```
document.getElementById("demo").innerHTML  
= result;  
}
```

</script>

</body>

</html>

 **Output**

0

♥ test()

😊 Description

Tests for a match in a string. Returns true or false

😊 Syntax

RegExpObject.test(string)

☺ Parameters

string: *Required*, the string to be searched

☺ Sample Code

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<p>The test() method returns true if it  
finds a match, otherwise it returns false.
```

```
</p>
```

```
<p>Click the button to search a string for
```

the character "o".</p>

<button

onclick="myFunction()">Test</button>

<p *id*="demo"></p>

<script>

function myFunction() {

var str = "Welcome to my books!";

var pattern = new RegExp("o");

var result = pattern.test(str);

document.getElementById("demo").inner
= result;

}

</script>

</body>

</html>

Output

true

♥ toString()

😊 Description

Returns the string value of the regular expression

😊 Syntax

RegExpObject.toString()

☺ Parameters

None

☺ Sample Code

```
<!DOCTYPE html>
<html>
<body>
<p>Click the button to return the string
value of the regular expression.</p>
<button
onclick="myFunction()">Test</button>
<p id="demo"></p>
```

```
<script>
function myFunction() {
    var pattern = new RegExp("Welcome
to my books!", "g");
    var result = pattern.toString();

document.getElementById("demo").inner
= result;
}
</script>

</body>
</html>
```

 **Output**

/Welcome to my books!/g