

# Javascript Regular Expressions

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## The source of this article

[Javascript Regular Expressions](#)

(Regular Expression, )

replace

## What is a Regular Expression?

(Regular Expression, )

(text search)

(text replace)

## Syntax

```
/pattern/modifiers;
```

## Example

```
var patt = /w3schools/i;
```

/w3schools/i

( )

**w3schools** ( ) .

**i** ( ) (modifier) .

## Using String Methods

JavaScript , search() replace() 가 .

search() , .

replace() .

## Using String search() With a String

search() .

### Example

[ "W3schools" string .

```
<!DOCTYPE html>
<html>
<body>
  <h2>JavaScript String Methods</h2>
  <p>Search a string for "W3schools", and display the position of the
match.</p>
  <p id="demo"></p> <!-- 6 -->
  <script>
    let str = "Visit W3Schools!";
    let n = str.search("W3Schools"); /* W3Schools가 ? */
    document.getElementById("demo").innerHTML = n;
  </script>
</body>
</html>
```

## Using String search() With a Regular Expression

### Example

"w3schools" .

```
<!DOCTYPE html>
```

```

<html>
<body>
  <h2>JavaScript Regular Expressions</h2>
  <p>Search a string for "w3schools", and display the position of the
match:</p>
  <p id="demo"></p>  <!-- 6 -->
  <script>
    let str = "Visit W3Schools!";
    let n = str.search(/w3Schools/i); /*
? */
    document.getElementById("demo").innerHTML = n;
  </script>
</body>
</html>

```

## Using String replace() With a String

replace()

```

<!DOCTYPE html>
<html>
<body>
  <h2>JavaScript String Methods</h2>
  <p>Replace "Microsoft" with "W3Schools" in the paragraph below:</p>
  <button onclick="myFunction()">Try it</button>
  <p id="demo">Please visit Microsoft!</p>  <!-- Please visit W3Schools! -
->
  <script>
    function myFunction() {
      let str = document.getElementById("demo").innerHTML;
      let txt = str.replace("Microsoft", "W3Schools");
      document.getElementById("demo").innerHTML = txt;
    }
  </script>
</body>
</html>

```

## Use String replace() With a Regular Expression

W3Schools (a case insensitive regular expression) Microsoft

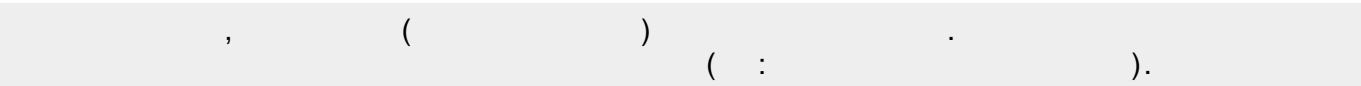
```

<!DOCTYPE html>
<html>
<body>

```

```
<h2>JavaScript Regular Expressions</h2>
<p>Replace "Microsoft" with "W3Schools" in the paragraph below:</p>
<button onclick="myFunction()">Try it</button>
<p id="demo">Please visit Microsoft and Microsoft!</p>
<script>
  function myFunction() {
    let str = document.getElementById("demo").innerHTML;
    let txt = str.replace(/microsoft/i, "W3Schools");
    document.getElementById("demo").innerHTML = txt;
  }
</script>
</body>
</html>
```

## Did You Notice?



## Regular Expression Modifiers

(Modifiers)

Modifier	Description
i	
g	( )
m	.

### Example of i modifier

```
<script>
  function myFunction() {
    let str = "Visit W3Schools";
    let patt1 = /w3schools/i; /* w3schools patt1 */
    let result = str.match(patt1); /* str patt1(result) */
    document.getElementById("demo").innerHTML = result; /* result */
  }
</script>
```

## Example of g modifier

```
<script>
  function myFunction() {
    let str = "Is this all there is?";
    let patt1 = /is/g; /*
    let result = str.match(patt1);
    document.getElementById("demo").innerHTML = result;
  }
```

## Example of m modifier

```
<script>
  function myFunction() {
    let str = "\nIs th\nis it?";
    let patt1 = /^is/m;
    let result = str.match(patt1);
    document.getElementById("demo").innerHTML = result; /* is */
  }
</script>
```

## Regular Expression Patterns

:

Expression	Description
[abc]	.
[0-9]	.
(x y)	alternatives .

## Example of [abc] pattern

```
<script>
  function myFunction() {
    let str = "Is this all there is?";
    let patt1 = /[h]/g;
    let result = str.match(patt1);
    document.getElementById("demo").innerHTML = result; /* h,h */
  }
</script>
```

## Example of [0-9] pattern

```
<script>
```

```
function myFunction() {
    let str = "123456789";
    let patt1 = /[1-4]/g; /* str 1~4 patt1 */
    var result = str.match(patt1); /* patt1 str result */
    document.getElementById("demo").innerHTML = result; /* 1,2,3,4 */
}
</script>
```

## Example of (x|y) pattern

```
<script>
function myFunction() {
    let str = "re, green, red, green, gren, gr, blue, yellow";
    let patt1 = /(red|green)/g;
    let result = str.match(patt1);
    document.getElementById("demo").innerHTML = result; /* green, red, green */
}
</script>
```

## Metacharacters are characters with a special meaning:

Metacharacter( ) :

Metacharacter	Description
\d	(digit) . digit: 0 9 10
\s	(whitespace character)
\b	\ bWORD WORD \ b
\uxxx	16 xxxx .

### Example of Metachatacters ( \d )

```
<script>
function myFunction() {
    let str = "Give 100%!";
    let patt1 = /\d/g; /* \d patt1 */
    let result = str.match(patt1); /* str patt1 result */
    document.getElementById("demo").innerHTML = result; /* 1,0,0 */
}
</script>
```

```
</script>
```

## Example of Metacharacters ( \s )

```
<script>
function myFunction() {
  let str = "Is this all there is?";
  let patt1 = /\s/g; /* (whitespace) */
  let result = str.match(patt1);
  document.getElementById("demo").innerHTML = result; /* [" ", " ", " ",
" "] */
  console.log(result, result.length);
}
</script>
```

## Exmample of Metacharacters ( \b )

```
<script>
let str = "HELLO, LOOK AT YOU!";
let patt1 = /\bLO/g; /* LO */
let result = str.search(patt1);
document.getElementById("demo").innerHTML = result; /* Found in
position: 7 */
console.log(result, result.length); /* 7 undefined */
</script>
```

## Exmample of Metacharacters ( \b )

```
<script>
let str = "HELLO, LOOK AT YOU";
let patt1 = /LO\b/g; /* LO가 가 */
let result = str.search(patt1);
document.getElementById("demo").innerHTML = result; /* Found in
position: 3 */
</script>
```

## Example of Metacharacters ( \uxxxx )

```
<script>
function myFunction() {
  let str = "Visit W3Schools. Hello World!";
  let patt1 = /\u0057/g;
  let result = str.match(patt1);
  document.getElementById("demo").innerHTML = result; /* W,W */
}
</script>
```

```
</script>
```

## Quantifiers define quantities

Quantifier	Description
n+	n .
n*	n 0 .
n?	n 0 1 .

### Example of Quantifiers ( n+ )

```
<script>
function myFunction() {
  let str = "Hellooo World! Hello W3Schools!";
  let patt1 = /o+/g; /* o가 */
  let result = str.match(patt1);
  document.getElementById("demo").innerHTML = result; /* ooo,o,o,oo */
}
</script>
```

### Example of Quantifiers ( n\* )

```
<script>
function myFunction() {
  let str = "Hellooo World! Hello W3Schools!";
  let patt1 = /lo*/g;
  let result = str.match(patt1);
  document.getElementById("demo").innerHTML = result; /* l,looo,l,l,lo,l
*/
}
</script>
```

### Example of Quantifiers ( n? )

```
<script>
function myFunction() {
  let str = "1, 100 or 1000?";
  let patt1 = /10?/g;
  let result = str.match(patt1);
  document.getElementById("demo").innerHTML = result; /* 1,10,10 */
}
</script>
```



```
, (null)
"e"
```

## Example

```
<script>
  let obj = /e/.exec("The best things in life are free!");
  document.getElementById("demo").innerHTML = "Found " + obj[0] + " in
position " + obj.index + " in the text: " + obj.input;
  /* Found e in position 2 in the text: The best things in life are free!
*/
</script>
```

## Complete RegExp Reference

[Complete JavaScript RegExp Reference](#)

RegExp

가

, [Javascript](#), [Regular](#), [Expressions](#)

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