

JavaScript: Object

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Sommario

- Oggetti Math e String
- Metodi di ricerca
- Sottostringhe
- Metodi di Markup XHTML
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Oggetto Math (1)

- Permette di svolgere parecchi comuni calcoli matematici

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Oggetto Math (2)

Method	Description	Example
abs(x)	absolute value of x	abs(7.2) is 7.2 abs(0.0) is 0.0 abs(-5.6) is 5.6
ceil(x)	rounds x to the smallest integer not less than x	ceil(9.2) is 10.0 ceil(-9.8) is -9.0
cos(x)	trigonometric cosine of x (x in radians)	cos(0.0) is 1.0
exp(x)	exponential method e^x	exp(1.0) is 2.71828 exp(2.0) is 7.38906
floor(x)	rounds x to the largest integer not greater than x	floor(9.2) is 9.0 floor(-9.8) is -10.0
log(x)	natural logarithm of x (base e)	log(2.71828) is 1.0 log(7.389056) is 2.0
max(x, y)	larger value of x and y	max(2.3, 12.7) is 12.7 max(-2.3, -12.7) is -2.3

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Oggetto Math (3)

<code>min(x, y)</code>	smaller value of x and y	<code>min(2.3, 12.7)</code> is 2.3 <code>min(-2.3, -12.7)</code> is -12.7
<code>pow(x, y)</code>	x raised to power y (xy)	<code>pow(2.0, 7.0)</code> is 128.0 <code>pow(9.0, 5)</code> is 3.0
<code>round(x)</code>	rounds x to the closest integer	<code>round(9.75)</code> is 10 <code>round(9.25)</code> is 9
<code>sin(x)</code>	trigonometric sine of x (x in radians)	<code>sin(0.0)</code> is 0.0
<code>sqrt(x)</code>	square root of x	<code>sqrt(900.0)</code> is 30.0 <code>sqrt(9.0)</code> is 3.0
<code>tan(x)</code>	trigonometric tangent of x (x in radians)	<code>tan(0.0)</code> is 0.0

Fig. 12.1 Math object methods.

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Oggetto Math (4)

Constant	Description	Value
Math. E	Base of a natural logarithm (e).	Approximately 2.718.
Math. LN2	Natural logarithm of 2.	Approximately 0.693.
Math. LN10	Natural logarithm of 10.	Approximately 2.302.
Math. LOG2E	Base 2 logarithm of e.	Approximately 1.442.
Math. LOG10E	Base 10 logarithm of e.	Approximately 0.434.
Math. PI	π —the ratio of a circle's circumference to its diameter.	Approximately 3.141592653589793.
Math. Sqrt1_2	Square root of 0.5.	Approximately 0.707.
Math. Sqrt2	Square root of 2.0.	Approximately 1.414.

Fig. 12.2 Properties of the Math object.

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Oggetto String

- Permette di elaborare le stringhe e i caratteri in JavaScript
- Appropriato per elaborare informazioni testuali

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Metodi dell' Oggetto String (1)

Method	Description
<code>charAt(index)</code>	Returns a string containing the character at the specified <i>index</i> . If there is no character at the <i>index</i> , <code>charAt</code> returns an empty string. The first character is located at <i>index</i> 0.
<code>charCodeAt(index)</code>	Returns the Unicode value of the character at the specified <i>index</i> . If there is no character at the <i>index</i> , <code>charCodeAt</code> returns NaN (Not a Number).
<code>concat(string)</code>	Concatenates its argument to the end of the string that invokes the method. The string invoking this method is not modified; instead a new <code>String</code> is returned. This method is the same as adding two strings with the string concatenation operator + (e.g., <code>s1.concat(s2)</code> is the same as <code>s1 + s2</code>).
<code>FromCharCode(value1, value2, ...)</code>	Converts a list of Unicode values into a string containing the corresponding characters.
<code>indexOf(substring, index)</code>	Searches for the first occurrence of <i>substring</i> starting from position <i>index</i> in the string that invokes the method. The method returns the starting index of <i>substring</i> in the source string or -1 if <i>substring</i> is not found. If the <i>index</i> argument is not provided, the method begins searching from index 0 in the source string.
<code>lastIndexOf(substring, index)</code>	Searches for the last occurrence of <i>substring</i> starting from position <i>index</i> and searching toward the beginning of the string that invokes the method. The method returns the starting index of <i>substring</i> in the source string or -1 if <i>substring</i> is not found. If the <i>index</i> argument is not provided, the method begins searching from the end of the source string.

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Metodi dell' Oggetto String (2)

<code>slice(start, end)</code>	Returns a string containing the portion of the string from index <i>start</i> through index <i>end</i> . If the <i>end</i> index is not specified, the method returns a string from the <i>start</i> index to the end of the source string. A negative <i>end</i> index specifies an offset from the end of the string starting from a position one past the end of the last character (so -1 indicates the last character position in the string).
<code>split(string)</code>	Splits the source string into an array of strings (tokens) where its <i>string</i> argument specifies the delimiter (i.e., the characters that indicate the end of each token in the source string).
<code>substr(start, length)</code>	Returns a string containing <i>length</i> characters starting from index <i>start</i> in the source string. If <i>length</i> is not specified, a string containing characters from <i>start</i> to the end of the source string is returned.
<code>substring(start, end)</code>	Returns a string containing the characters from index <i>start</i> up to but not including index <i>end</i> in the source string.
<code>toLowerCase()</code>	Returns a string in which all uppercase letters are converted to lowercase letters. Non-letter characters are not changed.
<code>toUpperCase()</code>	Returns a string in which all lowercase letters are converted to uppercase letters. Non-letter characters are not changed.
<code>toString()</code>	Returns the same string as the source string.
<code>valueOf()</code>	Returns the same string as the source string.

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Metodi dell' Oggetto String (3)

<i>Methods that generate XHTML tags</i>	
<code>anchor(name)</code>	Wraps the source string in an anchor element (<code><a></code>) with <i>name</i> as the anchor name.
<code>blink()</code>	Wraps the source string in a <code><blink></blink></code> element.
<code>fixed()</code>	Wraps the source string in a <code><tt></tt></code> element.
<code>link(url)</code>	Wraps the source string in an anchor element (<code><a></code>) with <i>url</i> as the hyperlink location.
<code>strike()</code>	Wraps the source string in a <code><strike></strike></code> element.
<code>sub()</code>	Wraps the source string in a <code><sub></sub></code> element.
<code>sup()</code>	Wraps the source string in a <code><sup></sup></code> element.

Fig. 12.3 String object methods.

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Metodi per elaborare caratteri (1)

- `charAt`
 - Restituisce il carattere che si trova in una specifica posizione
- `charCodeAt`
 - Restituisce il valore **Unicode** del carattere che si trova in una specifica posizione
- `fromCharCode`
 - Restituisce la stringa creata a partire da una serie di valori Unicode

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Metodi per elaborare caratteri (2)

- `toLowerCase`
 - Converte in minuscolo i caratteri di una stringa
- `toUpperCase`
 - Converte in maiuscolo i caratteri di una stringa

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```

1 <?xml version = "1.0" ?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
3   "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
4
5 <!-- Fig. 12.4: CharacterProcessing.html -->
6 <!-- Character Processing Methods -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10    <title>Character Processing Methods</title>
11
12    <script type = "text/javascript">
13      <!--
14      var s = "ZEBRA";
15      var s2 = "AbcDEFG";
16
17      document.writeln( "<code>Character at index 0 in '" +
18        s + "' is " + s.charAt( 0 ) );
19      document.writeln( "<code>Character code at index 0 in '" +
20        s + "' is " + s.charCodeAt( 0 ) + "</code>" );
21
22      document.writeln( "<code>" +
23        String.fromCharCode( 87, 79, 82, 68 ) +
24        "<code> contains character codes 87, 79, 82 and 68</code>" );
25

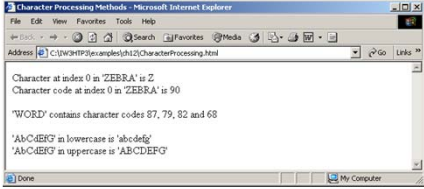
```

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```

26      document.writeln( "<code>" + s2 + " in lowercase is " +
27        s2.toLowerCase() + " );
28      document.writeln( "<code>" + s2 + " in uppercase is " +
29        s2.toUpperCase() + " </code>" );
30      // -->
31    </script>
32
33 </head><body></body>
34 </html >

```



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Metodi di ricerca

- indexOf e lastIndexOf
 - Cercano una particolare sottostringa in una stringa

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```

1 <?xml version = "1.0" ?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
3   "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
4
5 <!-- Fig. 12.5: SearchingStrings.html -->
6 <!-- Searching Strings -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9   <head>
10    <title>
11      Searching Strings with indexOf and lastIndexOf
12    </title>
13
14    <script type = "text/javascript">
15      <!--
16      var letters = "abcdefghijklmnopqrstuvwxyzkilmnopqrstuvwxyzabcedefghijklm";
17
18      function buttonPressed()
19      {
20        searchForm.first.value =
21          letters.indexOf( searchForm.input.value );
22        searchForm.last.value =
23          letters.lastIndexOf( searchForm.input.value );
24        searchForm.first2.value =
25          letters.indexOf( searchForm.input.value, 12 );

```

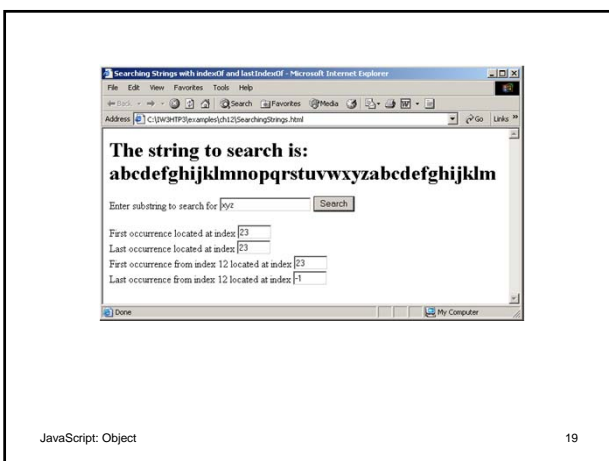
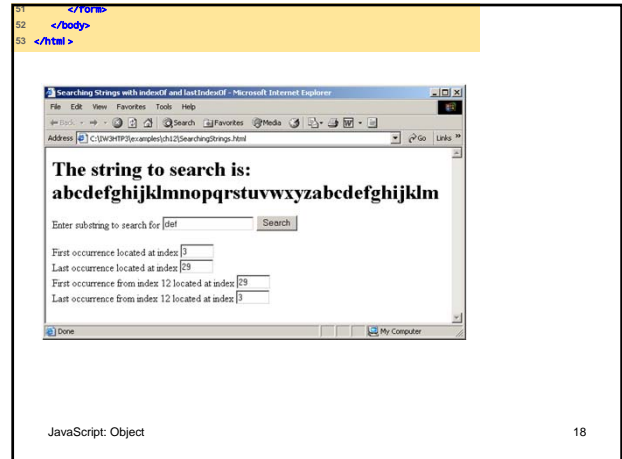
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```

26 searchForm.last12.value =
27 letters.lastIndexOf(
28     searchForm.inputVal.value, 12 );
29
30 // -->
31 </script>
32
33 </head>
34 <body>
35 <form name = "searchForm" action = "">
36 <h1>The string to search is:<br />
37 abcdefghijklmnopqrstuvwxyz</h1>
38 <p>Enter substring to search for
39 <input name = "inputVal" type = "text" />
40 <input name = "search" type = "button" value = "Search"
41 onclick = "buttonPressed()" /><br /></p>
42
43 <p>First occurrence located at index
44 <input name = "first" type = "text" size = "5" />
45 <br />Last occurrence located at index
46 <input name = "last" type = "text" size = "5" />
47 <br />First occurrence from index 12 located at index
48 <input name = "first12" type = "text" size = "5" />
49 <br />Last occurrence from index 12 located at index
50 <input name = "last12" type = "text" size = "5" /></p>

```

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Sottostringhe

- “Tokenizzazione”
 - **Orribile neologismo** che indica il processo che permette di ottenere i token da una stringa
- Token
 - Parole singole, separate da delimitatori

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```

1 <html version = "1.0" >
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
3 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
4
5 <!-- Fig. 12.6: SplitAndSubString.html -->
6 <!-- String Method split and substring -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9 <head>
10 <title>String Method split and substring</title>
11
12 <script type = "text/javascript">
13 <!--
14 function splitButtonPressed()
15 {
16     var strings = myForm.inputVal.value.split( " " );
17     myForm.output.value = strings.join( "<br>" );
18
19     myForm.outputSubString.value =
20     myForm.inputVal.value.substring( 0, 10 );
21 }
22 // -->
23 </script>
24 </head>
25

```

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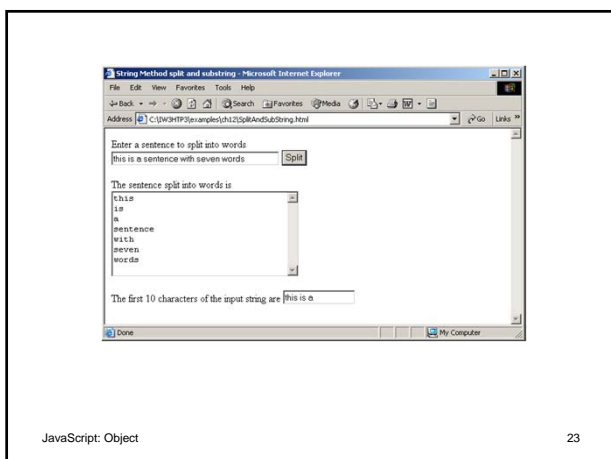
```

26 <body>
27 <form name = "myForm" action = "">
28 <p>Enter a sentence to split into words<br />
29 <input name = "inputVal" type = "text" size = "40" />
30 <input name = "splitButton" type = "button" value =
31 "Split" onclick = "splitButtonPressed()" /></p>
32
33 <p>The sentence split into words is<br />
34 <textarea name = "output" rows = "8" cols = "34">
35 </textarea></p>
36
37 <p>The first 10 characters of the input string are
38 <input name = "outputSubString" type = "text"
39 size = "15" /></p>
40 </form>
41 </body>
42 </html>

```

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Metodi di Markup XHTML (1)

- Anchor
 - Anchor
- Blink
 - <bl i nk> blinking text </bl i nk>
- Fixed
 - <tt> monospaced text </tt>

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Metodi di Markup XHTML (2)

- Strike
 - <stri ke> strike out text </stri ke>
- Subscript
 - _{subscript}
- Superscript
 - ^{superscript}

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```

1 <?xml version = "1.0" ?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
3 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
4
5 <!-- Fig. 12.7: MarkupMethods.html -->
6 <!-- XHTML markup methods of the String object -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9 <head>
10 <title>XHTML Markup Methods of the String Object</title>
11
12 <script type = "text/javascript">
13 <!--
14     var anchorText = "This is an anchor",
15         blinkText = "This is blinking text",
16         fixedText = "This is monospaced text",
17         linkText = "Click here to go to anchorText",
18         strikeText = "This is strike out text",
19         subText = "subscript",
20         supText = "superscript";
21
22     document.writeln( anchorText.anchor( "top" ) );
23     document.writeln( "<br />" + blinkText.blink() );
24     document.writeln( "<br />" + fixedText.fixed() );
25     document.writeln( "<br />" + strikeText.strike() );

```

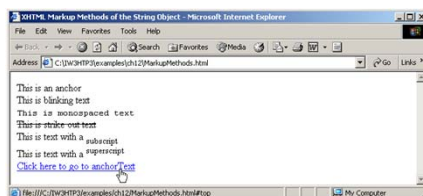
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```

26     document.writeln(
27         "<br />This is text with a " + subText.sub() );
28     document.writeln(
29         "<br />This is text with a " + supText.sup() );
30     document.writeln(
31         "<br />" + linkText.link( "#top" ) );
32     // -->
33 </script>
34
35 </head><body></body>
36 </html>

```



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Oggetto Date (1)

- Fornisce i metodi per la manipolazione di data e ora

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Oggetto Date (2)

Method	Description
getDate() getUTCDate()	Returns a number from 1 to 31 representing the day of the month in local time or UTC, respectively.
getDay() getUTCDay()	Returns a number from 0 (Sunday) to 6 (Saturday) representing the day of the week in local time or UTC, respectively.
getFullYear() getUTCFullYear()	Returns the year as a four-digit number in local time or UTC, respectively.
getHours() getUTCHours()	Returns a number from 0 to 23 representing hours since midnight in local time or UTC, respectively.
getMilliseconds() getUTCMilliseconds()	Returns a number from 0 to 999 representing the number of milliseconds in local time or UTC, respectively. The time is stored in hours, minutes, seconds and milliseconds.
getMinutes() getUTCMinutes()	Returns a number from 0 to 59 representing the minutes for the time in local time or UTC, respectively.
getMonth() getUTCMonth()	Returns a number from 0 (January) to 11 (December) representing the month in local time or UTC, respectively.
getSeconds() getUTCSeconds()	Returns a number from 0 to 59 representing the seconds for the time in local time or UTC, respectively.
getTime()	Returns the number of milliseconds between January 1, 1970 and the time in the Date object.
getTimezoneOffset()	Returns the difference in minutes between the current time on the local computer and UTC—previously known as Greenwich Mean Time (GMT).
setDate(val) setUTCDate(val)	Sets the day of the month (1 to 31) in local time or UTC, respectively.

Fig. 12.8 Methods of the Date object.

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Oggetto Date (3)

Method	Description
setFullYear(y, m, d) setUTCFullYear(y, m, d)	Sets the year in local time or UTC, respectively. The second and third arguments representing the month and the date are optional. If an optional argument is not specified, the current value in the Date object is used.
setHours(h, m, s, ms) setUTCHours(h, m, s, ms)	Sets the hour in local time or UTC, respectively. The second, third and fourth arguments representing the minutes, seconds and milliseconds are optional. If an optional argument is not specified, the current value in the Date object is used.
setMilliseconds(ms) setUTCMilliseconds(ms)	Sets the number of milliseconds in local time or UTC, respectively.
setMinutes(m, s, ms) setUTCMinutes(m, s, ms)	Sets the minute in local time or UTC, respectively. The second and third arguments representing the seconds and milliseconds are optional. If an optional argument is not specified, the current value in the Date object is used.
setMonth(m, d) setUTCMonth(m, d)	Sets the month in local time or UTC, respectively. The second argument representing the date is optional. If the optional argument is not specified, the current date value in the Date object is used.
setSeconds(s, ms) setUTCSeconds(s, ms)	Sets the second in local time or UTC, respectively. The second argument representing the milliseconds is optional. If this argument is not specified, the current millisecond value in the Date object is used.

Fig. 12.8 Methods of the Date object.

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Oggetto Date (4)

Method	Description
setTime(ms)	Sets the time based on its argument—the number of elapsed milliseconds since January 1, 1970.
toLocaleString()	Returns a string representation of the date and time in a form specific to the computer's locale. For example, September 13, 2001 at 3:42:22 PM is represented as 09/13/01 15:47:22 in the United States and 13/09/01 15:47:22 in Europe.
toUTCString()	Returns a string representation of the date and time in the form: 19 Sep 2001 15:47:22 UTC.
toString()	Returns a string representation of the date and time in a form specific to the locale of the computer (Mon Sep 19 15:47:22 EDT 2001 in the United States).
valueOf()	The time in number of milliseconds since midnight, January 1, 1970.

Fig. 12.8 Methods of the Date object.

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```

1 <html version = "1.0" >
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
3   "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
4
5 <!-- Fig. 12.9: DateTime.html -->
6 <!-- Date and Time Methods -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9
10 <head>
11
12 <title>Date and Time Methods</title>
13
14 <script type = "text/javascript">
15
16 <!--
17   var current = new Date();
18
19   document.writeln(
20     "<h3>String representations and valueOf</h3>");
21   document.writeln( "toString: " + current.toString() +
22     "<br />toLocaleString: " + current.toLocaleString() +
23     "<br />toUTCString: " + current.toUTCString() +
24     "<br />valueOf: " + current.valueOf() );
25
26   document.writeln(
27     "<h3>Get methods for local time zone</h3>");
28
29 </script>
30
31 </head>
32
33 </html>

```

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```

25 document.writeln( "getdate: " + current.getDate() +
26 " <br />getDay: " + current.getDay() +
27 " <br />getMonth: " + current.getMonth() +
28 " <br />getFullYear: " + current.getFullYear() +
29 " <br />getTime: " + current.getTime() +
30 " <br />getHours: " + current.getHours() +
31 " <br />getMinutes: " + current.getMinutes() +
32 " <br />getSeconds: " + current.getSeconds() +
33 " <br />getMilliseconds: " +
34 current.getMilliseconds() +
35 " <br />getTimezoneOffset: " +
36 current.getTimezoneOffset() );
37
38 document.writeln(
39 " <h1>Specifying arguments for a new Date</h1> " );
40 var anotherDate = new Date( 2001, 2, 18, 1, 5, 0, 0 );
41 document.writeln( "Date: " + anotherDate );
42
43 document.writeln(
44 " <h1>Set methods for local time zone</h1> " );
45 anotherDate.setDate( 31 );
46 anotherDate.setMonth( 11 );
47 anotherDate.setFullYear( 2001 );
48 anotherDate.setHours( 23 );
49 anotherDate.setMinutes( 60 );
    
```

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```

50 anotherDate.setSeconds( 99 );
51 document.writeln( "Modified date: " + anotherDate );
52 // -->
53 </script>
54
55 </head><body></body>
56 </html>
    
```

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Oggetti Boolean e Number (1)

- Oggetti che permettono la manipolazione di rispettivamente
 - valori true/false
 - valori numerici

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Oggetti Boolean e Number (2)

Method	Description
toString()	Returns the string "true" if the value of the Boolean object is true; otherwise, returns the string "false."
valueOf()	Returns the value true if the Boolean object is true; otherwise, returns false.

Fig. 12.10 Boolean object methods.

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Oggetti Boolean e Number (3)

Method or Property	Description
<code>toString(radix)</code>	Returns the string representation of the number. The optional <i>radix</i> argument (a number from 2 to 36) specifies the number's base. For example, <code>radix 2</code> results in the binary representation of the number, <code>8</code> results in the octal representation, <code>10</code> results in the decimal representation and <code>16</code> results in the hexadecimal representation. See Appendix E, Number Systems for a review of the binary, octal, decimal and hexadecimal number systems.
<code>valueOf()</code>	Returns the numeric value.
<code>Number.MAX_VALUE</code>	This property represents the largest value that can be stored in a JavaScript program—approximately $1.79E+308$.
<code>Number.MIN_VALUE</code>	This property represents the smallest value that can be stored in a JavaScript program—approximately $2.22E-308$.
<code>Number.NaN</code>	This property represents <i>not a number</i> —a value returned from an arithmetic expression that does not result in a number (e.g., the expression <code>parseInt("hello")</code> cannot convert the string "hello" into a number, so <code>parseInt</code> would return <code>Number.NaN</code> . To determine whether a value is <code>NaN</code> , test the result with function <code>isNaN</code> , which returns <code>true</code> if the value is <code>NaN</code> ; otherwise, it returns <code>false</code> .
<code>Number.NEGATIVE_INFINITY</code>	This property represents a value less than <code>-Number.MAX_VALUE</code> .
<code>Number.POSITIVE_INFINITY</code>	This property represents a value greater than <code>Number.MAX_VALUE</code> .

Fig. 12.11 Number object methods and properties.

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Oggetto document (1)

- Manipola il documento **correntemente** visualizzato nella finestra del browser

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Oggetto document (2)

Method or Property	Description
<code>write(string)</code>	Writes the string to the XHTML document as XHTML code.
<code>writeln(string)</code>	Writes the string to the XHTML document as XHTML code and adds a newline character at the end.
<code>document.cookie</code>	This property is a string containing the values of all the cookies stored on the user's computer for the current document. See Section 12.9, Using Cookies.
<code>document.lastModified</code>	This property is the date and time that this document was last modified.

Fig. 12.12 Important document object methods and properties.

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Oggetto window

- Fornisce i metodi per la gestione della finestra del browser

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```

1 <html version = "1.0" encoding = "utf-8" />
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 12.13: window.html -->
6 <!-- Using the Window Object -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9 <head>
10 <title>Using the Window Object</title>
11
12 <script type = "text/javascript">
13 <!--
14   var childWindow; // variable to control the child window
15
16   function createChildWindow()
17   {
18     // these variables all contain either "yes" or "no"
19     // to enable or disable a feature in the child window
20     var toolBar // specify if toolbar will appear in child window
21     var menuBar; // specify if menu bar will appear in child window
22     var location; // specify if address bar will appear in child window
23     var scrollBars; // specify if scroll bars will appear in child window
24     var status; // specify if status bar will appear in child window
25     var resizable; // specify if the child window will be resizable

```

JavaScript: Object

41

```

26
27 // determine whether the Tool Bar checkbox is checked
28 if ( toolBarCheckBox.checked )
29   toolBar = "yes";
30 else
31   toolBar = "no";
32
33 // determine whether the Menu Bar checkbox is checked
34 if ( menuBarCheckBox.checked )
35   menuBar = "yes";
36 else
37   menuBar = "no";
38
39 // determine whether the Address Bar checkbox is checked
40 if ( locationCheckBox.checked )
41   location = "yes";
42 else
43   location = "no";
44
45 // determine whether the Scroll Bar checkbox is checked
46 if ( scrollBarsCheckBox.checked )
47   scrollBars = "yes";
48 else
49   scrollBars = "no";
50

```

JavaScript: Object

42

```

51 // determine whether the Status Bar checkbox is checked
52 if ( statusCheckBox.checked )
53   status = "yes";
54 else
55   status = "no";
56
57 // determine whether the Resizable checkbox is checked
58 if ( resizableCheckBox.checked )
59   resizable = "yes";
60 else
61   resizable = "no";
62
63 // display window with selected features
64 childWindow = window.open( "", "", "resizable = " + resizable +
65   ", toolbar = " + toolBar + ", menuBar = " + menuBar +
66   ", status = " + status + ", location = " + location +
67   ", scrollBars = " + scrollBars );
68
69 // disable buttons
70 closeButton.disabled = false;
71 modifyButton.disabled = false;
72 getUrlButton.disabled = false;
73 setURLButton.disabled = false;
74 } // end function createChildWindow
75

```

JavaScript: Object

43

```

76 // insert text from the textbox into the child window
77 function modifyChildWindow()
78 {
79   if ( childWindow.closed )
80     alert( "You attempted to interact with a closed window" );
81   else
82     childWindow.document.write( textForChild.value );
83 } // end function modifyChildWindow
84
85 // close the child window
86 function closeChildWindow()
87 {
88   if ( childWindow.closed )
89     alert( "You attempted to interact with a closed window" );
90   else
91     childWindow.close();
92
93   closeButton.disabled = true;
94   modifyButton.disabled = true;
95   getUrlButton.disabled = true;
96   setURLButton.disabled = true;
97 } // end function closeChildWindow
98

```

JavaScript: Object

44

```

99 // copy the URL of the child window into the parent window's myChildURL
100 function getChildWindowURL()
101 {
102     if ( childWindow.closed )
103         alert( "You attempted to interact with a closed window" );
104     else
105         myChildURL.value = childWindow.location;
106 } // end function getChildWindowURL
107
108 // set the URL of the child window to the URL
109 // in the parent window's myChildURL
110 function setChildWindowURL()
111 {
112     if ( childWindow.closed )
113         alert( "You attempted to interact with a closed window" );
114     else
115         childWindow.location = myChildURL.value;
116 } // end function setChildWindowURL
117 //-->
118 </script>
119
120 </head>
121
122 <body>
123 <h1>Hello, This is the main window</h1>

```

JavaScript: Object 45

```

124 <p>Please check the features to enable for the child window</p>
125 <input id = "toolBarCheckBox" type = "checkbox" value = ""
126 checked = "checked" />
127 <label>Tool Bar</label>
128 <input id = "menuBarCheckBox" type = "checkbox" value = ""
129 checked = "checked" />
130 <label>Menu Bar</label>
131 <input id = "locationCheckBox" type = "checkbox" value = ""
132 checked = "checked" />
133 <label>Address Bar</label><br/>
134 <input id = "scrollBarsCheckBox" type = "checkbox" value = ""
135 checked = "checked" />
136 <label>Scroll Bars</label>
137 <input id = "statusCheckBox" type = "checkbox" value = ""
138 checked = "checked" />
139 <label>Status Bar</label>
140 <input id = "resizableCheckBox" type = "checkbox" value = ""
141 checked = "checked" />
142 <label>Resizable</label><br/></p>
143
144 <p>Please enter the text that you would like to display
145 in the child window<br/>
146 <input id = "textForChild" type = "text"
147 value = "<h1> Hello, I am a child window</h1> <br/>" />

```

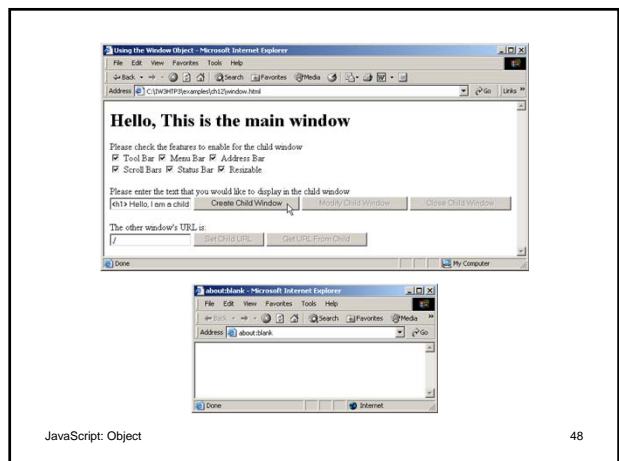
JavaScript: Object 46

```

148 <input id = "createButton" type = "button"
149 value = "Create Child Window" onclick = "createChildWindow()" />
150 <input id = "modifyButton" type = "button" value = "Modify Child Window"
151 onclick = "modifyChildWindow()" disabled = "disabled" />
152 <input id = "closeButton" type = "button" value = "Close Child Window"
153 onclick = "closeChildWindow()" disabled = "disabled" /></p>
154
155 <p>The other window's URL is: <br/>
156 <input id = "myChildURL" type = "text" value = "" />
157 <input id = "setURLButton" type = "button" value = "Set Child URL"
158 onclick = "setChildWindowURL()" disabled = "disabled" />
159 <input id = "getURLButton" type = "button" value = "Get URL From Child"
160 onclick = "getChildWindowURL()" disabled = "disabled" /></p>
161
162 </body>
163 </html>

```

JavaScript: Object 47





Metodi e Proprietà Oggetto window

Method or Property	Description
<code>open(url, name, options)</code>	Creates a new window with the URL of the window set to <i>url</i> , the name set to <i>name</i> , and the visible features set by the string passed in as <i>option</i> .
<code>prompt(prompt, default)</code>	Displays a dialog box asking the user for input. The text of the dialog is <i>prompt</i> , and the default value is set to <i>default</i> .
<code>close()</code>	Closes the current window and deletes its object from memory.
<code>window.focus()</code>	This method gives focus to the window (i.e., puts the window in the foreground, on top of any other open browser windows).
<code>window.document</code>	This property contains the <code>document</code> object representing the document currently inside the window.
<code>window.closed</code>	This property contains a boolean value that is set to true if the window is closed, and false if it is not.
<code>window.opener</code>	This property contains the <code>window</code> object of the window that opened the current window, if such a window exists.

Fig. 12.14 Important window object methods and properties.

JavaScript: Object 50

- ## Uso di Cookies (1)
- Dati memorizzati sul computer dell'utente
 - Usati per conservare informazioni riguardo il comportamento dell'utente durante una sessione con il browser
 - Accessibili mediante la proprietà `cookies`
 - Si imposta la data di scadenza con la proprietà `expires`
- JavaScript: Object 51

- ## Uso di Cookies (2)
- La funzione `escape` converte i caratteri non-alfanumerici in sequenze di esadecimali
 - `unescape` converte la sequenza di esadecimali in caratteri alfanumerici
- JavaScript: Object 52

```

1 <!-- Fig. 12.15: cookiee.html -->
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 12.15: cookiee.html -->
6 <!-- Using Cookies -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9 <head>
10 <title>Using Cookies</title>
11
12 <script type = "text/javascript">
13 <!--
14   var now = new Date(); // current date and time
15   var hour = now.getHours(); // current hour (0-23)
16   var name;
17
18   if ( hour < 12 ) // determine whether it is morning
19     document.write( "<h1>Good Morning, " );
20   else
21     {
22       hour = hour - 12; // convert from 24 hour clock to PM time
23

```

JavaScript: Object 53

```

24   // determine whether it is afternoon or evening
25   if ( hour < 6 )
26     document.write( "<h1>Good Afternoon, " );
27   else
28     document.write( "<h1>Good Evening, " );
29   }
30
31   // determine whether there is a cookie
32   if ( document.cookie )
33     {
34     // convert escape characters in the cookie string to their
35     // english notation
36     var myCookie = unescape( document.cookie );
37
38     // split the cookie into tokens using = as delimiter
39     var cookieTokens = myCookie.split( "=" );
40
41     // set name to the part of the cookie that follows the = sign
42     name = cookieTokens[ 1 ];
43   }
44   else
45     {
46     // if there was no cookie then ask the user to input a name
47     name = window.prompt( "Please enter your name", "GalAnt" );
48

```

JavaScript: Object 54

```

49   // escape special characters in the name string
50   // and add name to the cookie
51   document.cookie = "name=" + escape( name );
52   }
53
54   document.writeln(
55     name + ", welcome to JavaScript programming! </h1>" );
56   document.writeln( "<a href= \" JavaScript: wrongPerson() \" > " +
57     "Click here if you are not " + name + "</a>" );
58
59   // reset the document's cookie if wrong person
60   function wrongPerson()
61   {
62     // reset the cookie
63     document.cookie = "name=null; " +
64       " expires=Thu, 01-Jan-95 00:00:01 GMT";
65
66     // after removing the cookie reload the page to get a new name
67     location.reload();
68   }
69
70   // -->
71 </script>
72 </head>
73


```

JavaScript: Object 55

```

74 <body>
75 <p>Click Refresh (or Reload) to run the script again</p>
76 </body>
77 </html >

```



The screenshot shows a Microsoft Internet Explorer window titled "Using Cookies - Microsoft Internet Explorer". The address bar shows "C:\jw3\ffp3\examples\ch12\cookie.html". The main content area displays "Good Afternoon, GalAnt, welcome to JavaScript programming!" and a link "Click here if you are not GalAnt". Below the link is the text "Click Refresh (or Reload) to run the script again". A "Script Prompt" dialog box is open, asking "Please enter your name" with "GalAnt" entered in the text field. The dialog has "OK" and "Cancel" buttons.

JavaScript: Object 56

Esempio Conclusivo

- Combina i concetti precedenti

JavaScript: Object

57

```

1 <html version = "1.0" >
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3 "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 12.16: final.html -->
6 <!-- Putting it All Together -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9 <head>
10 <title>Putting it All Together</title>
11
12 <script type = "text/javascript">
13 <!--
14     var now = new Date(); // current date and time
15     var hour = now.getHours(); // current hour
16
17     // array with names of the images that will be randomly selected
18     var pictures =
19         [ "CPE", "EPT", "GPP", "GUI", "PERF", "PORT", "SEO" ];
20
21     // array with the quotes that will be randomly selected
22     var quotes = [ "Fore ever follows function.<br/>" +
23                 " Louis Henri Sullivan", "E pluribus unum." +
24                 "(One composed of many.)<br/> Virgil", "Is it a" +
25                 " world to hide virtues in?<br/> William Shakespeare" ];

```

JavaScript: Object

58

```

26
27 // write the current date and time to the web page
28 document.write( "<p>" + now.toLocaleString() + "<br/></p>" );
29
30 // determine whether it is morning
31 if ( hour < 12 )
32     document.write( "<h2>Good Morning. " );
33 else
34 {
35     hour = hour - 12; // convert from 24 hour clock to PM time
36
37     // determine whether it is afternoon or evening
38     if ( hour < 6 )
39         document.write( "<h2>Good Afternoon. " );
40     else
41         document.write( "<h2>Good Evening. " );
42 }
43
44 // determine whether there is a cookie
45 if ( document.cookie )
46 {
47     // convert escape characters in the cookie string to their
48     // english notation
49     var myCookie = unescape( document.cookie );
50

```

JavaScript: Object

59

```

51 // split the cookie into tokens using = as delimiter
52 var cookieTokens = myCookie.split( "=" );
53
54 // set name to the part of the cookie that follows the = sign
55 name = cookieTokens[ 1 ];
56 }
57 else
58 {
59     // if there was no cookie then ask the user to input a name
60     name = window.prompt( "Please enter your name, 'GalAnt' );
61
62     // escape special characters in the name string
63     // and add name to the cookie
64     document.cookie = "name =" + escape( name );
65 }
66
67 // write the greeting to the page
68 document.writeln(
69     name + ", welcome to JavaScript programming!</h2>" );
70
71 // write the link for deleting the cookie to the page
72 document.writeln( "<a href = \" JavaScript: wrongPerson() \" > " +
73     "Click here if you are not " + name + "</a><br/>" );
74

```

JavaScript: Object

60

```

75 // write the random image to the page
76 document.write ( "<img src = \"\" +
77   pictures[ Math.floor( Math.random() * 7 ) ] +
78   ".gif\" width= \"105\" height= \"100\" /> <br/>" );
79
80 // write the random quote to the page
81 document.write ( quotes[ Math.floor( Math.random() * 3 ) ] );
82
83 // create a window with all the quotes in it
84 function allQuotes()
85 {
86   // create the child window for the quotes
87   quoteWindow = window.open( "", "", "resizable=yes, toolbar" +
88     "no, menubar=no, status=no, location=no, " +
89     "scrollbars=yes" );
90   quoteWindow.document.write( "<p>" )
91
92   // loop through all quotes and write them in the new window
93   for ( var i = 0; i < quotes.length; i++)
94     quoteWindow.document.write( ( i + 1 ) + ". " +
95     quotes[ i ] + "<br/><br/>" );
96

```

JavaScript: Object 61

```

97 // write a cross link to the new window
98 quoteWindow.document.write( "</p><br/><a href = \"\" +
99   \"JavaScript:window.close()\"><
100   < /a> Close this window </a>" )
101 }
102
103 // reset the document's cookie if wrong person
104 function wrongPerson()
105 {
106   // reset the cookie
107   document.cookie = "name=null;" +
108     " expires=Thu, 01-Jan-95 00:00:01 GMT";
109
110 // after removing the cookie reload the page to get a new name
111 location.reload();
112 }
113
114 // open a new window with the quiz2.html file in it
115 function openQuiz()
116 {
117   window.open( "quiz2.html", "", "resizable = yes, " +
118     "toolbar = no, menubar = no, status = no, " +
119     "location = no, scrollbars = no");
120 }
121 // -->

```

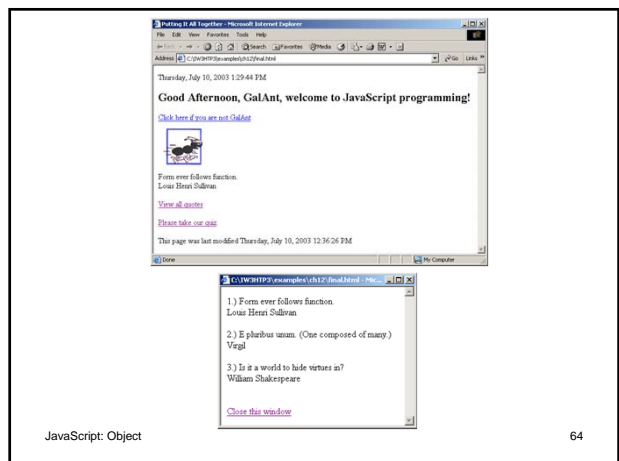
JavaScript: Object 62

```

122 </script>
123
124 </head>
125
126 <body>
127 <p><a href = \"JavaScript:allQuotes()\">View all quotes</a></p>
128
129 <p id = \"quiz2Spot\">
130 <a href = \"JavaScript:openQuiz()\">Please take our quiz</a></p>
131
132 <script type = \"text/javascript\">
133 // variable that gets the last modification date and time
134 var modDate = new Date( document.lastModified );
135
136 // write the last modified date and time to the page
137 document.write ( \"This page was last modified \" +
138   modDate.toLocaleString() );
139 </script>
140
141 </body>
142 </html>

```

JavaScript: Object 63




```

1 <!-- Fig. 12.14: quiz2.html -->
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
3   "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
4
5 <!-- Fig. 12.14: quiz2.html -->
6 <!-- OnLine Quiz -->
7
8 <html xmlns = "http://www.w3.org/1999/xhtml">
9 <head>
10 <title>OnLine Quiz</title>
11
12 <script type = "text/JavaScript">
13 <!--
14   function checkAnswers()
15   {
16     // determine whether the answer is correct
17     if ( myQuiz.radioButton[1].checked )
18       window.open(quizSpot.innerHTML =
19         "Congratulations, your answer is correct";
20     else // if the answer is incorrect
21       window.open(quizSpot.innerHTML = "Your answer is incorrect." +
22         " Please try again <br /> <a href= \"JavaScript:openQuiz()\" >
23         \" \> Please take our quiz</a>";
24
25     window.open.focus();

```

JavaScript: Object 65

```

26   window.close();
27 } // end checkAnswers function
28 //-->
29 </script>
30
31 </head>
32
33 <body>
34 <form id = "myQuiz" action = "JavaScript:checkAnswers()">
35 <p>Select the name of the tip that goes with the image shown:<br />
36 <img src = "EPT.gif" width = "100" height = "100"
37   alt = "mystery tip"/>
38 <br />
39
40 <input type = "radio" name = "radioButton" value = "CPE" />
41 <label>Common Programming Error</label>
42
43 <input type = "radio" name = "radioButton" value = "EPT" />
44 <label>Error-Prevention Tip</label>
45
46 <input type = "radio" name = "radioButton" value = "PERF" />
47 <label>Performance Tip</label>
48
49 <input type = "radio" name = "radioButton" value = "PORT" />
50 <label>Portability Tip</label><br />

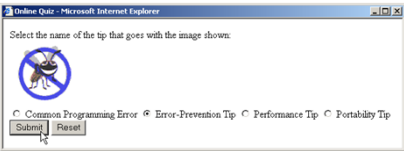
```

JavaScript: Object 66

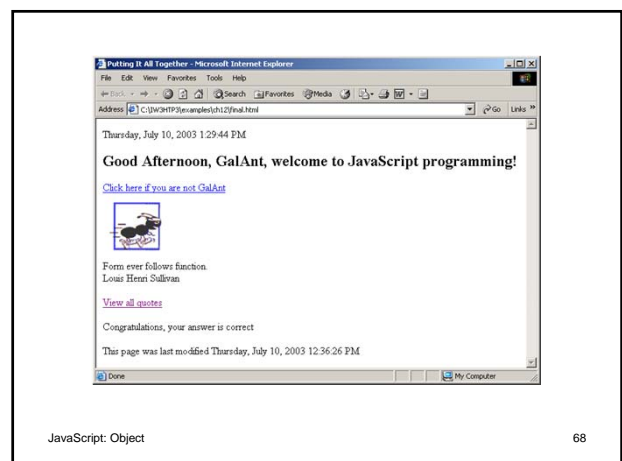
```

51 <input type = "submit" name = "Submit" value = "Submit" />
52 <input type = "reset" name = "reset" value = "Reset" />
53 </form>
54 </body>
55 </html>

```



JavaScript: Object 67



Web Resources

- www.javascript.com
- www.iboost.com/build/programming/js/tutorial/885.htm
- www.javascriptsearch.com
- www.alljavascripts.com