WRITE A BLOG ON DIFFERENCE BETWEEN DOCUMENT AND WINDOW OBJECTS

## INTRODUCTION:

* In this article, we will see the Document object & Window object, their various properties & methods, along with knowing their implementation & the differences between them.

## DOCUMENT:

* The document object represents a web page that is loaded in the browser.
* By accessing the document object, we can access the element in the HTML page.
* With the help of document objects, we can add dynamic content to our web page.
* The document object can be accessed with a window.document or just document.
* Syntax:

document.property\_name;

* The properties of document objects that are commonly used are listed in the below table:

Properties of document:

### PROPERTIES OF DOCUMENT:

* activeElement: It returns the currently active elements in the document.
* body: It returns the contents of the body element.
* anchors: It returns all <a> elements that have a name attribute.
* baseURI: It returns a string value that represents the base URI of the document.
* cookie: It returns the cookie of the current document.
* charSet: It returns a string, representing the document’s character encoding.
* defaultView: It returns the current Window Object.
* designMode: It is used to set documents as editable or read-only.
* domain: It returns the domain name of the document server.
* doctype: It returns the document’s doctype.
* embeds: It returns the collection of all embedded elements.
* URL: It returns the complete URL of the document.
* forms: It returns all the elements of the form.
* fullScreenElement: It returns the element that is currently present in full-screen mode.
* title: It returns the title element of the document.
* head: It returns the head element of the document.
* links: It returns all <area> and <a> elements that have a href attribute.
* lastModified: It returns the date and time of the current document that was last modified.
* images: It returns the collection of <img> elements in the document.
* implementation: It returns the DOMImplementation object associated with the current document.
* readyState: It returns the loading status of the current document.
* referrer: It returns the URI of the page that is linked to the current page.
* scripts: It returns all script elements present in the document.
* strictErrorChecking: It sets or returns whether strict error checking can be enforced on a document or not.

## METHODs OF DOCUMENT:

**Syntax:**

document.method\_name;

The lists of most commonly used methods are listed below:

* [**addEventListener()**](https://www.geeksforgeeks.org/html-dom-addeventlistener-method/): It is used to attach an event handler to the specified element.
* [**adoptNode()**](https://www.geeksforgeeks.org/html-dom-adoptnode-method/): It is used to adopt a node from another document and it returns a node object, representing the adopted node.
* [**close()**](https://www.geeksforgeeks.org/html-dom-close-method/): It is used to close the output stream.
* [**createAttribute()**](https://www.geeksforgeeks.org/html-dom-createattribute-method/)**:** It is used to create an attribute node with the specified name and returns the attribute object.
* [**createComment()**](https://www.geeksforgeeks.org/html-dom-createcomment-method/)**:** It is used to create a comment node with some text.
* [**createDocumentFragment()**](https://www.geeksforgeeks.org/html-dom-createdocumentfragment-method/): It is used to create the document fragment to change the content of the document.
* [**createElement()**](https://www.geeksforgeeks.org/html-dom-createelement-method/)**:** It is used to create HTML element .
* [**createEvent()**](https://www.geeksforgeeks.org/html-dom-createevent-event-method/): It is used to create a new events object.
* [**createTextNode()**](https://www.geeksforgeeks.org/html-dom-createtextnode-method/): It is used to create a textnode.
* [**execCommand()**](https://www.geeksforgeeks.org/html-dom-execcommand-method/): It is used to execute a command specified by the user on the editable selected section. It returns a Boolean value.
* [**fullscreenEnabled()**](https://www.geeksforgeeks.org/html-dom-fullscreenenabled-method/): It is used to check whether the document can be viewed in fullscreen mode or not. It returns a boolean value.
* [**getElementById()**](https://www.geeksforgeeks.org/html-dom-getelementbyid-method/): It returns the object of the given ID. If no object with that id exists then it returns null.
* [**getElementsByClassName()**](https://www.geeksforgeeks.org/html-dom-getelementsbyclassname-method/): It returns an object containing all the elements with the specified class names in the document as objects.
* [**getElementsByName()**](https://www.geeksforgeeks.org/html-dom-getelementsbyname-method/): It returns an object containing all the elements with the specified name in the document as objects.
* [**getElementsByTagName()**](https://www.geeksforgeeks.org/html-dom-getelementsbytagname-method/): It returns an object containing all the elements with the specified tag names in the document as objects.
* [**hasFocus()**](https://www.geeksforgeeks.org/html-dom-hasfocus-method/): It returns a boolean value that indicates whether the document or element has focus or not.
* [**importNode()**](https://www.geeksforgeeks.org/html-dom-importnode-method/): It imports the copy of a node from another document in the current document.
* [**normalize()**](https://www.geeksforgeeks.org/html-dom-normalize-method/): It flushes out the empty nodes and merges the adjacent text nodes with the first text node and
* [**normalizeDocument()**](https://www.geeksforgeeks.org/html-dom-normalizedocument-method/): It is used to normalize an HTML document by removing any empty text nodes and joining the adjacent text nodes.
* **open()**: It is used to open the output stream to collect the output.
* [**querySelector()**](https://www.geeksforgeeks.org/html-dom-queryselector-method/)**:** It returns the first element that matches a specified CSS selector(s) in the document.
* [**querySelectorAll()**](https://www.geeksforgeeks.org/html-dom-queryselectorall-method/): It returns a collection of an element’s child elements that matches a specified CSS selector(s) in the document
* [**removeEventListener()**](https://www.geeksforgeeks.org/html-dom-removeeventlistener-method/): It removes the event handler from an element that has an attached event.
* [**renameNode()**](https://www.geeksforgeeks.org/html-dom-renamenode-method/)**:** It is used to rename the node.
* [**write()**](https://www.geeksforgeeks.org/html-dom-write-method/): It is used to write some content or javascript code in the document.
* [**writeln()**](https://www.geeksforgeeks.org/html-dom-writeln-method/): It is used to write a document with a newline character after each statement.

## WINDOW:

* The window object is the topmost object of the DOM hierarchy.
* It represents a browser window or frame that displays the contents of the webpage.
* Whenever a window appears on the screen to display the contents of the document, the window object is created.

**Syntax:**

window.property\_name;

The properties of Window objects that are commonly used are listed in the below table:

## PROPERTIES OF THE DOCUMENT:

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* **console**: It returns a reference to the console object which provides access to the browser’s debugging console.
* **defaultStatus**: It is used to define the default message that will be displayed in the status bar when no activity is carried on by the browser.
* **controllers**: It returns the XUL controller objects for the current Chrome window.
* [**customElements**](https://www.geeksforgeeks.org/html-dom-window-customelements-property/): It returns a reference to the CustomElementRegistry object, which can be used to register new custom elements and also get information about already registered custom elements.
* [**crypto**](https://www.geeksforgeeks.org/html-dom-window-crypto-property/): It returns the browser crypto object.
* [**devicePixelRatio**](https://www.geeksforgeeks.org/html-dom-window-devicepixelratio-property/): It returns the ratio between physical pixels and device-independent pixels in the current display.
* [**frames[]**](https://www.geeksforgeeks.org/html-dom-window-frames-properties/): It represents an array that contains all the frames of a given window.
* **DOMPoint**: It returns a reference to a DOMPoint object, which represents a 2D or 3D point in a coordinate system.
* **History**: It provides information on the URLs visited in the current window.
* [**Document**](https://www.geeksforgeeks.org/html-dom-window-document-property/): It returns a reference to the document object of that window.
* **DOMMatrix**: It returns a reference to a DOMMatrix object, which represents 4×4 matrices, suitable for 2D and 3D operations.
* [**Length**](https://www.geeksforgeeks.org/html-window-length-property/): It represents the number of frames in the current window.
* **DOMRect**: It returns a reference to a DOMRect object, which represents a rectangle.
* [**fullScreen**](https://www.geeksforgeeks.org/web-window-api-dom-window-fullscreen-property/): This property indicates whether the window is displayed on full screen or not.
* **Location**: It contains the URL of the current window.
* [**innerHeight**](https://www.geeksforgeeks.org/html-window-innerheight-property/): It is used to get the height of the content area of the browser window.
* [**innerWidth**](https://www.geeksforgeeks.org/html-window-innerwidth-property/): It is used to get the width of the content area of the browser window.
* [**Name**](https://www.geeksforgeeks.org/html-window-name-property/): It contains the name of the referenced window.
* **Window**: It returns the current window or frame.
* [**Navigator**](https://www.geeksforgeeks.org/html-dom-window-navigator-property/): It returns a reference to the navigator object.
* [**outerHeight**](https://www.geeksforgeeks.org/html-window-outerheight-property/): It will get the height of the outside of the browser window.
* [**outerWidth**](https://www.geeksforgeeks.org/html-window-outerwidth-property/): It will get the width of the outside of the browser window.
* [**Status**](https://www.geeksforgeeks.org/html-dom-window-status-property/): It overrides the default status and places a message in the status bar.
* [**Top**](https://www.geeksforgeeks.org/html-window-top-property/): It returns a reference to the topmost window containing a frame if many windows are opened.
* [**Toolbar**](https://www.geeksforgeeks.org/web-window-api-window-toolbar-property/): It will result in the toolbar object, whose visibility can be toggled in the window.
* [**Opener**](https://www.geeksforgeeks.org/html-dom-window-opener-properties/): It contains a reference to the window that opened the current window.
* [**Parent**](https://www.geeksforgeeks.org/html-dom-window-parent-property/): It refers to the frameset in which the current frame is contained.
* **Screen**: It refers to the screen object
* [**Self**](https://www.geeksforgeeks.org/html-window-self-property/): It provides another way to refer to the current window.

### METHODS OF WINDOW:

**Syntax:**

window.method\_name;

The methods of Window objects that are commonly used are listed in the below table:

* [**alert()**](https://www.geeksforgeeks.org/html-window-alert-method/): It is used to display an alert box. It displays a specified message along with an OK button and is generally used to make sure that the information comes through the user.
* [**atob()**](https://www.geeksforgeeks.org/html-window-atob-method/): It is used for decoding a base-64 encoded string. It is used to decode a string of data that has been encoded using the btoa() method.
* [**blur()**](https://www.geeksforgeeks.org/javascript-window-blur-and-window-focus-method/): It is used to remove focus from the current window.
* [**btoa()**](https://www.geeksforgeeks.org/html-dom-window-btoa-method/): It is used for encoding a string in base-64 format.
* [**clearInterval()**](https://www.geeksforgeeks.org/javascript-cleartimeout-clearinterval-method/): It clears the interval which has been set by the setInterval() function before that.
* [**clearTimeout()**](https://www.geeksforgeeks.org/javascript-cleartimeout-clearinterval-method/)**:**It clears the timeout which has been set by the setTimeout()function before that.
* [**close()**](https://www.geeksforgeeks.org/javascript-window-close-method/)**:**It is used for closing a certain window or tab of the browser which was previously opened.
* [**confirm()**](https://www.geeksforgeeks.org/javascript-window-confirm-method/)**:**It is used to display a modal dialog with an optional message and two buttons i.e. OK and Cancel. It returns true if the user clicks “OK”, and false otherwise.
* [**focus()**](https://www.geeksforgeeks.org/javascript-window-blur-and-window-focus-method/)**:**It is used to give focus to an element in the current window.
* [**getComputedStyle()**](https://www.geeksforgeeks.org/javascript-window-getcomputedstyle-method/)**:**It is used to get all the computed CSS properties and values of the specified element.
* **getSelection()**: It returns a Selection object representing the range of text selected by the user
* [**matchMedia()**](https://www.geeksforgeeks.org/html-window-matchmedia-method/): It is used to return a MediaQueryList object which represents the result of the specified CSS media query string.
* [**open()**](https://www.geeksforgeeks.org/javascript-window-open-method/): It is used to open a new tab or window with the specified URL and name.
* [**moveBy()**](https://www.geeksforgeeks.org/html-window-moveby-method/): It is used for moving a window with a specified number of pixels relative to its current coordinates.
* [**moveTo()**](https://www.geeksforgeeks.org/html-window-moveto-method/): It is used in the window to move the window from the left and top coordinates.
* [**prompt()**](https://www.geeksforgeeks.org/javascript-window-prompt-method/): It is used to display a dialog with an optional message prompting the user to input some text
* [**resizeBy()**](https://www.geeksforgeeks.org/html-window-resizeby-method/): It is used to resize a window by the specified amount.
* [**resizeTo()**](https://www.geeksforgeeks.org/html-window-resizeto-method/): It is used to resize a window to the specified width and height.
* [**scrollBy()**](https://www.geeksforgeeks.org/html-window-scrollby-method/): It is used to scroll the document by the given number of pixels.
* [**scrollTo()**](https://www.geeksforgeeks.org/javascript-window-scrollto-method/): It is used to scroll to a particular set of coordinates in the document.
* [**setInterval()**](https://www.geeksforgeeks.org/java-script-settimeout-setinterval-method/)**:** It repeats a given function at every given time interval.
* [**setTimeout()**](https://www.geeksforgeeks.org/java-script-settimeout-setinterval-method/): It executes a function, after waiting a specified number of milliseconds.
* [**stop()**](https://www.geeksforgeeks.org/html-dom-window-stop-method/): It is used to stop the window from loading resources in the current browsing context.

# WINDOW VS DOCUMENT

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| WINDOW | DOCUMENT |
| It represents a browser window or frame that displays the contents of the webpage | It represents any HTML document or web page that is loaded in the browser. |
| It is the very first object that is loaded in the browser. | It is loaded inside the window. |
| It is the object of the browser. | It is the object of window property. |
| Global objects, functions, and variables of JavaScript are members of the window object. | All the tags, elements with attributes in HTML are part of the document. |
| We can access the document from a window using the window. document | We can access the document from a window using the window. document |
| The window is part of BOM, not DOM. | The document is part of BOM (browser object model) and dom (Document object model) |
| Properties of the window object cannot be accessed by the document object. | Properties of document objects such as title, body, cookies, etc can also be accessed by a window like this window. document.title |