**DAY-2**

* **Differences between Document and Window Objects?**

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 Object:**

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:**

* [**Active Element**](https://www.geeksforgeeks.org/html-dom-activeelement-property/): It returns the currently active elements in the document.
* [**Body**](https://www.geeksforgeeks.org/html-dom-body-property/): It returns the contents of the body element.
* **Anchors:** It returns all <a> elements that have a name attribute.
* [**Base URI**](https://www.geeksforgeeks.org/html-dom-baseuri-property/): It returns a string value that represents the base URI of the document.
* [**Cookie**](https://www.geeksforgeeks.org/html-dom-cookie-property/): It returns the cookie of the current document.
* [**Charset**](https://www.geeksforgeeks.org/html-dom-script-charset-property/): It returns a string, representing the document’s character encoding.
* [**Default View**](https://www.geeksforgeeks.org/html-dom-defaultview-property/): It returns the current Window Object.
* [**Design Mode**](https://www.geeksforgeeks.org/html-dom-designmode-property/): It is used to set documents as editable or read-only.
* [**Domain**](https://www.geeksforgeeks.org/html-dom-domain-property/): It returns the domain name of the document server.
* [**Doc type**](https://www.geeksforgeeks.org/html-dom-doctype-property/): It returns the document’s doctype.
* **Embeds**: It returns the collection of all embedded elements.
* [**URL**](https://www.geeksforgeeks.org/html-dom-url-property/): It returns the complete URL of the document.
* **Forms**: It returns all the elements of the form.
* [**FullScreenElement**](https://www.geeksforgeeks.org/html-dom-fullscreenelement-property/): It returns the element that is currently present in full-screen mode.
* [**Title**](https://www.geeksforgeeks.org/html-dom-title-property/): It returns the title element of the document.
* [**Head**](https://www.geeksforgeeks.org/html-dom-head-property/): It returns the head element of the document.
* **Links**: It returns all <area> and <a> elements that have a href attribute.
* [**Last Modified**](https://www.geeksforgeeks.org/html-dom-lastmodified-property/): 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**](https://www.geeksforgeeks.org/html-dom-implementation-property/): It returns the DOMImplementation object associated with the current document.
* [**Ready State**](https://www.geeksforgeeks.org/html-dom-readystate-property/): It returns the loading status of the current document.
* [**Referrer**](https://www.geeksforgeeks.org/html-dom-referrer-property/): 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**](https://www.geeksforgeeks.org/html-dom-stricterrorchecking-property/): 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:

* [**Close ( HYPERLINK "https://www.geeksforgeeks.org/html-dom-close-method/")**](https://www.geeksforgeeks.org/html-dom-close-method/)**:** It is used to close the output stream**.**
* [**createComment HYPERLINK "https://www.geeksforgeeks.org/html-dom-createcomment-method/"( HYPERLINK "https://www.geeksforgeeks.org/html-dom-createcomment-method/")**](https://www.geeksforgeeks.org/html-dom-createcomment-method/)**:**It is used to create a comment node with some text**.**
* [**createElement HYPERLINK "https://www.geeksforgeeks.org/html-dom-createelement-method/"( HYPERLINK "https://www.geeksforgeeks.org/html-dom-createelement-method/")**](https://www.geeksforgeeks.org/html-dom-createelement-method/)**:**It is used to create HTML element .
* [**createEvent HYPERLINK "https://www.geeksforgeeks.org/html-dom-createevent-event-method/"( HYPERLINK "https://www.geeksforgeeks.org/html-dom-createevent-event-method/")**](https://www.geeksforgeeks.org/html-dom-createevent-event-method/)**:** It is used to create a new events object.
* [**createTextNode HYPERLINK "https://www.geeksforgeeks.org/html-dom-createtextnode-method/"( HYPERLINK "https://www.geeksforgeeks.org/html-dom-createtextnode-method/")**](https://www.geeksforgeeks.org/html-dom-createtextnode-method/)**:** It is used to create a textnode.
* [**renameNode HYPERLINK "https://www.geeksforgeeks.org/html-dom-renamenode-method/"( HYPERLINK "https://www.geeksforgeeks.org/html-dom-renamenode-method/")**](https://www.geeksforgeeks.org/html-dom-renamenode-method/)**:**It is used to rename the node.
* [**Write ( HYPERLINK "https://www.geeksforgeeks.org/html-dom-write-method/")**](https://www.geeksforgeeks.org/html-dom-write-method/)**:** It is used to write some content or javascript code in the document.
* **Window Object:**

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 window:**

* [**Closed**](https://www.geeksforgeeks.org/javascript-window-close-method/)**:** It holds a Boolean value that represents whether the window is closed or not.
* **Console:** It returns a reference to the console object which provides access to the browser’s debugging console.
* **Default Status:** 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.
* [**Custom Elements**](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.
* [**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 represents4×4 matrices, suitable for 2D and 3D operations.
* [**Frames [ HYPERLINK "https://www.geeksforgeeks.org/html-dom-window-frames-properties/"]**](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.
* [**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.
* [**Inner Height**](https://www.geeksforgeeks.org/html-window-innerheight-property/)**:** It is used to get the height of the content area of the browser window.
* [**Inner Width**](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.
* [**Outer Height**](https://www.geeksforgeeks.org/html-window-outerheight-property/)**:** It will get the height of the outside of the browser window.
* [**Outer Width**](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:**

**“windows.method\_name;”**

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

* [**Alert ( HYPERLINK "https://www.geeksforgeeks.org/html-window-alert-method/")**](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.
* [**Open ( HYPERLINK "https://www.geeksforgeeks.org/javascript-window-open-method/")**](https://www.geeksforgeeks.org/javascript-window-open-method/)**:** It is used to open a new tab or window with the specified URL and name.
* [**Move By ( HYPERLINK "https://www.geeksforgeeks.org/html-window-moveby-method/")**](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.
* [**Move To ( HYPERLINK "https://www.geeksforgeeks.org/html-window-moveto-method/")**](https://www.geeksforgeeks.org/html-window-moveto-method/)**:** It is used in the window to move the window from the left and top coordinates.
* [**Set Timeout ( HYPERLINK "https://www.geeksforgeeks.org/java-script-settimeout-setinterval-method/")**](https://www.geeksforgeeks.org/java-script-settimeout-setinterval-method/)**:** It executes a function, after waiting a specified number of milliseconds.
* [**Stop ( HYPERLINK "https://www.geeksforgeeks.org/html-dom-window-stop-method/")**](https://www.geeksforgeeks.org/html-dom-window-stop-method/)**:** It is used to stop the window from loading resources in the current browsing context.
* [**Prompt ( HYPERLINK "https://www.geeksforgeeks.org/javascript-window-prompt-method/")**](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.

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| **Document** | **Window** |
| It represents the document loaded inside the window or browser. | It represents the browser window in which you are seeing the content. |
| The properties related to it are stored in the document object. | The properties related to it are stored in the window object. |
| It is loaded after the loading window because the window contains a document. | It is loaded before the document because window container document. |
| It is the root element of the document object model. | The window is the global element for all objects, functions, etc. |
| It is an object of window. | It is an object of the browser. |
| We cannot access windows objects properties inside the document. | We can access document object properties inside the window. |
| logically:  document:{ properties} | logically:  window:{document:{properties}} |
| Example: document.title will return the title of the document | Example: window.document.title will return the title of the document. |