

In the context of web development and JavaScript, the `document` and `window` objects are important components of the Document Object Model (DOM). They represent different aspects of the browser environment and serve distinct purposes.

document Object:

- The **document** object represents the HTML document loaded in the current browser window or tab.
- It provides an interface to interact with and manipulate the content of the document, such as modifying elements, handling events, and changing styles.
- Methods and properties of the **document** object allow developers to access and modify the structure and content of the HTML document.

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```
document.getElementById("myElement").innerHTML = "New Content";
```

window Object:

- The **window** object represents the entire browser window or tab.
- It serves as the global object in the browser environment and contains properties and methods related to the browser window, such as navigation, resizing, and opening new windows.
- It also encompasses the **document** object, so properties and methods related to the document can be accessed through the **window** object.

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```
window.open("https://www.example.com", "_blank");
```

- Additionally, the **window** object includes properties like `innerWidth` and `innerHeight` for the dimensions of the viewport and methods like `alert()` and `confirm()` for displaying dialog boxes.

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```
window.alert("Hello, World!");
```

In summary, the `document` object is primarily concerned with the content and structure of the HTML document, while the `window` object represents the overall browser window and provides methods for interacting with the browser environment. It's important to note that in most cases, when you're working with the DOM in a web page, you are essentially interacting with the `document` object, but some global properties and methods are accessible through the `window` object as well.

Difference between document and window:

document	window
It represents any HTML document or web page that is loaded in the browser.	It represents a browser window or frame that displays the contents of the webpage.

document	window
It is loaded inside the window.	It is the very first object that is loaded in the browser.
It is the object of window property.	It is the object of the browser.
All the tags, elements with attributes in HTML are part of the document.	Global objects, functions, and variables of JavaScript are members of the window object.
We can access the document from a window using the window. document	We can access the window from the window only. i.e. window.window
The document is part of BOM (browser object model) and dom (Document object model)	The window is part of BOM, not DOM.
Properties of document objects such as title, body, cookies, etc can also be accessed by a window like this window. document.title	Properties of the window object cannot be accessed by the document object.
syntax: document.propertyname;	syntax: window.propertyname;
example: document.title : will return the title of the document	example: window.innerHeight : will return the height of the content area of the browser