**Document VS Window Object**

|  |  |
| --- | --- |
| **Document** | **Window** |
| **Definition:** The document object represents the DOM document loaded in the window and serves as an interface to interact with the HTML content of the web page. | **Definition:** The window object represents the browser window that contains the DOM document. |
| **Scope:** The document object is specific to each HTML document loaded in the window. It provides access to the DOM elements within that document | **Scope:** Variables and functions declared globally are attached to the window object automatically. |
| **Properties and Methods:** It provides access to various properties and methods for manipulating the document's structure, content, and styling like document.getElementById(),  document.querySelector() etc. | **Properties and Methods:** It provides access to various properties and methods related to the browser window like window.close(), window.innerwidth etc. |
| **Events:** The document object handles events related to elements within the HTML document, such as clicks, keypresses, form submissions, etc. | **Events:** The window object handles events related to the browser window itself, such as resizing, scrolling, loading, etc. These events are often referred to as window events. |
| **Parent-child relationship:** The document object, however, is always contained within a single window object, representing the DOM of the current HTML document loaded in that window | **Parent-child relationship:** The window object can contain multiple document objects, each representing a separate HTML document loaded in tabs or frames within the browser window |
| **Lifecycle**: The document object's lifecycle is tied to the specific HTML document loaded in the window. It's created when the document is loaded and persists until the window navigates to a new URL or is closed | **Lifecycle**: The window object's lifecycle is tied to the entire lifespan of the browser window. It's created when the window is opened and persists until the window is closed |