1. **write differences between window and document objects in javascript**

* Scope of Access: The window object represents the browser window or tab, providing access to browser-related features like the window size, location, and navigation history. The document object, on the other hand, represents the web page loaded in the window/tab, providing access to the page's HTML structure, elements, and content.
* Properties and Methods: window object includes properties and methods related to the browser window, such as window.innerWidth, window.location, and window.alert(). document object includes properties and methods for interacting with the HTML document, such as document.getElementById(), document.querySelector(), and document.title.
* Hierarchy: While both window and document objects are global objects in JavaScript, the document object is a property of the window object. This means you can access the document object directly from the global scope (window.document) or indirectly through the window object (document).
* Lifecycle: The window object persists as long as the browser window or tab is open, and it is responsible for managing browser-level functionalities. The document object, however, represents the currently loaded HTML document and is created and destroyed as the page is loaded, unloaded, or navigated.
* Event Handling: The window object handles events related to the browser window or tab, such as onload, onresize, and onunload. The document object handles events related to the HTML document, such as onclick, onsubmit, and onkeydown, allowing you to respond to user interactions with the page content.