1. Difference between window and document object:

In JavaScript, the document and window objects are fundamental components of the browser environment, but they serve different purposes.

window Object:

The window object represents the browser window. It's the global object in client-side JavaScript and encompasses the entire browser window. It provides properties and methods that can be accessed globally. For instance, window holds information about the browser's dimensions (window.innerHeight), manages timing events (setTimeout, setInterval), and also includes the localStorage and sessionStorage objects for storing data locally.

document Object:

The document object is part of the window object and represents the actual web page loaded in the window. It provides access to the content and elements of the HTML document currently displayed. Through the document object, you can manipulate the structure and content of the web page. You can access elements by their IDs, classes, tags, etc., using document.getElementById, document.querySelector, and similar methods. The document object also lets you modify the content, structure, and styles of the webpage dynamically.