1. Write a blog on the difference between document and window objects.

**Answer:**

**Window Object:**

* Window object 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.
* The window is at a top level at the JavaScript object hierarchy. The window object is the topmost object of the Document Object Model hierarchy (DOM).
* The first thing that gets loaded into the browser is the window and the properties related to that window are stored in the window object. Properties related to window objects are length, innerWidth, innerHeight, caches, etc.
* The Browser Object Model (BOM) contains objects that represent the current browser window or tab. The topmost object in the BOM is the windowobject representing the window or tab or an iframe sometimes. Window object has properties like browser history, location and the device’s screen etc.
* The window object represents a window containing a DOM document.
* Window object is the object of the browser.
* Global objects, functions, and variables of JavaScript are members of the window object.
* The window is part of Browser Object Model (BOM), not Document Object Model (DOM).
* Properties of the window object cannot be accessed by the document object.
* Window have various properties and methods of its own.
* We can access the window from the window only. i.e. window.window
* Syntax: window.propertyname;

**Example:**

**Properties**

window.innerHeight - the inner height of the browser window (in pixels)

window.innerWidth - the inner width of the browser window (in pixels)

**Methods**

window.open() - open a new window

window.close() - close the current window

window.moveTo() - move the current window

window.resizeTo() - resize the current window

**Document Object:**

* The document object represents a web page that is loaded in the browser.
* A document is an object inside the window object and we use a document object for manipulation inside the document. By accessing the document object, we can access the element in the HTML page.
* After the window gets loaded then there’s a document (HTML or another document) loaded inside that window, and the properties related to that document is stored in the document object. Properties related to document objects are title, URL, cookie, etc.
* When a web page is loaded, the browser creates a Document Object Model (DOM) of the page. The document object represents the whole html document as a tree of Objects(HTML, HEAD, BODY, and other HTML tags). It is the root element that represents the html document.
* Document object is property of window object that points to the DOM document loaded in that window.
* Document object is the object of window property.
* All the tags, elements with attributes in HTML are part of the document.
* The document is part of Browser Object Model (BOM) and Document Object Model (DOM).
* Document have various properties and methods of its own.
* We can access the document from a window using the window. document.
* Syntax: document.propertyname.

**Example:**

**Properties**

element.innerHTML = new html content - Change the inner HTML of an element

element.attribute = new value - Change the attribute value of an HTML element

**Methods**

document.createElement(element) - Create an HTML element

document.removeChild(element) - Remove an HTML element

**Conclusion:**

Understanding the differences between Window and Document objects is crucial in JavaScript and web development. Window manages browser interactions, while Document acts as an interface for content manipulation. Using these functionalities allows developers to create interactive web experiences.