Document and Window Objects in JavaScript

JavaScript is a versatile and powerful language that runs in the browser and interacts with the web page's content and structure. Two of the most fundamental objects provided by the browser's environment are the window and document objects. While they are closely related, they serve distinct purposes and have different properties and methods.

The Window Object:

The window object is the global object in the browser environment. It represents the browser window or the frame in which the content is displayed. Essentially, it acts as the global scope for JavaScript code running in the browser. This means that all global variables and functions are properties and methods of the window object.

window.alert("Hello!");

The document Object:

The document object represents the HTML or XML content of a web page. It is part of the window object and serves as the entry point to the page's content. Through the document object, you can access and manipulate the structure and content of the web page.

**DOM Access**: The document object provides methods to access and manipulate HTML elements.

var element = document.getElementById("myElement")

**Key differences:**

* **Scope**:

Window: Represents the browser window and serves as the global scope.

Document: Represents the web page's content and structure within the browser window.

* **Functionality**:

Window: Provides methods for controlling the browser window, handling timeouts, and accessing browser information.

Document: Provides methods for accessing and manipulating the DOM, creating elements, and handling events.

* **Hierarchy**:

Window is the top-level object.

Document is a property of the window object.