**Document Object Model (DOM):**

The Document Object is a fundamental part of the Document Object Model (DOM), which is a programming interface for web documents.

The Document Object Model represents the structure of a document as a tree of objects, where each object corresponds to a part of the document, such as elements, attributes, and text.

The document object specifically refers to the root of this tree and provides an interface that allows scripts (typically written in JavaScript) to dynamically interact with and manipulate the content of an HTML or XML document. The document object provides methods and properties that allow developers to access and modify various aspects of the document, including its structure, content, and styling.

**Example:**

// Get an element by its ID

var myElement = document.getElementById("exampleElement");

// Modify the text content of the element

myElement.textContent = "Hello, World!";

**Window Object:**

The window object is a fundamental part of the JavaScript programming language and is a core component of the browser environment.

It represents the global window or frame in which all JavaScript code is executed when running in a web browser. The window object provides an interface to interact with various aspects of the browser environment, including the document, navigation, history, and more.

Represents the browser window or frame and serves as a global object for JavaScript in the browser.

**Example:**

window.console();

**Differences Between Document Object and Window Object**

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|  | **Document Object** | **Window Object** |
| **Scope** | Pertains to the content within the HTML document, such as elements, attributes, and text. | Encompasses the entire browser window and includes properties and methods related to the browser environment. |
| **Access** | Accessed using the document keyword. | Accessed using the window keyword, but the global context allows for direct access to its properties and methods without the window prefix. |
| **Hierarchy** | Nested within the window object, representing the content of the current document. | At the top of the hierarchy, representing the browser window and global environment. |
| **Content Manipulation** | Used for manipulating the content of the HTML document, such as modifying elements, attributes, and text. | Used for browser-related tasks, such as opening and closing windows, navigating to URLs, and handling events. |
| **Events** | Captures events related to the content, such as clicks, keypresses, and form submissions. | Captures events related to the browser window, such as resizing, scrolling, and unloading. |
| **Methods** | Provides methods for selecting and modifying elements within the document, like getElementById or createElement. | Provides methods for managing the browser, such as alert, open, and setTimeout. |
| **Location** | Represents the current document and its content. | Represents the entire browser window and includes information about the current URL. |
| **Navigation** | Primarily concerned with the structure and content of the document. | Handles navigation tasks, such as opening new windows, navigating to URLs, and managing the browser's history. |
| **Properties** | Contains properties related to the content, such as title or URL. | Contains properties related to the browser environment, such as innerWidth, innerHeight, and navigator. |
| **Context** | Contextualizes the content and structure of the HTML document. | Contextualizes the entire browser environment. |
| **Lifecycle** | Tied to the lifecycle of the HTML document, from loading to unloading. | Represents the overall lifecycle of the browser window, including its opening, closing, and navigating. |
| **DOM Tree** | Represents the structure of the HTML document as a tree of elements. | Does not represent the DOM tree directly but encompasses the document object within its global context. |
| **Document-specific Features** | Contains features specific to working with document content, like body, head, and getElementById. | Contains features specific to the browser environment, such as history, localStorage, and console. |
| **Responsibilities** | Primarily responsible for managing and manipulating the content within the HTML document. | Primarily responsible for managing the overall browser environment and providing a global context for JavaScript. |