**Task -2**

**1 .Write a blog on the Differences between the Document and Window Object?**

**Introduction:**

In the realm of web development, understanding the Document and Window objects is crucial. Both are fundamental components of the Document Object Model (DOM), a programming interface for web documents. In this blog post, we'll delve into the differences between the Document and Window objects in JavaScript and explore their unique roles in shaping the interactive web experience.

**Document Object:**

The Document object represents the entire HTML document. It serves as an entry point to the document's content and provides methods and properties for manipulating it. When you interact with the DOM to access or modify elements on a web page, you are essentially working with the Document object.

Key characteristics of the Document object:

1. Content Manipulation:

The Document object allows you to access and manipulate the content within an HTML document. You can select elements, modify their attributes, and change the structure of the document.

2. Methods for Element Selection:

Methods such as `getElementById()`, `getElementsByClassName()`, and `getElementsByTagName()` are part of the Document object and enable developers to select specific elements within the document.

3. DOM Tree Navigation:

- Document object provides methods to navigate through the DOM tree, allowing you to traverse the hierarchy of elements.

**Window Object:**

On the other hand, the Window object represents the browser window or a tab. It serves as the global object for JavaScript in a web page and encompasses not only the document but also various properties related to the browser environment.

Key characteristics of the Window object:

1. Global Scope:

The Window object is the global object in a web page. Any variable or function declared without the `var`, `let`, or `const` keyword becomes a property of the Window object.

2. Browser-Related Properties:

Properties like `location`, `navigator`, and `history` are part of the Window object. They provide information about the browser, its location, and the user's navigation history.

3. Timers and Events:

The Window object handles timers (via `setTimeout()` and `setInterval()`) and events. It allows you to execute code after a specific time interval or in response to user interactions.

**Differences and Interactions:**

1. Hierarchy:

The Document object is nested within the Window object. You access the Document object through the `document` property of the Window object.

2. Scope:

While the Document object deals with the content and structure of the HTML document, the Window object deals with the browser environment, global variables, and browser-related functionality.

3. Interactions:

The Window object can access the Document object and vice versa. For example, you can use `window. Document` or simply `document` to refer to the Document object from the Window object.

**Conclusion:**

In summary, understanding the distinctions between the Document and Window objects is essential for effective web development. The Document object focuses on the content and structure of the HTML document, providing methods for manipulation, while the Window object serves as the global environment for JavaScript, encompassing browser-related properties and functionality. Mastery of these concepts empowers developers to create dynamic and responsive web applications.