5. What is BOM? DOM? Diff. between BOM vs DOM?

BOM (Browser Object Model) and DOM (Document Object Model) are two fundamental concepts in web development, both essential for manipulating and interacting with web pages, but they serve different purposes.

\*\*BOM (Browser Object Model):\*\*

The Browser Object Model refers to the objects and methods provided by the web browser to interact with the browser itself rather than the content of the web page. BOM includes objects like `window`, `navigator`, `screen`, `location`, `history`, `document` (although technically part of the DOM, it has a significant role in BOM as well), and others. BOM allows interaction with the browser, its windows, tabs, and other browser-related functionality.

Key BOM components:

- `window`: Represents an open window in a browser.

- `navigator`: Provides information about the browser.

- `location`: Represents the URL of the current page.

- `screen`: Provides information about the user's screen.

- `history`: Represents the browsing history.

- `document`: Represents the DOM of the current web page.

\*\*DOM (Document Object Model):\*\*

The Document Object Model is a programming interface for web documents. It represents the structure of HTML and XML documents as a tree-like structure of objects that can be manipulated using scripting languages like JavaScript. It specifies how elements in a document are structured and how they can be accessed and manipulated. The DOM provides a way for scripts to dynamically access and update the content, structure, and style of documents.

Key DOM components:

- `document`: Represents the entire HTML or XML document.

- Elements: HTML elements like `<div>`, `<p>`, `<a>`, etc.

- Attributes: Attributes of HTML elements.

- Nodes: Everything in the document is a node, including elements, text nodes, and attributes.

\*\*Difference between BOM and DOM:\*\*

- \*\*Focus:\*\*

- BOM deals with browser-specific objects and methods, providing control over the browser window and its behavior.

- DOM deals with the document structure and content, enabling access and manipulation of HTML elements and their attributes within a web page.

- \*\*Purpose:\*\*

- BOM focuses on controlling the browser, handling navigation, controlling windows, handling cookies, managing history, and more.

- DOM focuses on accessing and manipulating the content and structure of web documents, allowing dynamic modifications to the web page content and structure.

In summary, BOM deals with the browser and its interaction, while DOM deals with the structure and content of the web page itself, providing access and manipulation of the document's elements. Both BOM and DOM are integral parts of web development, enabling the creation of interactive and dynamic web applications.