

## Day 13



**Javascript**  
THE LANGUAGE OF THE WEB

### **DOM, BOM & Window Object :**

#### **What is the Browser Environment?**

When JavaScript runs in a browser, it can interact with:

1. The web page (HTML content)
2. The browser itself
3. The window that contains everything

These are handled using three main parts: DOM, BOM, and Window Object

#### **Window Object**

The window object is the top-level object in the browser. It represents the browser window or tab where the web page is displayed.

Everything (like `alert()`, `console.log()`, `document`, etc.) is part of the window object.

#### **DOM (Document Object Model)**

The DOM represents the HTML document as a tree structure. Each HTML element (like `<p>`, `<div>`, `<h1>`) becomes a JavaScript object that you can access or change.

#### **BOM (Browser Object Model)**

The BOM lets JavaScript interact with the browser (outside the webpage) — like the address bar, alert boxes, history, or screen size.

#### **Relation Between Them**

Window Object

├— Document Object (DOM)

└— Browser Object Model (BOM)

#### **Summary**

| Concept | Full Form             | Deals With               | Example                                                         |
|---------|-----------------------|--------------------------|-----------------------------------------------------------------|
| Window  | —                     | Whole browser window/tab | <code>window.alert()</code> ,<br><code>window.innerWidth</code> |
| DOM     | Document Object Model | Web page (HTML elements) | <code>document.getElementById()</code>                          |

| Concept | Full Form            | Deals With                   | Example                             |
|---------|----------------------|------------------------------|-------------------------------------|
| BOM     | Browser Object Model | Browser (URL, history, etc.) | window.location.href, window.open() |

Example: You can skip writing window. because it's the global object.

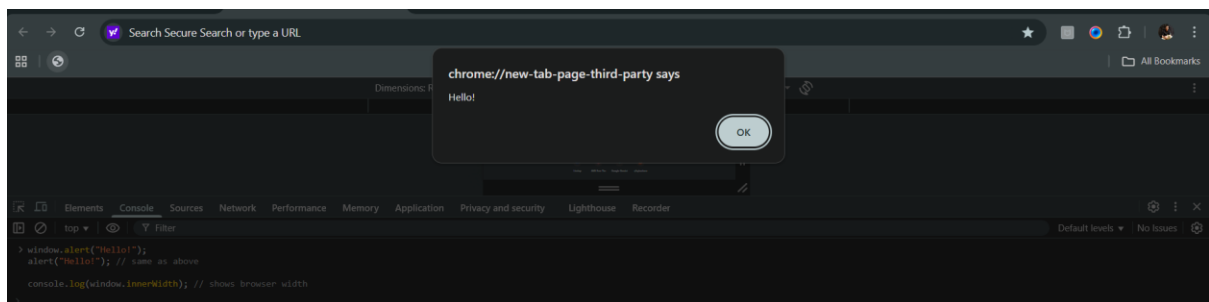
```

> window.alert("Hello!");
alert("Hello!"); // same as above

console.log(window.innerWidth); // shows browser width

```

Output:



```

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< undefined

```

Example:

```

> console.log(document)
  #document (chrome://new-tab-page-third-party/)
< undefined

```