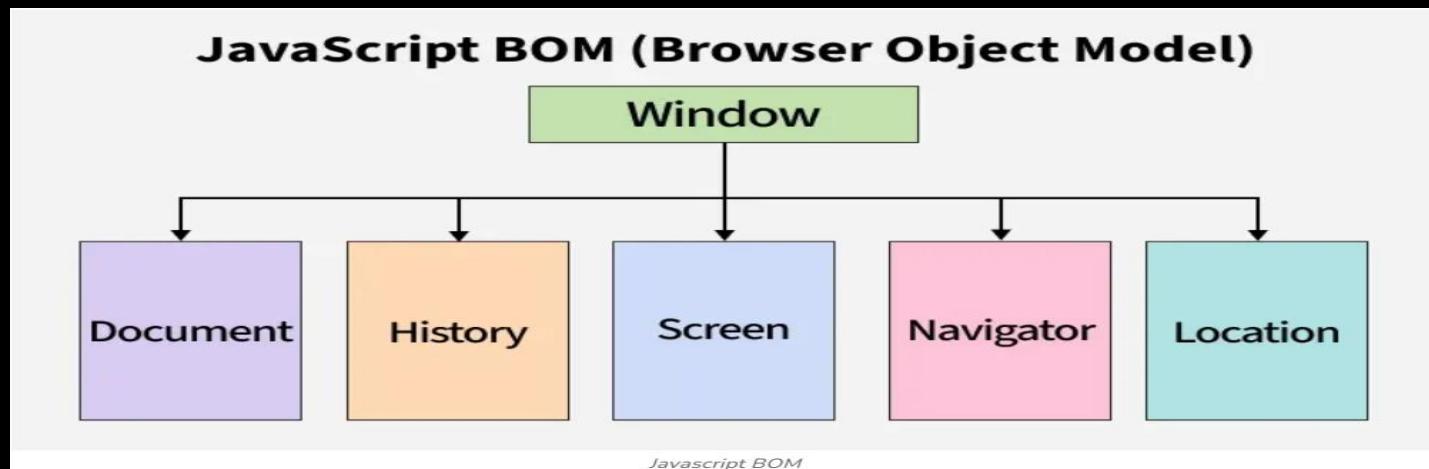


WHAT IS BOM?

- BOM (Browser Object Model)
- It allows JavaScript to interact with the browser itself
- Not limited to webpage content (unlike DOM)
- Controls browser features like window size, navigation, history, screen info



WHY BOM EXISTS?

- Webpages need to access browser functionalities
- Example: Check window size for responsive design
- Redirect user to another webpage
- Show alerts, confirmation, and input dialogs
- Access browser history for navigation

WHERE DO WE USE BOM?

- Creating popup messages (alert, prompt, confirm)
- Understanding screen size for UI adjustments
- Opening or closing browser windows
- Navigating between pages
- Getting information about browser & system

BOM VS DOM (VERY IMPORTANT)

- DOM → Document Object Model → Deals with HTML elements
- BOM → Browser Object Model → Deals with browser window
- DOM Example: `document.getElementById()`
- BOM Example: `window.location.href`

WINDOW OBJECT (HEART OF BOM)

- window is the top-most object in BOM
- Represents the entire browser window
- All global variables & functions become part of window
- Example:
 - `window.alert('Hi')`
 - `window.innerWidth`
 - `window.document`

WINDOW OBJECT PROPERTIES

Some commonly used properties of window:

- innerWidth → Width of browser window
- innerHeight → Height of browser window
- outerWidth → Full width (including toolbar)
- outerHeight → Full height (including toolbar)

SCREEN OBJECT

- Gives information about user's screen
- `screen.width` → Screen width
- `screen.height` → Screen height
- `screen.colorDepth` → Color quality
- Used for responsive layouts & display adjustments

LOCATION OBJECT

- Helps control and access browser URL
- `window.location.href` → Get current URL
- `window.location.reload()` → Reload page
- `window.location.assign('site')` → Navigate to new page
- Useful for redirects and changing pages dynamically

HISTORY OBJECT

- Allows navigation through browser history
- `history.back()` → Go to previous page
- `history.forward()` → Go to next page
- `history.length` → Number of pages in history
- Useful in SPA & custom navigation systems

NAVIGATOR OBJECT

- Contains information about browser & OS
- navigator.userAgent
- navigator.language
- navigator.onLine → Check internet connection
- Used for browser compatibility & environment checking

POPUP METHODS

- `alert('message')` → Simple message popup
- `confirm('Are you sure?')` → Returns true/false
- `prompt('Your name?')` → Takes user input
- Commonly used for quick interactions

OPENING & CLOSING BROWSER WINDOWS

- `window.open('https://google.com')` → Opens new tab/window
- `window.close()` → Closes current tab (if opened via script)
- Used for controlled navigation

REAL-LIFE USES OF BOM

- Showing warning popups
- Checking if user is online
- Detecting screen size for responsive content
- Automatically redirecting users
- Custom back/forward navigation

SUMMARY OF BOM

- BOM = Browser level interactions using JavaScript
- window object is the root
- DOM = webpage content | BOM = browser control
- Useful for: navigation, screen info, popups, history control, window sizing