

# DOM, BOM, and Events in JavaScript

## 🌳 DOM (Document Object Model) Topics

### 📁 DOM Basics

- **DOM Tree Structure (Node, Element, Text, etc.)**
- **Accessing Elements:**
  - getElementById()
  - getElementsByClassName()
  - getElementsByTagName()
  - querySelector()
  - querySelectorAll()
- **Traversing DOM Nodes:**
  - parentNode
  - childNodes, children
  - firstChild, lastChild
  - nextSibling, previousSibling

### 🔧 DOM Manipulation

- Changing Content:
  - innerHTML
  - textContent
  - innerText
- **Changing Attributes:**
  - setAttribute(), getAttribute(), removeAttribute()
- **Changing Styles:**
  - style.propertyName
  - className, classList.add(), classList.remove()

### 🔨 Creating and Removing Elements

- createElement()
- appendChild()
- insertBefore()
- removeChild()
- replaceChild()
- cloneNode()

### 💡 DOM Properties & Methods

- nodeType, nodeName, nodeValue
- hasChildNodes()
- contains()

## 🌐 BOM (Browser Object Model) Topics

### 🏠 window Object (Global Scope)

- window.alert(), confirm(), prompt()
- setTimeout(), setInterval(), clearTimeout(), clearInterval()
- window.open(), window.close()

### 📍 location Object

- location.href
- location.assign()
- location.reload()
- location.replace()

### 🌐 navigator Object

- navigator.userAgent
- navigator.language
- navigator.onLine
- navigator.geolocation

### 🖥️ screen Object

- screen.width, screen.height
- screen.availWidth, availHeight

### ⏮️ history Object

- history.back()
- history.forward()
- history.go()

## 🦋 Event Topics

### 🎯 Event Basics

- What is an event?
- Inline event handling (onclick="...")
- DOM Level 2 event handling:
  - addEventListener()
  - removeEventListener()

### 🧠 Event Types

- Mouse Events: click, dblclick, mouseover, mouseout, mousedown, mouseup
- Keyboard Events: keydown, keyup, keypress
- Form Events: submit, change, focus, blur, input
- Window Events: load, resize, scroll, unload
- Clipboard Events: copy, cut, paste

### 🔧 Event Object Properties

- event.type
- event.target
- event.currentTarget
- event.preventDefault()
- event.stopPropagation()

### 🦋 Event Delegation

- Concept of bubbling and capturing
- Using delegation with event.target

### 🔄 Custom Events

- Creating custom events with new CustomEvent()
- Dispatching with dispatchEvent()