DOM
DOM - Document Object Model

- Document
  - Root Element <html>
    - Element: <head>
      - Element: <title>
        - Text: “My Title”
    - Attribute: href
    - Element: <body>
      - Element: <a>
        - Text: “A link”
      - Element: <h1>
        - Text: “A header”
## BOM: Browser Object Model

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>document</td>
<td>DOM (current HTML page)</td>
</tr>
<tr>
<td>history</td>
<td>List of pages user has visited</td>
</tr>
<tr>
<td>location</td>
<td>URL of current page</td>
</tr>
<tr>
<td>navigator</td>
<td>Info about the browser</td>
</tr>
<tr>
<td>screen</td>
<td>Screen area (viewport) occupied by the browser.</td>
</tr>
<tr>
<td>window</td>
<td>The browser window</td>
</tr>
</tbody>
</table>
• Top level object in the Browser Object Model
• Methods include:
  • alert, confirm, prompt (popup boxes)
  • setInterval, setTimeout, clearInterval, clearTimeout (timers)
  • open, close (popping up new browser windows)
  • blur, focus, moveBy, moveTo, print, resizeBy,
    resizeTo, scrollBy, scrollTO
Current web page and its elements

- Properties:
  - anchors, body, cookie, domain, forms, images, links, referrer, title, URL

- Methods:
  - `getElementById`
  - `getElementsByName`
  - `getElementsByTagName`
  - `close`, `open`, `write`, `writeln`
**Location**: URL of the current page

- **Properties**:
  - host, hostname, href, pathname, port, protocol, search

- **Methods**:
  - assign, reload, replace

**Navigator**: Information about the web browser

- **Properties**:
  - appName, appVersion, browserLanguage, cookieEnabled, platform, userAgent
**Screen**: information about the display screen

- Properties: `availHeight`, `availWidth`, `colorDepth`, `height`, `pixelDepth`, `width`

**Difference?**

- *Screen* is what’s visible to you
- *Window* is the browser window including scrollbars, navigation, bookmark bars, etc
- *Document* can be larger than the screen/window
The history object keeps a list of sites that the browser has visited in this window.

- Properties: length
- Methods: back, forward, go
- Sometimes the browser won't let scripts view history properties, for security reasons.
## document traversal

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>firstChild</td>
<td>Start/end of this node’s list of children.</td>
</tr>
<tr>
<td>lastChild</td>
<td></td>
</tr>
<tr>
<td>childNodes</td>
<td>Array of all this node’s children</td>
</tr>
<tr>
<td>nextSibling</td>
<td>Neighbouring nodes with the same parent.</td>
</tr>
<tr>
<td>previousSibling</td>
<td></td>
</tr>
<tr>
<td>parentNode</td>
<td>Node that contains this node</td>
</tr>
</tbody>
</table>
This is a paragraph with a
<a href="/path/page.html">link</a> in it.
<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>document.createElement(&quot;tag&quot;)</code></td>
<td>Create and return a new empty DOM nodes</td>
</tr>
<tr>
<td><code>document.createTextNode(&quot;text&quot;)</code></td>
<td>Create and return a text node with the given text</td>
</tr>
<tr>
<td><code>appendChild(node)</code></td>
<td>place node at end of this node’s children</td>
</tr>
<tr>
<td><code>insertBefore(new, old)</code></td>
<td>place given new node just before old child</td>
</tr>
<tr>
<td><code>removeChild(node)</code></td>
<td>remove node from this child list</td>
</tr>
<tr>
<td><code>replaceChild(new, old)</code></td>
<td>replace node</td>
</tr>
</tbody>
</table>
Events

mouse
  • onclick, ondblclick, onmousedown/up/over/move/out

keyboard
  • onkeypress/down/up

form
  • onblur/focus/select/change/reset/submit

frame
  • onload/abort/resize/scroll/unload