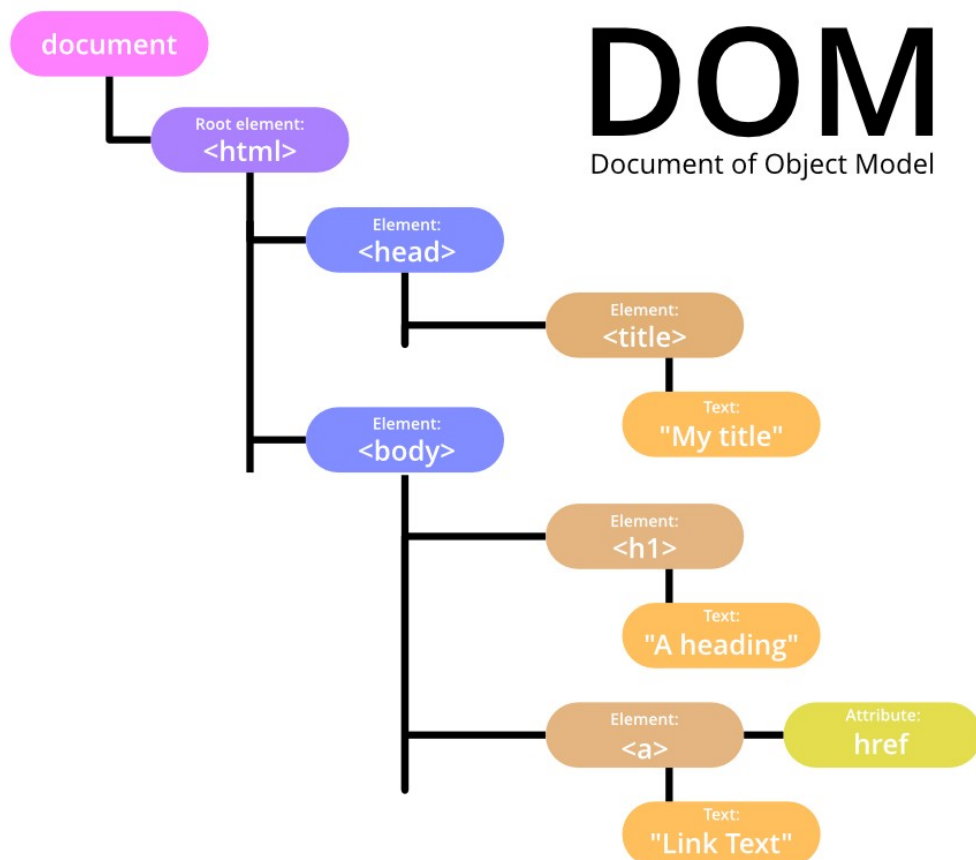


1. What Is the DOM?

- The DOM (Document Object Model) is the way a web browser handles HTML structure.
- Every HTML element is a node in a tree-like structure, see below.



- Each Element can be thought of as an object that can be manipulated by Javascript.
- JavaScript can change the following
 - Change text
 - Add or remove elements
 - Modify styles and attributes

2. Setting Up HTML and JavaScript

To setup JS in HTML, you will use the `<script>` tag with an `src` attribute that provide the path(location) of the script file.

The script tag belongs in the `<head>` and looks something like the following.

```
<script src="a/location/to/the/script.js"></script>
```

3. Using `document.getElementById()` and `document.getElementsByClassName()`

To manipulate document elements you can use the `getElementBy*()` functions.

- Get Element will always return one element only as ID should be unique.
- Getting elements by class name will return a list (or an array-like) structure that has all elements that have the class name specified.
- This gives JavaScript direct access to the element for manipulation.

4. Event Listeners

- Event listeners are used to trigger specific functions/behavior when a specific interaction that is being “listened” for is done, its a trigger for a specific task.
- `addEventListener` lets JavaScript react to user interactions like button clicks or hover events with the mouse.

5. Inspecting DOM in the element inspector and using the console

- You can use the dev window to inspect and modify the HTML DOM, changes here are temporary and reset on refresh.
- Use the Elements tab to view the live DOM.
- Use the Console tab to run JS commands like `document.getElementById()` manually, this lets you play with functionality but the commands are not saved unless you put the code in a script file and link it to HTML.

6. Console vs JavaScript File

Console	JS file
<ul style="list-style-type: none">- Temporary and resets on refresh- Great to test code- Not linked to an HTML file	<ul style="list-style-type: none">- Saved to file and persists on refresh- Great to use on production or real use application- Linked to an HTML file