**The HTML DOM (Document Object Model)**

When a web page is loaded, the browser creates a **D**ocument **O**bject **M**odel of the page.

The **HTML DOM** model is constructed as a tree of **Objects**:



The DOM presents documents as a hierarchy of [Node](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1950641247) objects that also implement other, more specialized interfaces. Some types of nodes may have [*child*](https://www.w3.org/TR/DOM-Level-2-Core/glossary.html#dt-child) nodes of various types, and others are leaf nodes that cannot have anything below them in the document structure. For XML and HTML, the node types, and which node types they may have as children, are as follows:

* [Document](https://www.w3.org/TR/DOM-Level-2-Core/core.html#i-Document) -- [Element](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-745549614) (maximum of one), [ProcessingInstruction](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-1004215813), [Comment](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1728279322), [DocumentType](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-412266927) (maximum of one)
* [DocumentFragment](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-B63ED1A3) -- [Element](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-745549614), [ProcessingInstruction](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1004215813), [Comment](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1728279322), [Text](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1312295772), [CDATASection](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-667469212), [EntityReference](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-11C98490)
* [DocumentType](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-412266927) -- no children
* [EntityReference](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-11C98490) -- [Element](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-745549614), [ProcessingInstruction](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1004215813), [Comment](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1728279322), [Text](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1312295772), [CDATASection](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-667469212), [EntityReference](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-11C98490)
* [Element](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-745549614) -- [Element](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-745549614), [Text](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1312295772), [Comment](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1728279322), [ProcessingInstruction](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1004215813), [CDATASection](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-667469212), [EntityReference](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-11C98490)
* [Attr](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-637646024) -- [Text](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1312295772), [EntityReference](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-11C98490)
* [ProcessingInstruction](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1004215813) -- no children
* [Comment](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1728279322) -- no children
* [Text](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1312295772) -- no children
* [CDATASection](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-667469212) -- no children
* [Entity](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-527DCFF2) -- [Element](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-745549614), [ProcessingInstruction](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1004215813), [Comment](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1728279322), [Text](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1312295772), [CDATASection](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-667469212), [EntityReference](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-11C98490)
* [Notation](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-5431D1B9) -- no children

The DOM also specifies a [NodeList](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-536297177) interface to handle ordered lists of [Nodes](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1950641247), such as the children of a [Node](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1950641247), or the [elements](https://www.w3.org/TR/DOM-Level-2-Core/glossary.html#dt-element) returned by the getElementsByTagName method of the [Element](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-745549614) interface, and also a [NamedNodeMap](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-1780488922) interface to handle unordered sets of nodes referenced by their name attribute, such as the attributes of an [Element](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-745549614). [NodeList](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-536297177) and [NamedNodeMap](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-1780488922) objects in the DOM are *live*; that is, changes to the underlying document structure are reflected in all relevant [NodeList](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-536297177) and [NamedNodeMap](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-1780488922) objects. For example, if a DOM user gets a [NodeList](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-536297177) object containing the children of an [Element](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-745549614), then subsequently adds more children to that [element](https://www.w3.org/TR/DOM-Level-2-Core/glossary.html#dt-element) (or removes children, or modifies them), those changes are automatically reflected in the [NodeList](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-536297177), without further action on the user's part. Likewise, changes to a [Node](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1950641247) in the tree are reflected in all references to that [Node](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1950641247) in [NodeList](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-536297177) and [NamedNodeMap](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-1780488922) objects.

Finally, the interfaces [Text](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1312295772), [Comment](https://www.w3.org/TR/DOM-Level-2-Core/core.html#ID-1728279322), and [CDATASection](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-667469212) all inherit from the [CharacterData](https://www.w3.org/TR/DOM-Level-2-Core/core.html" \l "ID-FF21A306) interface.