

Navigating in the Document Tree

It is time to dive deeper into the details about the functionality covered by the Document Object Model. Let's begin!

WE'LL COVER THE FOLLOWING ^

- Listing 6-2: The DOM tree

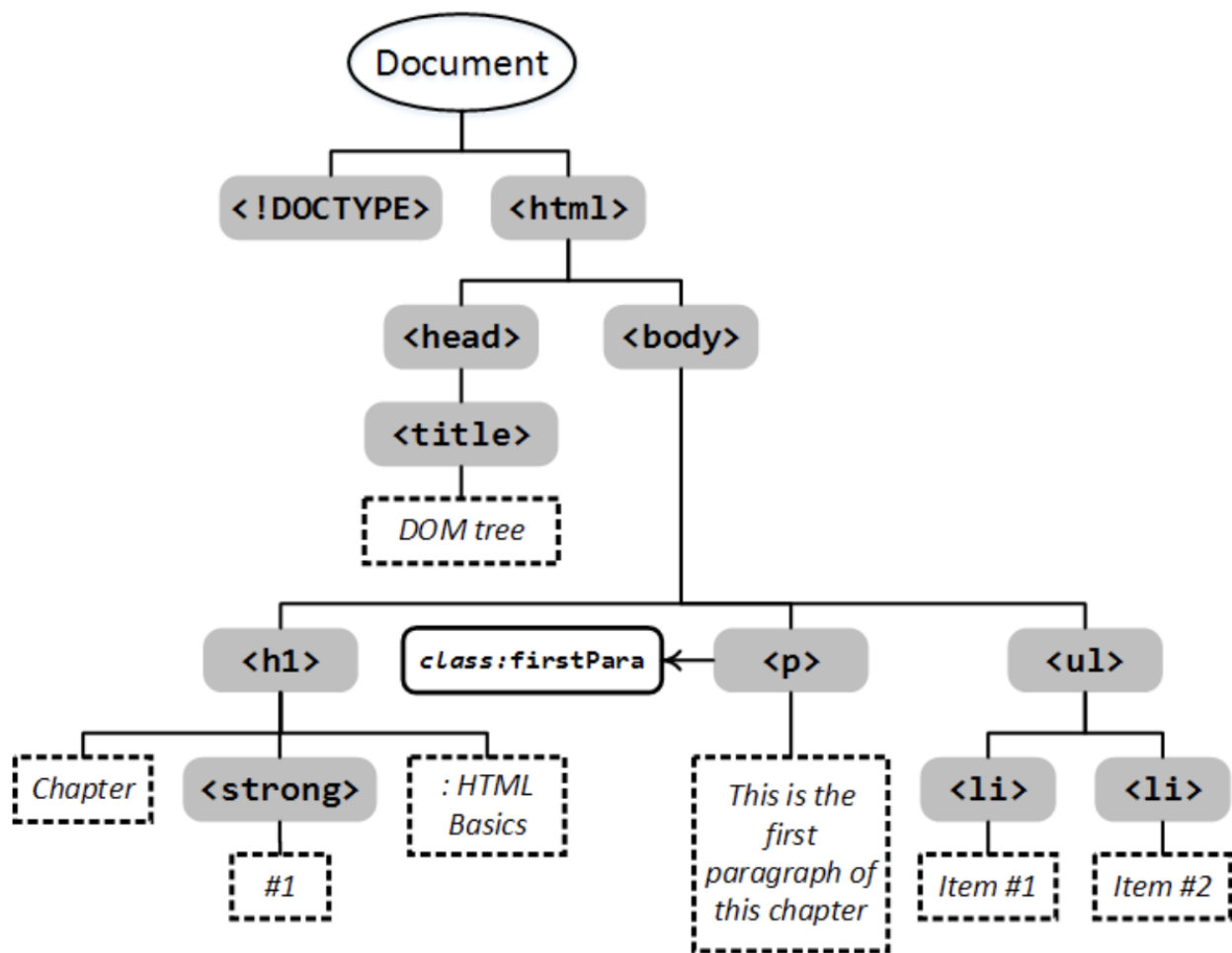
As is obvious, the entire document that represents a web page can be depicted as a tree. This tree is built up from nodes, where each node has exactly one parent, except the root node that has no parent, and each node may have zero, one, or more child nodes. HTML elements, texts, and attributes of elements are all nodes in this tree.

The [image](#) in the DOM Basics lesson already showed you a simple HTML markup as a hierarchy.

The image given below shows a bit more compound markup; its source is detailed in Listing 6-2.

Listing 6-2: The DOM tree

```
<!DOCTYPE html>
<html>
<head>
  <title>DOM Tree</title>
</head>
<body>
  <h1>Chapter <strong>#1</strong>: HTML Basics</h1>
  <p class="firstPara">
    This is the first paragraph of this chapter
  </p>
  <ul>
    <li>Item #1</li>
    <li>Item #2</li>
  </ul>
</body>
</html>
```



HTML tree with elements, attributes, and texts

The representation above helps you to understand the basic concepts related to the document tree. If you do not see this figure, you may think that the root of this tree is the `<html>` node. Nonetheless, the root of this tree is the document itself, drawn as an ellipse. Nodes with shaded backgrounds represent HTML elements.

Rectangles with dashed borders depict text embedded into HTML elements, and the single rectangle with rounded corners and solid borders marks the attribute belonging to its parent markup element.

Nodes can have child nodes (direct descendants), and each child node has a parent (direct ancestor). For example, the Document node's child nodes are `<!DOCUMENT>` and `<html>`; similarly, the two `` nodes are the child nodes of ``. This relationship means that `<!DOCUMENT>` and `<html>` have the same parent, the Document node; the two `` nodes' parent is the `` node.

Although an attribute node is associated with an HTML element node, this is

not a parent-child relationship, but rather a directed association from the element to the attribute.

In the image above, `<p>` has only one child, the `“This is...”` text; the `“class: firstPara”` node is an attribute.

Just as in a real family, where children of the same parents are siblings, in the document tree, nodes belonging to the same parent are called siblings. So `<head>` and `<body>` are sibling nodes, their common direct parent is `<html>`. Similarly, `<h1>`, `<p>`, and `` are siblings and their parent is `<body>`.

In the *next lesson*, let's move onto some node navigation basics.