Document: moveBefore() method

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The **`moveBefore()`** method of the Document interface moves a given Node inside the `Document` DOM node as a direct child, before a given reference node.

Syntax

```
moveBefore(movedNode, referenceNode)
```

Parameters

- `movedNode`
  - : A Node representing the node to be moved. Note that this must be an Element or a CharacterData node.
- `referenceNode`
  - : A Node that `movedNode` will be moved before, or `null`. If the value is `null`, `movedNode` is inserted at the end of the `Document`'s child nodes.

Return value

None (undefined).

Exceptions

- `HierarchyRequestError` DOMException
  - : Thrown in any of the following situations:
    - The specified `movedNode` is not part of this document.
    - The specified `movedNode` is not an Element or CharacterData node.
    - You are trying to move `movedNode` before the document's doctype (represented by a DocumentType object).
- `NotFoundError` DOMException
  - : The specified `referenceNode` is not a child of the node you are calling `moveBefore()` on, that is, the node you are trying to move `movedNode` inside.
- TypeError
  - : The second argument was not supplied.

Description

The `moveBefore()` method moves a given node to a new place in the DOM. It provides similar functionality to the Node.insertBefore() method, except that it doesn't remove and then reinsert the node. This means that the state of the node (which would be reset if moving it with `insertBefore()` and similar mechanisms) is preserved after the move. This includes:

- Animation and transition state.
- iframe loading state.
- Interactivity states (for example, :focus and :active).
- Fullscreen element state.

- Open/close state of popovers.
- Modal state of dialog elements (modal dialogs will not be closed).

The play state of video and audio elements is not included in the above list, as these elements retain their state when removed and reinserted, regardless of the mechanism used.

When observing changes to the DOM using a MutationObserver, nodes moved with `moveBefore()` will be recorded with a removed node and an added node.

The `moveBefore()` method is not particularly useful when invoked on the `Document` node. There are some non-element uses for it, for example you could use `moveBefore()` to move comment nodes around the root of the `Document`. However, you are much more likely to find a use for invoking it on an individual `DocumentFragment` or `Element` — see DocumentFragment.moveBefore() and Element.moveBefore().

`moveBefore()` constraints

There are some constraints to be aware of when using `moveBefore()`:

- It can only work when moving a node within the same document.
- It won't work if you try to move a node that is not connected to the DOM to an already connected parent, or vice versa.

In such cases, `moveBefore()` will fail with a `HierarchyRequestError` exception. If the above constraints are requirements for your particular use case, you should use Node.insertBefore() instead, or use `try...catch` to handle the errors that arise from such cases.

Examples

Moving a comment node with `moveBefore()`

In this demo we show how to use `document.moveBefore()` to move a comment node within the DOM.

HTML

The HTML is a minimal template that features a comment inside the body.

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8" />
    <title>document.moveBefore() example</title>
  </head>
  <body>
    <!-- This comment should be at the end of the document -->
    <p>Some content</p>
  </body>
</html>
```

JavaScript

In our script, we loop through all the childNodes of the `<body>` element. When we find a node with a nodeType value of `8` (which indicates a comment node), we store a reference to it inside a variable called `commentNode`. We then invoke `document.moveBefore()`, specifying that we want to move the comment node, and specifying a second argument of `null` to insert our comment the end of the `Document`'s child nodes.

```
let commentNode;

for (node of document.querySelector("body").childNodes) {
  if (node.nodeType === 8) {
    commentNode = node;
  }
}

document.moveBefore(commentNode, null);
```

Result

The rendered example looks like this:

If you inspect the example with your browser's developer tools, you'll notice that the comment has been moved to the end of the document, after the closing `</html>` tag.

Specifications

Browser compatibility

See also

- DocumentFragment.moveBefore()
- Element.moveBefore()
- Node.insertBefore()

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