JavaScript DocumentFragment

Summary: in this tutorial, you'll learn about the JavaScript `DocumentFragment` interface to compose DOM nodes and update them to the active DOM tree.

Introduction to the JavaScript DocumentFragment interface

The `DocumentFragment` interface is a lightweight version of the `Document` that stores a piece of document structure like a standard document. However, a `DocumentFragment` isn't part of the active DOM tree.

If you change the document fragment, it doesn't affect the document or incur any performance.

Typically, you use the `DocumentFragment` to compose DOM nodes and append or insert it to the active DOM tree using `appendChild()` or `insertBefore()` method.

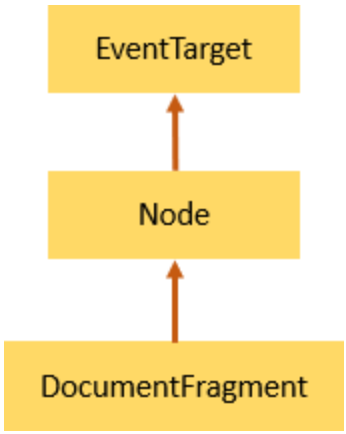
To create a new document fragment, you use the `DocumentFragment` constructor like this:

```
let fragment = new DocumentFragment();
```

Alternatively, you can use the `createDocumentFragment()` method of the `Document` object:

```
let fragment = document.createDocumentFragment();
```

This `DocumentFragment` inherits the methods of its parent, `Node`, and also implements those of the `ParentNode` interface such as `querySelector()` and `querySelectorAll()`.



JavaScript DocumentFragment example

Suppose that you have a `<ul>` element with the id `language`:

```
<ul id="language"></ul>
```

The following code creates a list of `<li>` elements (`<li>`) and append each to the `<ul>` element using the `DocumentFragment`:

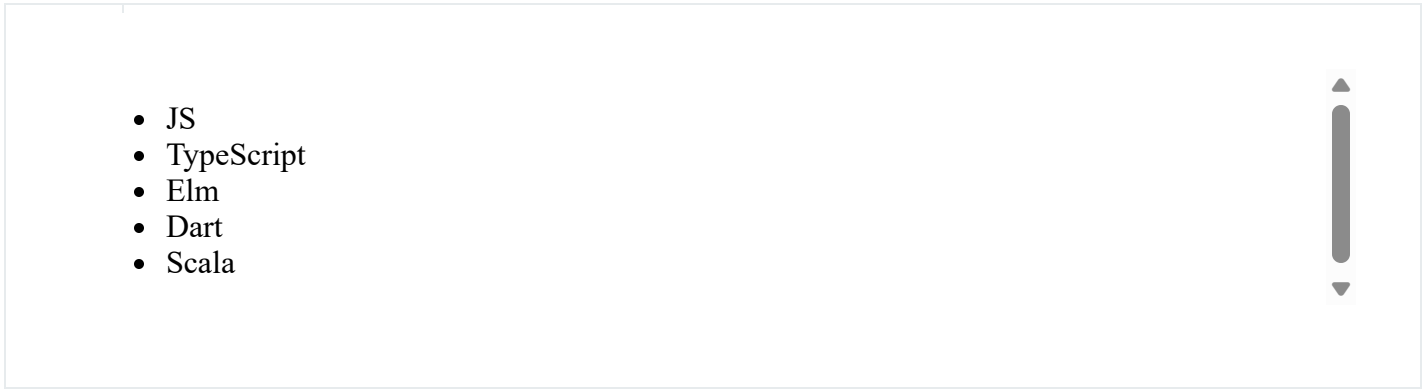
```
let languages = ['JS', 'TypeScript', 'Elm', 'Dart','Scala'];

let langEl = document.querySelector('#language')

let fragment = new DocumentFragment();
languages.forEach((language) => {
    let li = document.createElement('li');
    li.innerHTML = language;
    fragment.appendChild(li);
})

langEl.appendChild(fragment);
```

Output



How it works:

- First, select the `<ul>` element by its id using the `querySelector()` method.
- Second, create a new document fragment.
- Third, for each element in the `languages` array, create a list item element, assign the list item's `innerHTML` to the `language`, and append all the newly created list items to the document fragment.
- Finally, append the document fragment to the `<ul>` element.

Put it all together:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>DocumentFragment Demo</title>
</head>
<body>
    <ul id="language"></ul>

    <script>
        let languages = ['JS', 'TypeScript', 'Elm', 'Dart', 'Scala'];

        let langEl = document.querySelector('#language');
        let fragment = new DocumentFragment();

        languages.forEach((language) => {
```

```
            let li = document.createElement('li');
            li.innerHTML = language;
            fragment.appendChild(li);
        })

        langEl.appendChild(fragment);
    </script>

</body>
</html>
```

Summary

- Use the `DocumentFragment` to compose DOM nodes before updating them to the active DOM tree to get better performance.

Quiz