How it Works: Querying the Document

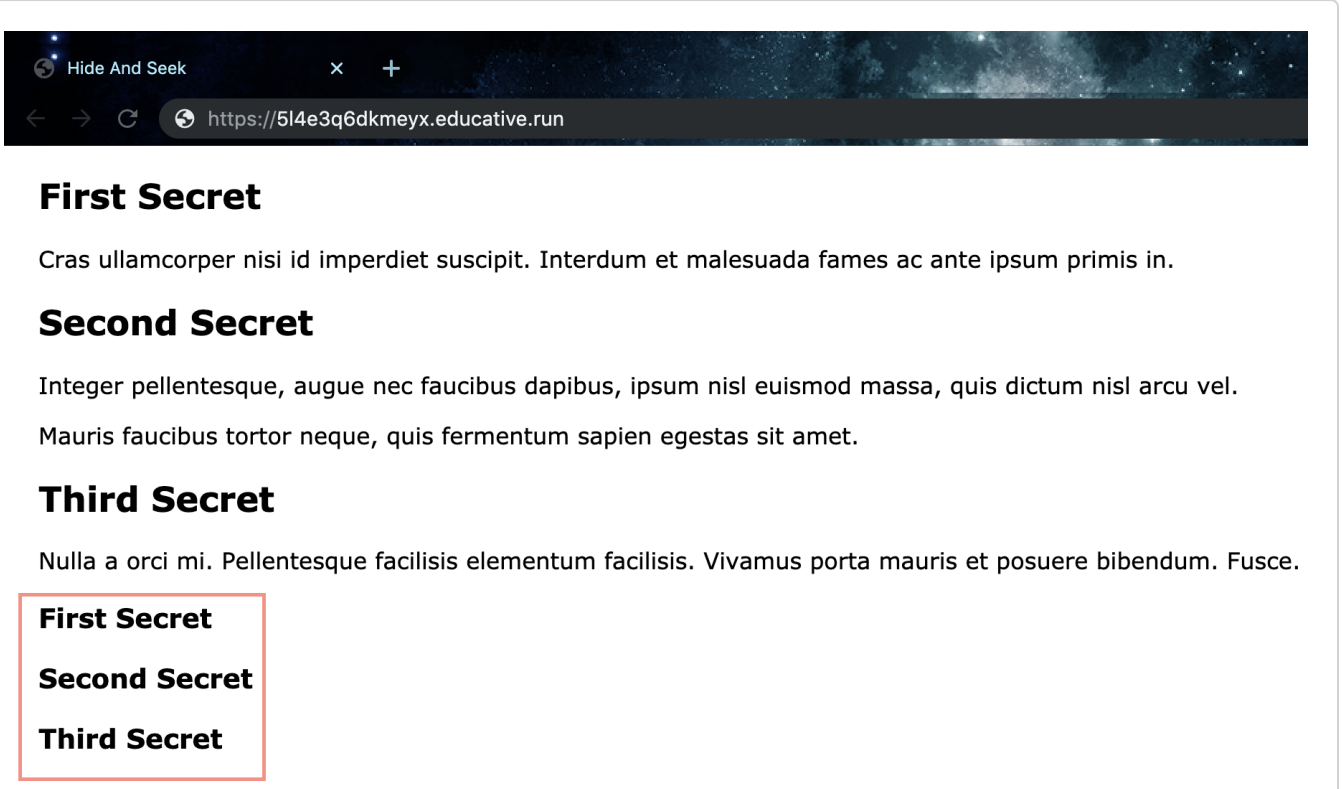
In this lesson, we learn the implementation of the previous lesson's exercise.
Let's begin!

WE'LL COVER THE FOLLOWING

HOW IT WORKS

Because originally **hideandseek.js** was empty, including it in **index.html** did not actually run any JavaScript code.

However, in **step three**, when you added code to this file it was executed. That is how the output in the below image was created.



The script added extra output to the page

You added this code:

```
var titles = document.getElementsByTagName('h2');
for (var i = 0; i < titles.length; i++) {
  var title = titles[i];
  document.write('<h3>' + title.textContent + '</h3>');
}
```

The key operation is in **line one**. The document object represents the current document in the browser. Because the **hideandseek.js** file is loaded at the end of the `<body>` section, the real content of the document is already loaded.

The `getElementsByTagName()` function queries the DOM of the loaded document, and retrieves a list of elements that match the argument of the function. This time `“h2”` is passed as the argument, so this invocation retrieves the collection of all `<h2>` instances in the DOM.

The `for` loop enclosed between **line two** and **five** iterates through the items of this list (item indexes start at `0`).

Line three puts the current item into the title variable.

Line four uses the `write()` method of document, which appends the argument’s text at the end of the document markup.

The code above creates `<h3>` headings with the text of the markup element represented by title.

The value of title is the current `<h2>` heading, and its embedded text can be accessed through the `textContent` property.

Because the `for` loop’s body is executed for each `<h2>` tag, you see three new `<h3>` tags added to the page.

A complete implementation of the above exercise is given below for you to play around with:

EXERCISE 6-1: Complete implementation

```
var titles = document.getElementsByTagName('h2');
for (var i = 0; i < titles.length; i++) {
  var title = titles[i];
  document.write('<h3>' + title.textContent + '</h3>');
```

```
}
```

As you see, querying the DOM is pretty easy. Besides the `getElementsByTagName()` function, document provides a few more query methods, such as `getElementById()` and `getElementsByClassName()`.

Their names indicate what they retrieve; later in the upcoming lessons you'll learn a bit more about each of them.

In the *next lesson*, we learn how to manipulate the DOM.

Stay tuned!