Introduction to DOM

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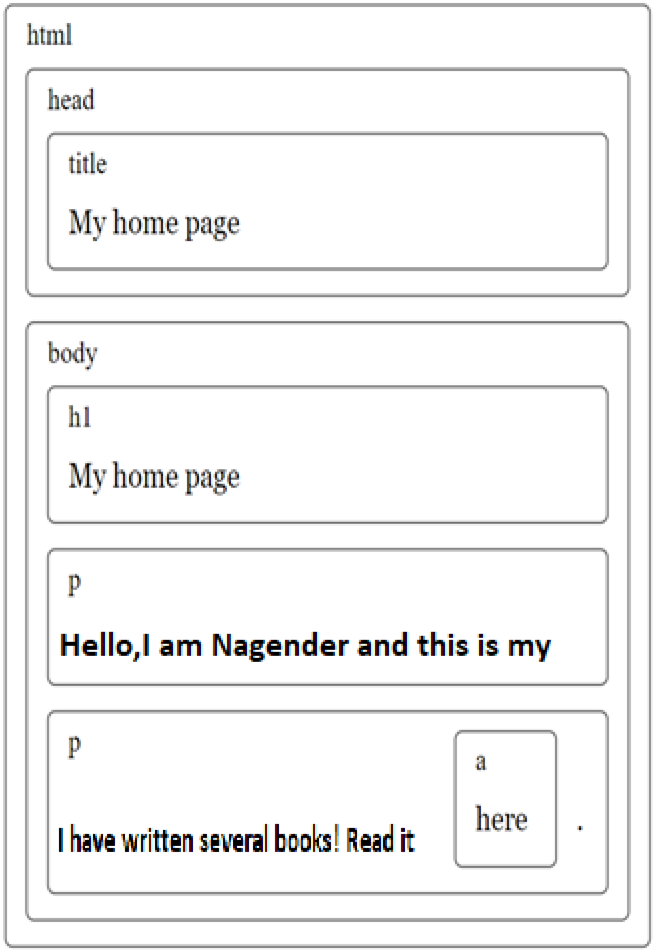
Document Object Model (DOM)

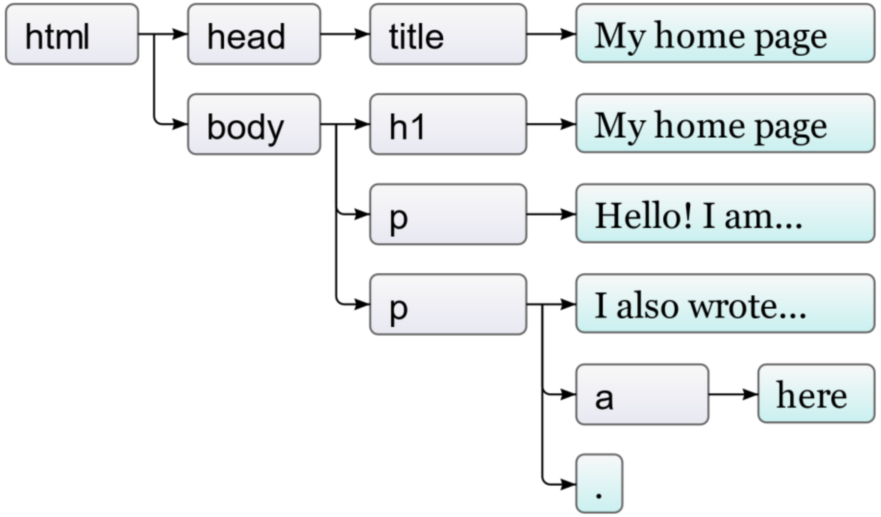
The browser builds up a model of the document’s structure and uses this model to draw the page on the screen.

```
<!doctype html>
<html>
 <head>
  <title>My home page</title>
 </head>
<body>
 <h1>My home page</h1>
<p>Hello, I am Nagender and this is my home page.</p>
<p>I have written several books! Read it
 <a href="https://www.springer.com/gp/book/9783319135564 ">Smart Homes</a>.
</p>
</body>
</html>
```


html
head
title
My home page
body
h1
My home page
p
Hello,I am Nagender and this is my
p
I have written several books! Read it
a
here
.

The data structure the browser uses to represent the document follows this shape. For each box, there is an object, which we can interact with to find out things such as what HTML tag it represents and which boxes and text it contains. This representation is called the *Document Object Model*, or DOM

DOM Tree



html

head

title

My home page

body

h1

My home page

p

Hello! I am...

p

I also wrote...

a

here

.

The HTML DOM is a standard for how to get, change, add, or delete HTML elements.

"The W3C Document Object Model (DOM) is a platform and language-neutral interface that allows programs and scripts to dynamically access and update the content, structure, and style of a document."

Finding elements

document.getElementById(*id*)	Find an element by element id
document.getElementsByTagName (*name*)	Find elements by tag name
document.getElementsByClassName (*name*)	Find elements by class name
	Finding HTML elements by CSS selectors
	Finding HTML elements by HTML object collections

Ex: getElementById

```
<html>
<body>

<p id=“para1"></p>

<script>
document.getElementById(“para1").innerHTML = “I am from getElementById";
</script>

</body>
</html>
```

getElementById is a method, while innerHTML is a property

Ex: getElementsByTagName

```
<!DOCTYPE html>
<html>
<body>

<h2>Finding HTML Elements by Tag Name</h2>

<p>This is Para1</p>
<p>This example demonstrates the use of  <b>getElementsByTagName</b> method.</p>
<p id=“para2"></p>


<script>
var x = document.getElementsByTagName("p");
document.getElementById(“para2").innerHTML = 'The text in first paragraph (index 0) is: ' + x[0].innerHTML;
</script>
</body>
</html>
```

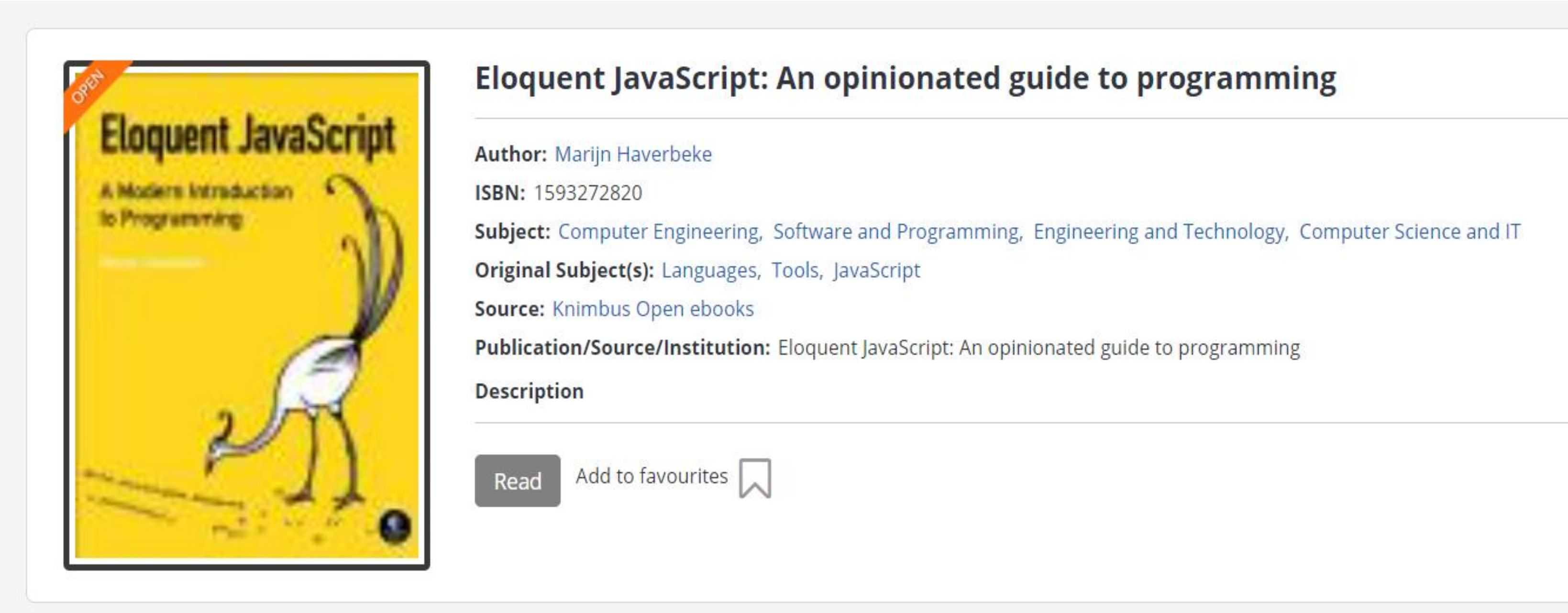
Ex: getElementsByClassName

```
<!DOCTYPE html>
<html>
<body>

<h2>Finding HTML Elements by Class Name</h2>

<p>Hello World!</p>

<p class=“C1">The DOM is very useful.</p>
<p class=“C1">This example demonstrates the <b>getElementsByClassName</b> method.</p>

<p id="demo1"></p>

<script>
var x = document.getElementsByClassName(“C1");
document.getElementById("demo1").innerHTML =  'The first paragraph (index 0) with class="intro": ' + x[0].innerHTML;
</script>


</body>
</html>
```

Difference between “id” and “Class” selectors

ID can be used to identify one element, whereas a class can be used to identify more than one.

Reference



Eloquent JavaScript: An opinionated guide to programming

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Description