

Introduction to the DOM

This chapter will help you discover how a web page is shown by a browser.

WE'LL COVER THE FOLLOWING ^

- Web Page Structure

You already know that a web page is a document that contains text and tags such as headings, paragraphs, links, etc. This happens in a language called HTML. Let's take this simple web page as an example. Feel free to add your own information!

Output

HTML

```
<!doctype html>
<html>

<head>
  <meta charset="utf-8">
  <title>My web page</title>
</head>

<body>
  <h1>My web page</h1>
  <p>Hello! My name's Baptiste.</p>
  <p>I live in the great city of <a href="https://en.wikipedia.org/wiki/Bordeaux">Bordeaux</a>
</body>

</html>
```



To create this result, the browser first takes the HTML code and builds a representation of its structure. It then displays this structure in the browser.

The browser also offers *programmatic access* to its structured representation of a displayed web page. Using this interface, you can dynamically update the

of a displayed web page. Using this interface, you can dynamically update the page by adding or removing elements, changing styles, etc. This is how you create *interactive* web pages.

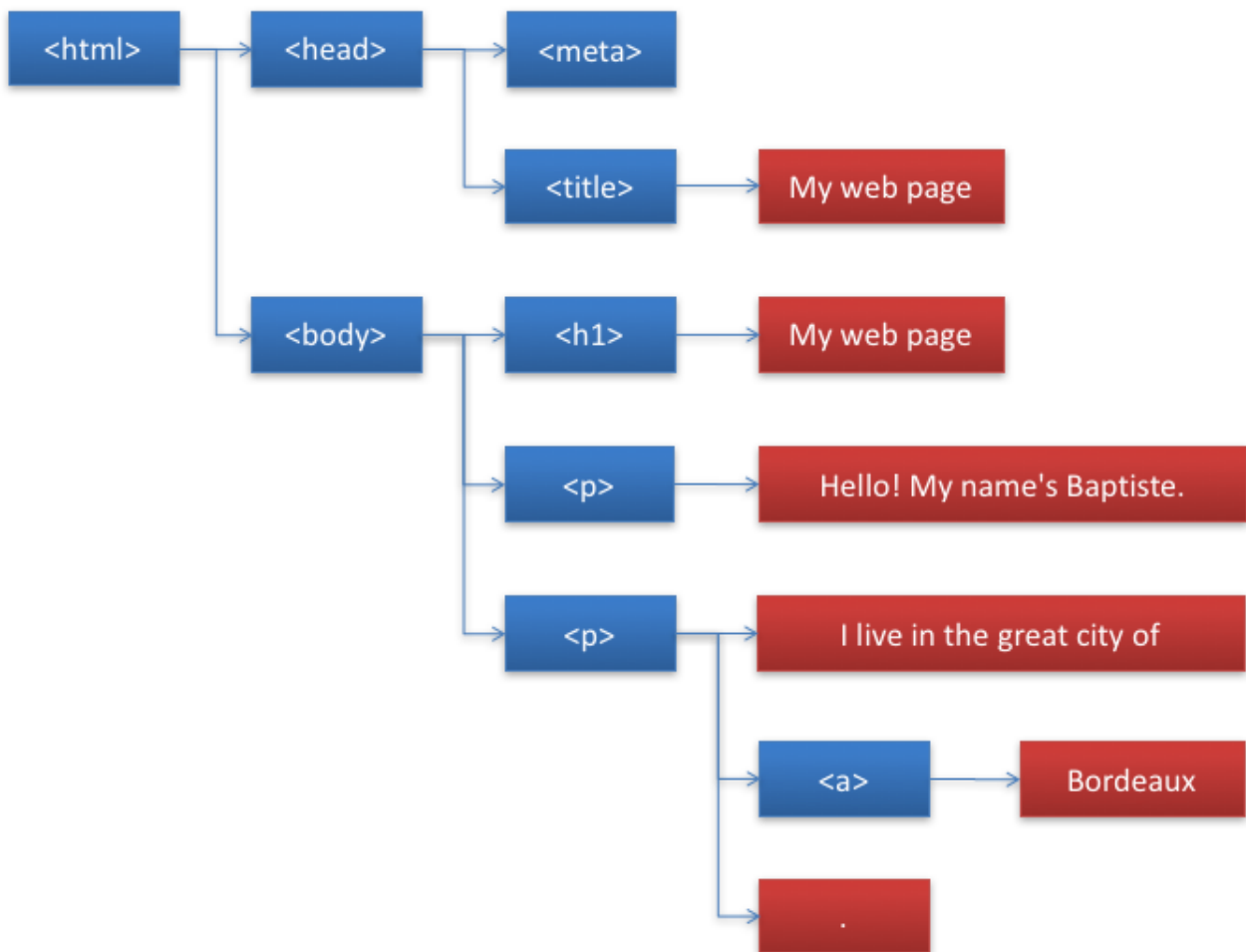
The structured representation of a web page is called **DOM**, short for Document Object Model. The DOM defines the structure of a page and a way to interact with it. This means it's a programming interface, or **API** (Application Programming Interface). JavaScript is the language of choice for interacting with the DOM.

At the dawn of the Web, each browser was using its own DOM, giving headaches to JavaScript developers trying to code web pages. These hard times are over. Through a [World Wide Web Consortium](#) (W3C) effort, the first version of a unified DOM was created in 1998. Nowadays, all recent browsers use a standardized DOM.

Web Page Structure

A web page is a set of nested tags. You can represent a web page in a hierarchical form called a *tree*. The `<html>` element sets up your document as HTML and contains two sub-elements, `<head>` and `<body>`, which themselves contain several sub-elements.

Here is the tree corresponding to our example HTML page.



Each entity in the tree is called a *node*. There are two types of nodes:

Those (in blue here) that correspond to HTML tags like `<body>` or `<p>`. These nodes are called *element nodes* and they can have subnodes, called *child nodes* or children. Those (in red) that match the textual content of the page. These nodes are called *text nodes* and do not have children.