document
html
head
body
title
h1
p
text
text
text
a
text
a
text
a
text
text
text
text

Document Object Model

When a browser loads a web page, it creates a model of that page

This is called a “DOM tree” and it is stored in the browser’s memory

Every element, attribute, and piece of text in the HTML is represented by its own “DOM node”

Document Object Model

Types of DOM Nodes

There are four main types of nodes.

- The Document node, which represents the entire page
- Element nodes, which represent individual HTML tags
- Attribute nodes, which represent attributes of HTML tags, such as class
- Text nodes, which represents the text within an element, such as the content of a p tag

We talk about the relationship between *element* nodes as “parents,” “children,” and “siblings.”

```
<html>
  <head>
    <title>New York University</title>
  </head>

  <body>
    <h1>Web Development</h1>

    <p>This course provides concrete knowledge
    in Web technologies and programming.</p>

    <p>Class notes are available
    <a href="notes.html">here</a>.<p>
  </body>
</html>
```

html
head
title
New York University
body
h1
Web Development
p
This course provides concrete knowledge . . .
p
Class notes are available
a
here
.

html
head
title
New York University
body
h1
Web Development
p
This course . . .
p
Class notes are . . .
a
here
.

Document Object Model

DOM Queries

JavaScript methods that find elements in the DOM tree are called “DOM queries”

DOM queries may return one element, or they may return a “node list”

Which DOM query you use depends on what you want to do and the scope of browser support required

Document Object Model

DOM Queries

JavaScript methods that return a single element node:

- `getElementById()`
- `querySelector()`

Document Object Model

DOM Queries

JavaScript methods that return one or more elements:

- `getElementsByClassName()`
- `getElementsByTagName()`
- `querySelectorAll()`

Web Development and Programming

CSCI-UA 61

JavaScript

Document Object Model