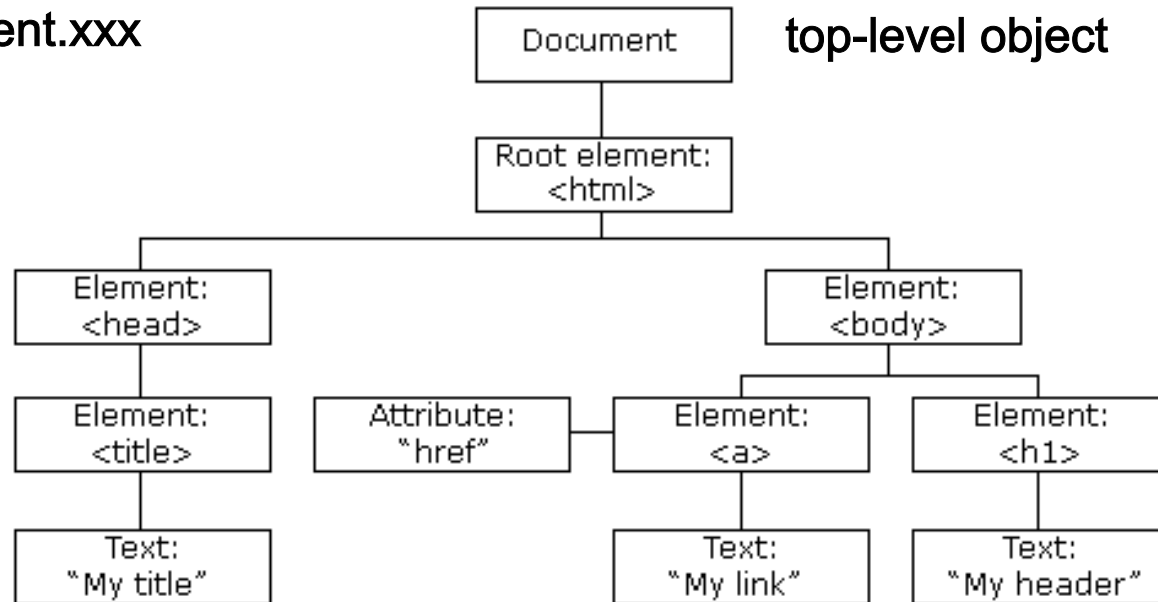


DOM Selectors

Document

It all starts with the document, the root node

document.xxx



Exercise

Open up the JS console and try these 4 lines:

```
document.URL;  
document.head;  
document.body;  
document.links;
```

Methods

The document comes with a bunch of methods for selecting elements. We're going to learn about the following 5:

- `document.getElementById()`
- `document.getElementsByClassName()`
- `document.getElementsByTagName()`
- `document.querySelector()`
- `document.querySelectorAll()`

getElementById

Takes a string argument and returns the one element with a matching ID

```
var tag = document.getElementById("highlight");
```

```
console.dir(tag) //show the objects
```

```
<body>
  <h1>Hello</h1>
  <h1>Goodbye</h1>
  <ul>
    <li id="highlight">List Item 1</li>
    <li class="bolded">List Item 2</li>
    <li class="bolded">List Item 3</li>
  </ul>
</body>
```

getElementsByClassName

Takes a string argument and returns a list of elements that have a matching class

```
var tags = document.getElementsByClassName("bolded");  
console.log(tags[0]);
```

returned result: light-weight array

cannot iterate over the array

```
<body>  
  <h1>Hello</h1>  
  <h1>Goodbye</h1>  
  <ul>  
    <li id="highlight">List Item 1</li>  
    <li class="bolded">List Item 2</li>  
    <li class="bolded">List Item 3</li>  
  </ul>  
</body>
```

getElementsByTagName

Returns a list of all elements of a given tag name, like `` or `<h1>`

```
var tags = document.getElementsByTagName("li");  
console.log(tags[0]);
```

```
<body>  
  <h1>Hello</h1>  
  <h1>Goodbye</h1>  
  <ul>  
    <li id="highlight">List Item 1</li>  
    <li class="bolded">List Item 2</li>  
    <li class="bolded">List Item 3</li>  
  </ul>  
</body>
```

getElementsByTagName

Returns a list of all elements of a given tag name, like `` or `<h1>`

```
var tags = document.getElementsByTagName("h1");  
console.log(tags[0]);
```

```
<body>  
  <h1>Hello</h1>  
  <h1>Goodbye</h1>  
  <ul>  
    <li id="highlight">List Item 1</li>  
    <li class="bolded">List Item 2</li>  
    <li class="bolded">List Item 3</li>  
  </ul>  
</body>
```


querySelector

Returns the first element that matches a given
CSS-style selector

```
//select by ID  
var tag = document.querySelector("#highlight");
```

```
<body>  
  <h1>Hello</h1>  
  <h1>Goodbye</h1>  
  <ul>  
    <li id="highlight">List Item 1</li>  
    <li class="bolded">List Item 2</li>  
    <li class="bolded">List Item 3</li>  
  </ul>  
</body>
```

querySelector

Returns the first element that matches a given CSS-style selector

```
//select by Class  
var tag = document.querySelector(".bolded");
```

```
<body>  
  <h1>Hello</h1>  
  <h1>Goodbye</h1>  
  <ul>  
    <li id="highlight">List Item 1</li>  
    <li class="bolded">List Item 2</li>  
    <li class="bolded">List Item 3</li>  
  </ul>  
</body>
```

querySelector

Returns **the first element** that matches a given CSS-style selector

```
//select by tag  
var tag = document.querySelector("h1");  
tag name
```

```
<body>  
  <h1>Hello</h1>  
  <h1>Goodbye</h1>  
  <ul>  
    <li id="highlight">List Item 1</li>  
    <li class="bolded">List Item 2</li>  
    <li class="bolded">List Item 3</li>  
  </ul>  
</body>
```

querySelectorAll

Returns **a list of elements** that matches a given CSS-style selector

```
//select by tag  
var tags = document.querySelectorAll("h1");
```

```
<body>  
  <h1>Hello</h1>  
  <h1>Goodbye</h1>  
  <ul>  
    <li id="highlight">List Item 1</li>  
    <li class="bolded">List Item 2</li>  
    <li class="bolded">List Item 3</li>  
  </ul>  
</body>
```

querySelectorAll

Returns **a list of elements** that matches a given CSS-style selector

```
//select by class  
var tags = document.querySelectorAll(".bolded");
```

```
<body>  
  <h1>Hello</h1>  
  <h1>Goodbye</h1>  
  <ul>  
    <li id="highlight">List Item 1</li>  
    <li class="bolded">List Item 2</li>  
    <li class="bolded">List Item 3</li>  
  </ul>  
</body>
```

Exercise

Come up with 4 different ways to select the first <p> tag

```
<!DOCTYPE html>
<html>
<head>
  <title>My title</title>
</head>
<body>
  <h1>I am an h1!</h1>
  <p id="first" class="special">Hello</p>
  <p class="special">Goodbye</p>
  <p>Hi Again</p>
  <p id="last">Goodbye Again</p>
</body>
</html>
```

```
document.getElementById("first");
document.querySelector("#first");
document.getElementsByClassName("special")[0]
document.querySelector(".special") //only return the first one
document.querySelectorAll(".special")[0]
document.querySelector("h1 + p")
```