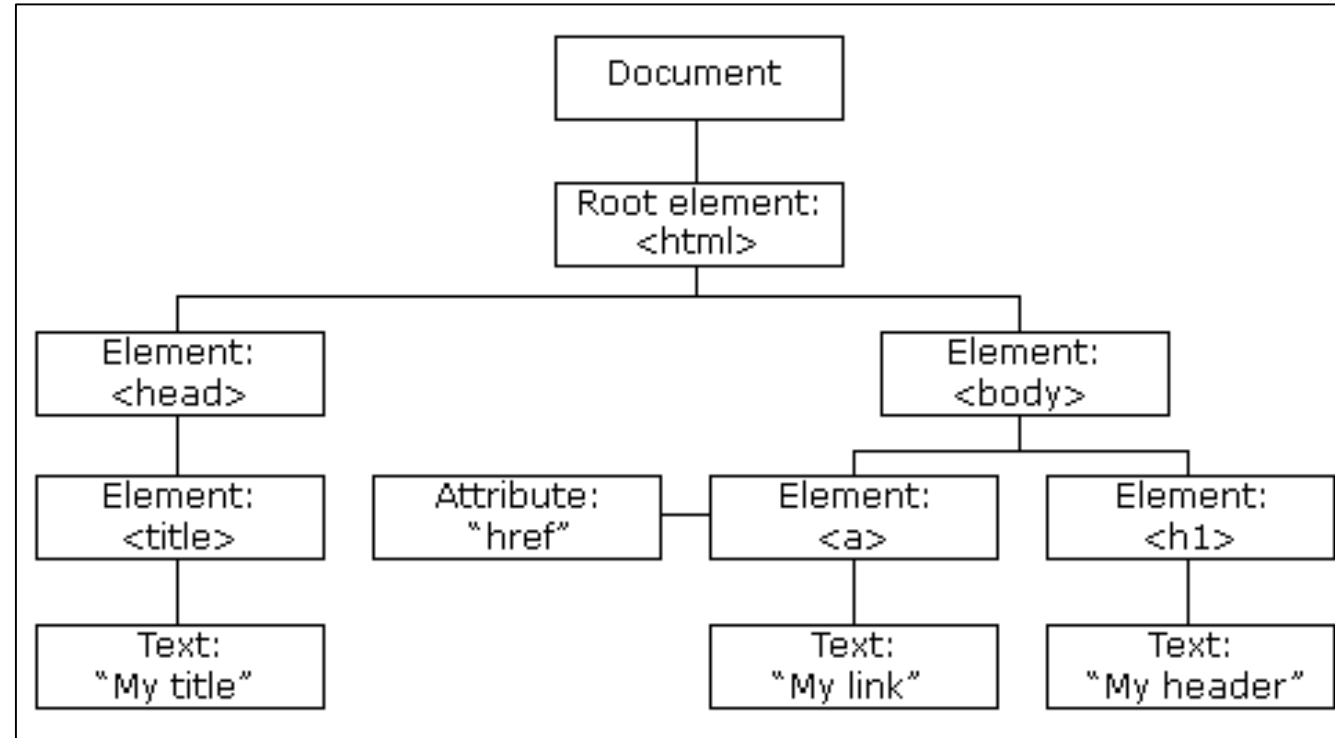# The Document Object Model

The DOM

The Document Object Model (DOM)

- Document - The file and all its content
- Object - All the things in the document and their "handles"
- Model - A way to depict the document and all its objects

Node: Parents, Children, and Siblings

- Node tree - hierarchical relationship

- Parents may have children

- Children must have a parent

- Multiple children (of one parent) are siblings (brothers or sisters)

- Root - top node

- Root - no parent

JavaScript and the DOM

- Accessed with JavaScript

- Elements == objects

- The programming interface is through methods and properties
  - A method is an action
  - A property is a value

Properties

- A property is a characteristic or attribute of the object.

- Access a property through its DOT NOTATION: object.property

- Examples
  - The URL of a web page document
    `document.URL`
  - The title of a web page document
    `document.title`
  - The date the web page file was last modified
    `document.lastModified`
  - The src file of an image object
    `mymage.src`

Method

- A method is an action the object can do or respond to:

- Writing text to a web page document:

    `document.write()`

- Submitting a form
  using JavaScript instead of `<input type="submit"...`

    `form1.submit()`

.getElementById() method

- The `.getElementById()` method returns the element with the specified ID

- Example:
```
var e = document.getElementById("intro");
```

Note: developers commonly use "e" as a variable name to represent an element.

.addEventListener() method

- Waits for a specific "event" on a particular element (.getElementById()), then runs a *function()*

- Example:

```
document.getElementById("message").addEventListener("click",
function(){
        alert("Someone clicked me!");
})
```