



Maydm

Web Development

Day 10: JS with HTML

The DOM & jQuery

Icebreaker!

Today's Schedule

Morning:

- JavaScript so far...
- JavaScript with HTML
- The Document Object Model
- jQuery

Afternoon:

- Field Trip!
- Project: Random Quote Generator

JavaScript Review

- Comments
- Variables
- Data Types
- Operating on Variables
- Template Literals
- Booleans
- Functions
- If Statements
- Arrays
- Loops
- Objects
- JSON

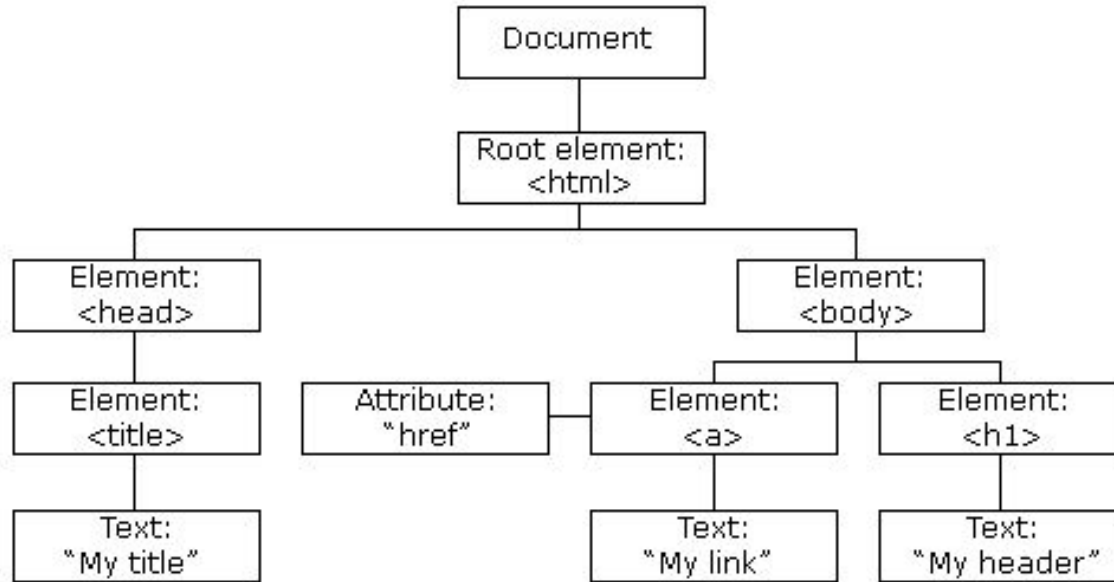
Using JS with HTML

JavaScript works with HTML using the **Document Object Model**.

The DOM defines how a document (the website, in this case) is structured and accessed.

The DOM changes with each web page, based on the HTML of the page.

The Document Object Model



DOM Methods

You've already seen one DOM method regularly in the JS projects you've been working on:

```
document.getElementById(element);
```

Remember, methods are built-in functions that belong to specific objects and can only be used by those objects. This method can only be used by the **document** object.

Commonly Used DOM Methods

- `document.getElementById(id)`
- `document.getElementsByTagName(name)`
- `document.createElement(name)`
- `parentNode.appendChild(node)`
- `element.innerHTML()`
- `element.setAttribute()`
- `element.getAttribute()`
- `element.addEventListener()`
- `window.onload()`
- `console.log()`
- `window.scrollTo()`

Running JS on HTML Page

Using buttons is a common way to execute JS functions, and it is easy to implement using the “onclick” attribute. You can also add any necessary arguments to the function, just like you would using a JS file.

```
<button onclick="myFunction()">  
  Run a function  
</button>
```

JavaScript Libraries

Just like with CSS, there are shortcuts for using JavaScript with **libraries**.

A **JavaScript library** is a set of functions that work as shortcuts to plain JavaScript methods.

There are 100s of JS libraries, though be careful before you start using one! It might not be maintained anymore, or it might be out of date. Many libraries that were popular a few years ago are now considered obsolete because of advances in “vanilla” JavaScript.

jQuery

jQuery is a JavaScript library that makes HTML manipulation easier than with “vanilla” JS.

jQuery can be used in the same file as vanilla JS!

Since it is a library, it must be included in the HTML page in order to use its methods. Add a link to the jQuery library just as you would your own JS file.

Important: Because the browser reads line by line, include the jQuery library before any scripts that use jQuery or the code won't work!

Using jQuery

```
document.getElementById.innerHTML = "Hello World";  
  
// The "vanilla" JS above is the same as jQuery below  
$("#divId").html("Hello World");
```

Anatomy of a jQuery Statement

\$ is a variable included in jQuery.
It indicates the statement that
follows is jQuery.

The method to use. In this case, the
method is **.html**. It is the same as the
innerHTML method in vanilla JS.

```
$("#divId").html("Hello World");
```

The selector to
"query" (find) in HTML.
Notice the hashtag (#)
to indicate an ID.

The argument, if
required by the method.
In this case, this is the
text that will be added to
the div.

Project: Random Quotation Generator

Open the “Random Quotation Generator” starter code and fork the pen.

Just as before, we’ll read through the code together, starting with the HTML.

You can use either vanilla JS or jQuery for this project. If you use jQuery, remember to include a link to the library on your HTML page.

Algorithmic Bias

<https://www.poetofcode.com/>

Reflection

Write in your journal about how you feel or what you learned today.

Prompts:

- Why would you want to use a JavaScript library instead of vanilla JS?
- Think about Joy Buolamwini's talk about algorithmic bias. Why is it important to remove bias in coding? How can it be addressed?
- How are methods like functions?