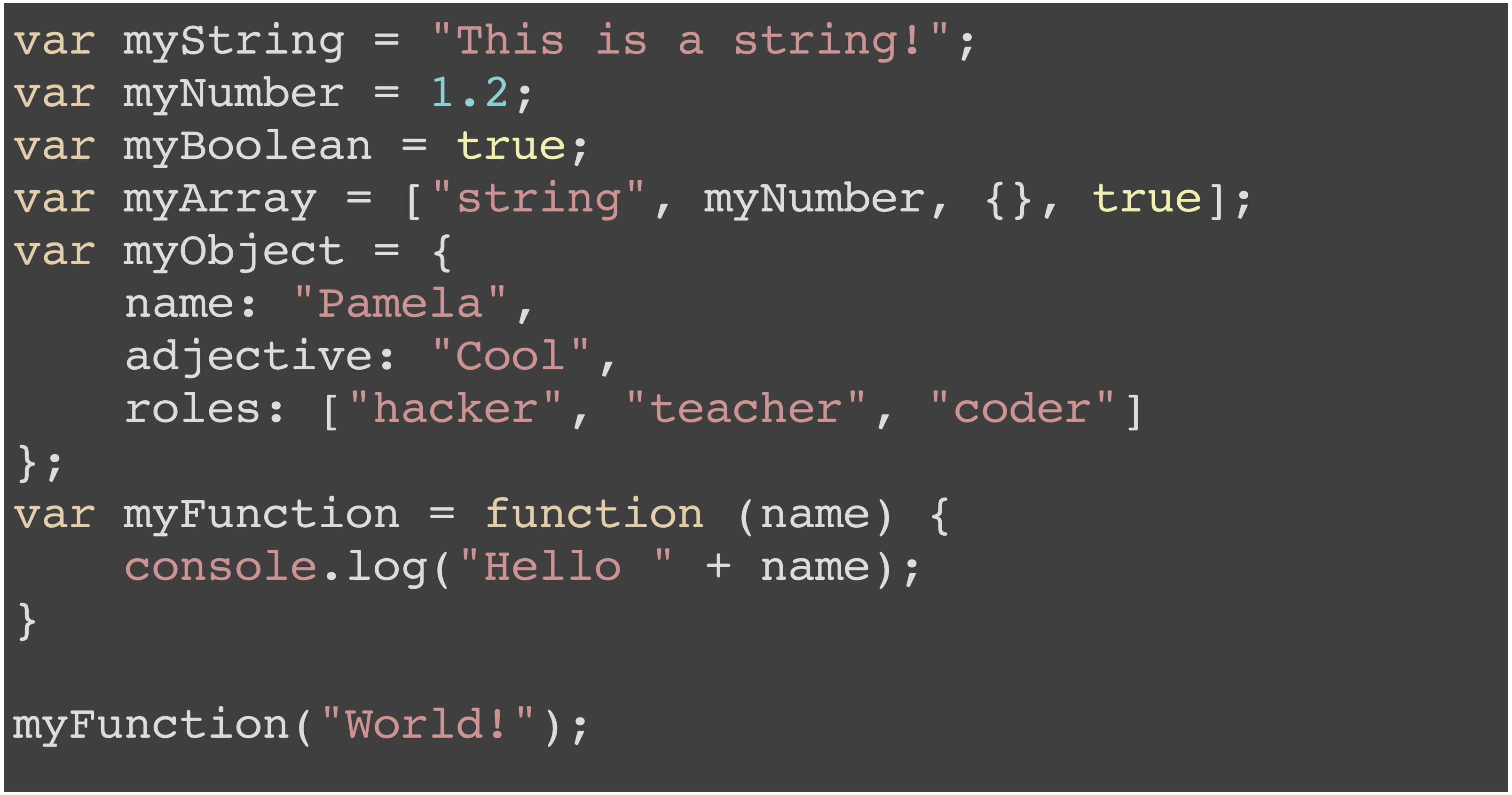
Introduction to jQuery

Our Goals

- Define what a library is in JavaScript
- A quick review
- Be able to talk about what jQuery actually is
- Get an introduction to how to use it

A quick review



```
var myString = "This is a string!";
var myNumber = 1.2;
var myBoolean = true;
var myArray = ["string", myNumber, {}, true];
var myObject = {
    name: "Pamela",
    adjective: "Cool",
    roles: ["hacker", "teacher", "coder"]
};
var myFunction = function (name) {
    console.log("Hello " + name);
}

myFunction("World!");
```

A quick review

```
document.getElementById( "id" );
document.querySelector( "cssSelector" );

document.getElementsByTagName( "tagName" );
document.getElementsByClassName( "className" );
document.querySelectorAll( "cssSelector" );

var myButton = document.querySelector("button");
myButton.addEventListener("click", function (e) {
    console.log( e );
});
```

What is a library?

- A library is a collection of reusable methods for a particular purpose
- It's really just someone else's code that we use to do something. It could be:
    - A library of maths-related things
    - A library of ways to easily access and manipulate the DOM
    - A library of really useless things, like this:
        - fartScroll.js
        - rekt.js
        - HTML9 Responsive BoilerStrap JS

A math library…

- Might include things like:
  - ***`math.sum( 2, 5 );`***
  - ***`math.pow( 4, 6 );`***
  - ***`math.factorial( 9 );`***
- To work with a javascript library:
  - We include the library before our own as a script tag
  - Then we use it in our code
- Like this!

Have a crack at these exercises

jQuery: The most popular library

- Built in August 22nd, 2005 by John Resig
    - Twitter
    - Github
- 11.5% of the entire internet use it
- 78.1% of the top million sites use it
- 41, 691, 337 sites use it (the last I checked)
    - Wappalyzer
    - BuiltWith

So, what does it do?

- Data manipulation
- DOM manipulation
- Events
- AJAX
- Effects and animation
- HTML templating
- Widgets / theming
- Graphics / charts
- App architecture
- Browser differences

→

jQuery!

write less, do more

So, why jQuery?

```
// Pure JavaScript version

var images = document.getElementsByClassName( "img" );

for (var i = 0; i < images.length; i++) {
    var currentImage = images[i];
    currentImage.style.display = "none";
}

// jQuery version

$("img").hide(); // Or...
$("img").fadeOut();
```

So, why jQuery?

```
var p = document.createElement('p');
var textNode = document.createTextNode('Welcome!');
p.appendChild(textNode);
p.style.cssFloat = 'left';
p.style.backgroundColor = 'red';
p.className = 'special';
var header = document.getElementsByClassName('header')[0];
header.appendChild( p );

// jQuery version

var $p = $("<p>Welcome!</p>");
$p.css({ float: "left", backgroundColor: "red" });
$p.addClass( "special" );
$("header").append( $p );
```

Select, manipulate, admire!

```
// Select all paragraphs on the page
var $allParagraphs = $( "p" );

// Use methods on them all
$allParagraphs.addClass( "special" );
$allParagraphs.css( "font-size", "24px" );
$allParagraphs.fadeOut();

// Admiring goes here...
```

jQuery: The Basics

```
$( "p" ).addClass( "special" );
```

- **$** - The global jQuery function. Can also be "jQuery"
- **("p")** - Finds DOM element(s) according to what's in the quotes. Returns a "jQuery collection."
- **.addClass("special");** - Built-in jQuery method that adds the specified class to the collection. Read the docs here.

jQuery: The Basics

All CSS selectors are valid, plus heaps more!

```
<p>Paragraph</p>

<div id="main"></div>

<p class="intro"></p>

<div class="container">
    <p></p>
</div>

<ul>
    <li></li>
    <li class="special">
        Special
    </li>
    <li></li>
    <li></li>
</ul>
```

```
$("p");

$("#main");

$("p.intro");


$(".container p");




$("ul li.special");
```

Have a crack at these exercises

Reading elements

```
<a href="http://ga.co" style="font-size:20px;">GA</a>
```

```
// We can store it
var $aTag = $( "a" );

var aTagHTML = $aTag.html();
var aHref = $aTag.attr("href");
var aFontSize = $aTag.css("font-size");
```

Changing elements

```
<a href=""></a>
```

```
var $aTag = $('a');

$aTag.html('Yahoo!');
$aTag.attr('href', 'http://www.yahoo.com');
$aTag.css({
    'color': 'hotpink'
});
```

```
<a href="http://yahoo.com" style="color:hotpink;">Yahoo!</a>
```

Create, manipulate, inject!

- **Step 1**: Create element and store a reference
  - `var $p = $( "<p></p>" );`
- **Step 2**: Use a method to manipulate (optional)
  - `$p.addClass( "special" );`
- **Step 3**: Inject into your HTML
  - `$( "body" ).append( $p );`

Create, manipulate, inject!

- **Step 1**: Create element and store a reference
  - `var $h1 = $("<h1>Hello World</h1>");`
- **Step 2**: Manipulate the CSS
  - `$h1.css( "font-size", "24px" );`
- **Step 3**: Make sure you put it on the page!
  - `$( "body" ).prepend( $h1 );`

Regular Nodes to jQuery

```
var $allParagraphs = $("p"); // jQuery collection

var firstParagraph = $allParagraphs[0]; // Pure DOM

var $firstParagraph = $allParagraphs.eq(0); // jQuery

for (var i = 0; i < $allParagraphs.length; i++) {

    var $paragraph = $allParagraphs.eq( i );
    $paragraph.html( $paragraph.html() += " wooooo!" );

}
```

Iterating through (proper)

```
var $allParagraphs = $( "p" );

$allParagraphs.each(function () {
    $(this).html( "Wow!" );
});
```

jQuery: Including

- Download it from here
- Or link to the official CDN

```
<script src="https://code.jquery.com/jquery-1.12.3.min.js"></script>

<!-- OR... -->

<script src="jquery.js"></script>

<!-- Then your code! -->

<script src="main.js"></script>
```

Have a crack at these exercises

Our Goals

- Define what a library is in JavaScript
- A quick review
- Be able to talk about what jQuery actually is
- Get an introduction to how to use it

Homework

- Dancing Cats
- Try jQuery
- Code Academy: jQuery
- Learn jQuery
- jQuery Fundamentals