Introduction to jQuery

History

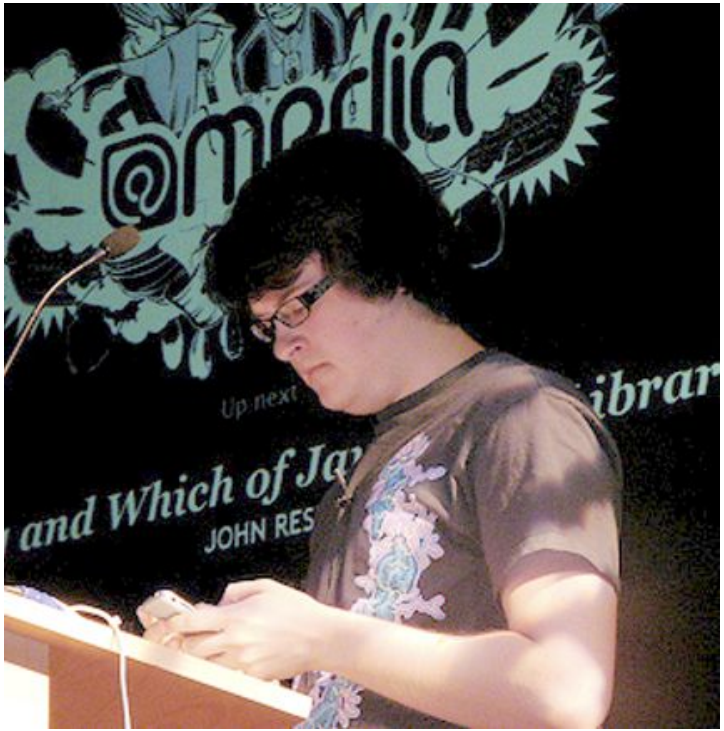


Photo credit: Wikipedia

jQuery was originally created by John Resig in 2006 and became the most popular JavaScript library.

jQuery Advantages

- Smoothed out differences between browsers.
- Simplifies common tasks, such as traversing the DOM
- Easier to work with the event model
- Added an easy to use effects library
- Plugin system for additional functionality
- Simpler syntax for shorter more concise scripts.

jQuery is Less Useful

- ~~Smoothed out differences between browsers.~~
- ~~Simplifies common tasks, such as traversing the DOM~~
- ~~Easier to work with the event model~~
- ~~Added an easy to use effects library~~
- Plugin system for additional functionality
- Simpler syntax for shorter more concise scripts.

Modern Considerations

Adding jQuery to your project adds some weight to the files and they will take longer to load. If you are doing just one simple thing, it's really not worth it.

However, if you want to get a simple interaction working quickly and easily, or you want to make use of a jQuery plugin, it may save you a lot of time.

What is a Library, Anyway?

In programming, a library is just a file with a bunch of functions in it.

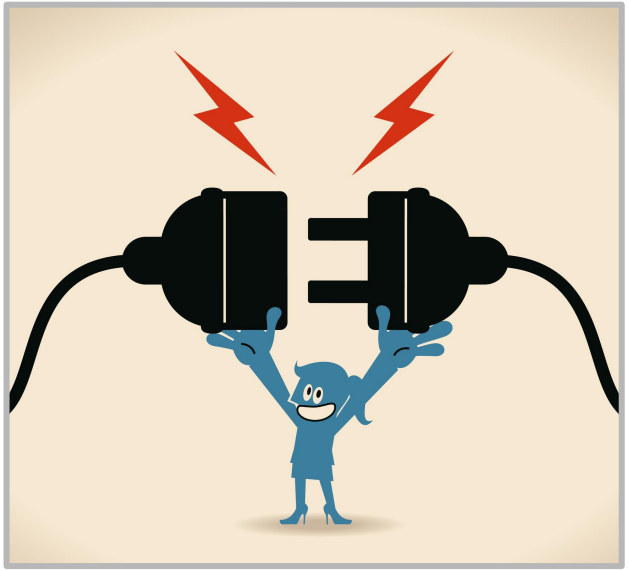
When you plug that library into your project (in this case, your HTML file), you can just use all of those functions.

It’s really just a matter of finding out what those functions are, and how to use them.

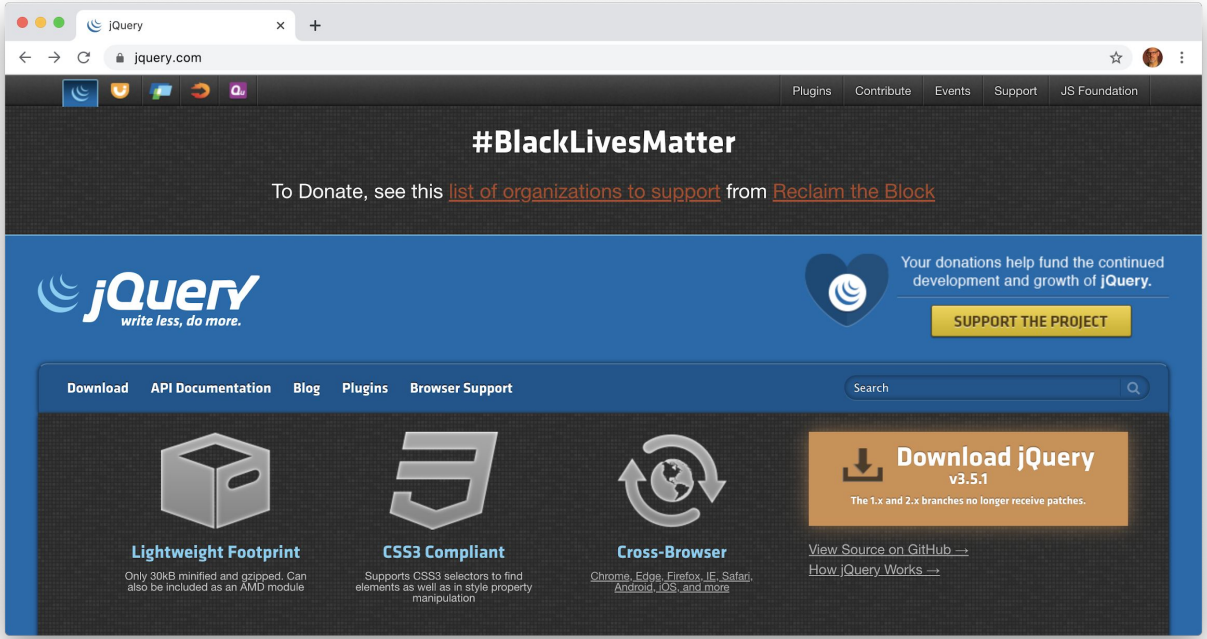
Two Options for Plugging In jQuery

There are two options for plugging in the jQuery library.

1. You can download the library into your project and link to the file locally in your project folder.
2. You can “hot link” to the library on a CDN, or Content Delivery Network.

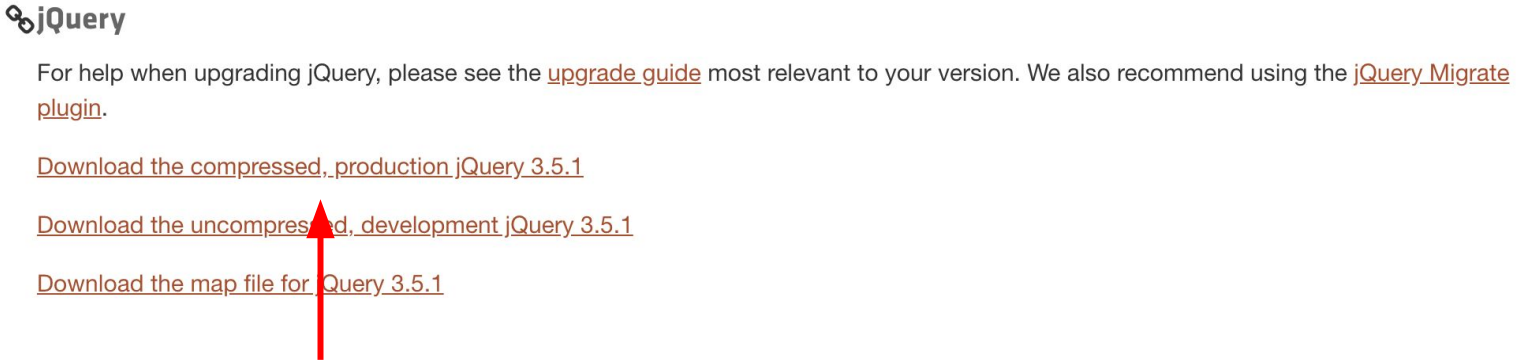


Downloading jQuery



If you want to download jQuery, go to jquery.com and click the Download jQuery button.

Get the Compressed Version



When you get to the download page, you want the top link here for the compressed, production version of jQuery.

When you click the link, you will see a page of code. Right click on the page (the white area, not the code itself) and choose “save as”.

Plug in the jQuery Library

Add the file to the folder for our test and then link it up to see if it is working.

There is nothing wrong with loading jQuery this way, but it means keeping track of another file.

Even easier is to use the CDN.

```
<h1>Is jQuery Working?</h1>

<script src="jquery-3.5.1.min.js"></script>

<script>
    if (window.jQuery) {
        alert("jQuery is loaded! :-)");
    }
    else {
        alert("jQuery is not loaded :-(");
    }
</script>
```

The Google CDN

jQuery

3.x snippet:

```
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
```

2.x snippet:

```
<script src="https://ajax.googleapis.com/ajax/libs/jquery/2.2.4/jquery.min.js"></script>
```

1.x snippet:

```
<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.12.4/jquery.min.js"></script>
```

There are a few places you can get jQuery, but the google CDN might be the easiest one. There are three main versions of jQuery.

Plug in the Version from the CDN

```
<h1>Is jQuery Working?</h1>

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

<script>
    if (window.jQuery) {
        alert("jQuery is loaded! :-)");
    }
    else {
        alert("jQuery is not loaded :-(");
    }
</script>
```

Replace the local link with the one from the CDN. It should still work!

Now you don't need the file for jQuery in your folder at all.

Basic jQuery Syntax - The jQuery Object

Remove the test script and put this in instead. If you load the page, you will see the heading is red.

```
<script>

    $('h1').css('color', 'red');

</script>
```

```
<script>

    jQuery('h1').css('color', 'red');

</script>
```

Basic jQuery Syntax - jQuery Methods

css() is one of the very many jQuery methods available because the jQuery library is plugged in.

jQuery adds a lot of helper functions that do things you commonly need to do on web pages. We will be looking at a bunch of them in projects for this course.

This method takes two inputs, a property (color) and a value (red).

See the jQuery documentation for a full list of functions you can use.

```
<script>

    $('h1').css('color', 'red');

</script>
```

Basic jQuery Syntax - Working with Collections

Add some paragraphs to the page, then change the script to change the color of the paragraphs.

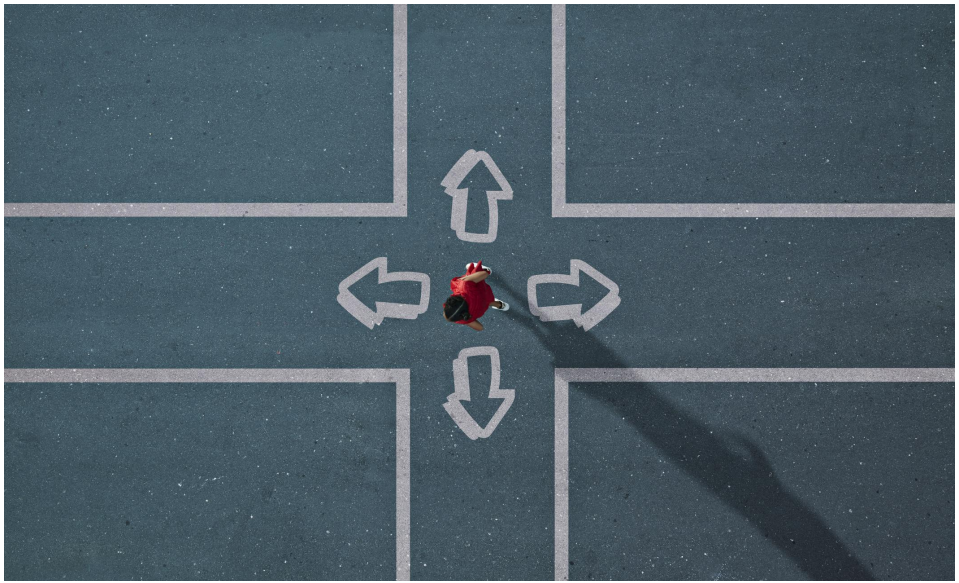
```
<h1>Is jQuery Working?</h1>
<p>Here is a paragraph</p>
<p>Here is a second paragraph</p>
<p>Here is a third paragraph</p>
```

```
<script>

    $('p').css('color', 'red');

</script>
```

jQuery - Selecting Elements

Download and open page.html in your code editor and you will there is some markup.

You can use this to try just a handful of selectors and filters in jQuery.



jQuery - Getting IDs

```
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

<script>

    $('#main').css('border', '2px solid red');

</script>
```

Add the link to jQuery at the bottom of page.html and script tags after that to add your own script and then try the statement above.

jQuery will get that element and put a border around it.

jQuery - Getting Classes

```
<script>

    //$('#main').css('border', '2px solid red');

    $('.special').css('border', '2px solid red');
</script>
```

Comment out the first line with the ID and add one that gets the class of special. Notice all the elements on the page with that class have been affected.

jQuery - Compound Selectors

```
//$('#main').css('border', '2px solid red');

//$('.special').css('border', '2px solid red');

$('#main h2').css('border', '2px solid red');
```

Of course, compound selectors will work as well.

Try These!

Try some of these other selectors. This is just a smattering of what is possible.

You can even get elements that have particular content inside them!

If there is an element on the page you want to affect, there are probably about 50 ways of getting to it.

```
$('h2, p').css('border', '2px solid red');

$('ol li:even').css('border', '2px solid red');

$('#main p:first').css('border', '2px solid red');

$('li:has(ul)').css('border', '2px solid red');

$('li:contains(three)').css('border', '2px solid red');
```

jQuery Events

jQuery has its own event handlers too.

You pass an anonymous function into the click function. It will run when the matching selectors are clicked.

Remember “this” contextually means “the link that was clicked”.

The html() method in jQuery will give you back the html, just like innerHTML.

```
$('a').click();
```

```
$('a').click( function(){} );
```

```
$('a').click( function(){
    console.log( $(this).html() );
} );
```

jQuery is just JavaScript

It is important to remember that jQuery is just more JavaScript. While you have to use the jQuery syntax to do things with jQuery, you can still just mix in plain old JavaScript as well.

So the code on the right works fine because this.innerHTML is just plain JavaScript.

```
$('a').click( function(){
    console.log( this.innerHTML );
} );
```

Summary

You have learned a LOT of new stuff. You can plug in the jQuery library and use a little bit of jQuery syntax to capture events and manipulate the DOM.

jQuery is just more JavaScript, but it makes doing some things a bit easier.

It is still important to learn actual native JavaScript, especially as the need for jQuery in new projects is reduced.