DOM manipulation with jQuery

Follow along

Follow along

Open the `jquery.html` file.

Follow along

Open the browser's console.

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Follow along

You are going to edit the HTML so open it in your editor.

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What is jQuery?

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What is jQuery?

jQuery is a JavaScript *library*.

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What is jQuery?

It's a bunch of JavaScript code written for us.

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What is jQuery?

We use it in the form of the
`jQuery` or `$` function.

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What is jQuery?

Try this in your browser's console.

`jQuery === $`

What is jQuery?

It became popular in a time when browsers weren't standard.

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What is jQuery?

Especially Internet Explorer.

What is jQuery?

So rather than handling all the differences ourselves...

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What is jQuery?

jQuery would handle the all those quirks for us.

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What is jQuery?

Suddenly programming for the Web was nice again.

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What is jQuery?

jQuery is part of the reason the Web exploded in popularity.

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What is jQuery?

Even though browsers behave much better[1] nowadays jQuery still has its place in making some JavaScript common tasks a bit easier.

[1] They follow what we call the EcmaScript spec a little bit better

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Selecting elements with jQuery

Selecting elements

Before we can do anything with jQuery we must first select some DOM elements.

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Selecting elements

Just like in CSS, we select the elements that we want to manipulate.

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Selecting elements

In fact, jQuery allows us to use CSS selectors.

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Tag selector

Tag selector

Start by adding this tag to your HTML.

`<p>Hi.</p>`

Tag selector

Now run this jQuery call in your browser console.

`$('p')`

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Tag selector

```html
<!-- Add this -->
<p>Hi.</p>
```

```javascript
// Select with this
$('p')
```

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Class selector

```html
<!-- Add this -->
<button class="js-pizza">Pizza</button>
```

```js
// Select with this
$('.js-pizza')
```

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Class selector

Classes can have any name.

```
<!-- Add this -->
<button class="empanadas">Empanadas</button>

// Select with this
$('.empanadas')
```

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ID selector

```html
<!-- Add this -->
<button id="cookies">Cookies</button>
```

```javascript
// Select with this
$('#cookies')
```

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ID selector

IDs can also have any name.

```html
<!-- Add this -->
<button id="ice-cream">Ice Cream</button>
```

```js
// Select with this
$('#ice-cream')
```

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Attribute selector

Select by the *presence* of the attribute.

```html
<!-- Add this -->
<a href="#shakes">Shakes</a>
```

```js
// Select with this
$('[href]')
```

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Attribute selector

Select by the *value* of the attribute.

```
<!-- Add this -->
<button data-hook="coffee donuts">Coffee</button>


// Select with this
$('[data-hook="coffee donuts"]')
```

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Attribute selector

Fuzzy matching of the *value* of the attribute.

```html
<!-- Add this -->
<button data-hook="coffee donuts">Coffee</button>
```

```js
// Select with this
$('[data-hook~=coffee]')
```

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Pseudo-class selector

```html
<!-- Add this -->
<ul class="list">
  <li>Zero</li>
  <li>One</li>
  <li>Two</li>
  <li>Three</li>
</ul>


// Select with this
$('.list li:odd')
```

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More selectors

There are many other selectors available to you

`Child, multiple, siblings...`

Check the [selectors section](#) in the jQuery documentation to see more.

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Exercise

Add these HTML elements to the page and select them using jQuery.

```html
<p>I like pizza.</p>
<h1 id="title">jQuery Exercises</h1>
<button class="js-tacos">Tacos</button>
<button data-action="do stuff">Do Stuff</button>
```

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Adding and removing elements with jQuery

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Adding elements

The `.append()` method adds new HTML
inside the selected elements.

For example, given the following empty container

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

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Adding elements

If you use `.append()` on the container
inserting a paragraph...

```javascript
var price = '<p>Only $399.99</p>';

$('.container').append(price);
```

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Adding elements

`.append()` will insert the paragraph between the opening and closing `<div>` tags.

```
<div class="container">
  <p>Only $399.99</p>
</div>
```

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Exercise

In addition to `append`, you can also use the `prepend`, `before` and `after` functions to add elements. Try adding the following elements to the container using these functions.

How are they different?

```
'<p>Prepend me.</p>'
'<p>Before me.</p>'
'<p>After me.</p>'
```

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Exercise

The HTML should look like this:

```
<p>Before me.</p>

<div class="container">
  <p>Prepend me.</p>
  <p>Only $399.99</p>
</div>

<p>After me.</p>
```

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Prepend

.`prepend()` will insert the paragraph before any other content <u>inside</u> the element.

```html
<div class="container">

    <p>Prepend me.</p>

    <p>Only $399.99</p>
</div>
```

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Before and after

.`before()` and .`after()` will insert the paragraph <u>outside</u> of the container.

```
<p>Before me.</p>

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

<p>After me.</p>
```

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HTML and Text

If you only want to change the content of an element, like switching the text of a paragraph, you should use `.html()` or `.text()`.
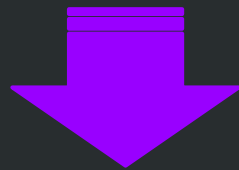
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HTML and Text

`.html()` replaces all the element's content with the html you pass as an argument.

```
<div class="text"></div>
```

⬇️

```
$('.text').html('<p>Some HTML</p>');
```

⬇️

```
<div class="text">
    <p>Some HTML</p>
</div>
```

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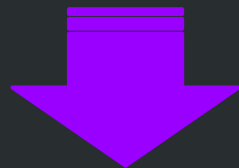# HTML and Text

`.text()` replaces all the element's content with text, without interpreting the HTML.

```
<div class="text"></div>
```

⬇

```
$('.text').text('<p>Some text</p>');
```

⬇

```
<div class="text">
    &lt;p&gt;Some text&lt;/p&gt;
</div>
```

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HTML and Text

See the difference between the results of `.html()` and `.text()` in this CodePen.

```html
<div class="text">
    <p>Some HTML</p>
</div>


<!-- vs. -->


<div class="text">
    &lt;p&gt;Some text&lt;/p&gt;
</div>
```

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Removing elements

You can remove the selected elements from the document by calling the `.remove()` method.

```
$('p').remove();
$('button').remove();
```

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Removing elements

You can also remove everything inside the selected elements by calling the `.empty()` method.

```
$('.container').empty();
$('body').empty();
```

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Removing elements

Difference between `.remove()` and `.empty()`

```html
<div class="container">
  <p>Remove me.</p>
</div>
```

```
    $('p').remove();                    $('p').empty();
    ------------                        ------------
<div class="container">            <div class="container">
                                     <p></p>
</div>                             </div>
```

Removing elements

Difference between `.remove()` and `.empty()`

```html
<div class="container">
  <p class="remove">Remove me.</p>
  <p class="empty">Empty me.</p>
</div>

<!-- $('.remove).remove() -->

<div class="container">
  <p class="empty">Empty me.</p>
</div>

<!-- vs. $('.empty).empty() -->

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

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Manipulating
properties and classes

Manipulating properties

The `.prop()` method allows you to get information about an element.

```html
<div class="container">

    <input type="radio">

</div>
```

```javascript
$('input').prop('type'); //=> radio
$('.container').prop('class');//=> container
```

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Manipulating properties

You mainly get HTML attribute values.

```html
<div class="container">
    <input type="radio">
</div>
```
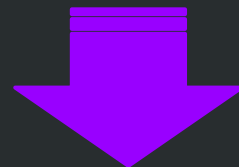
```javascript
$('input').prop('type'); //=> radio
$('.container').prop('class');//=> container
```

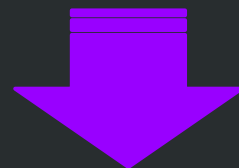IRON
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Manipulating properties

You can also use `.prop()` to *set* a property.

```
<input type="checkbox">
```

```
$('input[type=checkbox]').prop('type', 'radio');
```

```
<input type="radio">
```

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Manipulating classes

There are a set of functions
specifically for dealing with classes.

```
$('.container').hasClass('container');
```

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Manipulating classes

Does the container have the `container` class?

```
$('.container').hasClass('container'); //=> true
$('.container').hasClass('other'); //=> false
```

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Manipulating classes

We can add a class with
the `.addClass()` method.

```
$('.container').addClass('pizza');
$('.container').hasClass('pizza'); //=> true
```

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Manipulating classes

There's also a `.removeClass()` method.

```
$('.container').removeClass('pizza');
$('.container').hasClass('pizza'); //=> false
```

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Manipulating classes

And there's `.toggleClass()`
method to switch it on or off.

```
$('.container').toggleClass('pizza');
```

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Handling form inputs

Handling form inputs

The `.val()` method is primarily used to get the values of form input tags such as `<input>`, `<select>` and `<textarea>`.

```
<input type="text" value="Pepe" class="js-name">

$('.js-name').val(); //=> Pepe
```

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Handling form inputs

It can also be used to set the values of form fields.

```html
<select class="js-options">
    <option>Single</option>
    <option>Single2</option>
</select>
```

```javascript
$('.js-options').val(); //=> Single

$('.js-options').val('Single2');

$('.js-options').val(); //=> Single2
```

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Effects

Effects

There are different methods to make elements appear or disappear at will.

The basics: `.hide()` `.show()` and `.toggle()`
Opacity: `.fadeIn()` `.fadeOut()` and `.fadeToggle()`
Sliding: `.slideDown()` `.slideUp()` and `.slideToggle()`

See the difference

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Quiz

You have an empty paragraph tag.
You want to add some text to it.

Which jQuery functions do you use?

```
<p class="js-text"></p>
```

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Quiz

You have an empty paragraph tag.
You want to add some text to it.

[Solution](#)

```
<p class="js-text"></p>
```

Quiz

You have a `<div>` container with a class `circle`. You want to remove it's `circle` class.

Which jQuery functions do you use?

```
<div class="container circle"></div>
```

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Quiz

You have a `<div>` container with a class `circle`. You want to remove it's `circle` class.

[Solution](#)

```html
<div class="container circle"></div>
```

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Quiz

You have a list of items and you want to add a new one in the first position.

Also, you want to change the style of the odd `<li>` tags.

Which jQuery functions do you use?

```
<ul>
    <li>some text</li>
    <li>more text</li>
    <li>another text</li>
</ul>
```

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Quiz

You have a list of items and you want to add a new one in the first position.

Also, you want to change the style of the odd `<li>` tags.

[Solution](#)

```
<ul>

    <li>some text</li>

    <li>more text</li>

    <li>another text</li>

</ul>
```

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Quiz

You want an `<h1>` with the text from this `<input>`.
You also want to place the `<h1>` before the `<p>` tag.

Which jQuery functions do you use?

```
<input type="text" id="info" value="Hello world">

<p>Add the h1 on top of this paragraph.</p>
```

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Quiz

Create an `<h1>` with the text from this `<input>`.
Place the `<h1>` before the `<p>` tag.

[Solution](#)

```html
<input type="text" id="info" value="Hello world">

<p>Add the h1 on top of this paragraph.</p>
```

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