

CT4009

# JavaScript — Events, jQuery

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JavaScript – Events, jQuery

# What we'll cover

- jQuery selectors and the DOM
- Attribute selectors
- Filtering DOM elements
- JavaScript events with jQuery
- Global events from **document** and **window**
- Form events

# How these sessions work

- I show examples and explain them
- I demo concepts with CodePen
- Please stop me and ask questions when you have them!

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# What is jQuery?

- An open source library designed to simplify working with the DOM
- Released in 2006 by Jon Resig
- By far the most popular JavaScript library
- As of today: 80 million websites are powered by jQuery <sup>1</sup>
- Still widely used today, even though it's 12 years old

1: <https://trends.builtwith.com/javascript/jquery>

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# What are the benefits?

- Very stable codebase
- Excellent documentation (<https://api.jquery.com>)
- Lots of answered questions on Stack Overflow (<https://stackoverflow.com/questions/tagged/jquery>)
- Friendly API that makes learning JavaScript easier

# Basic jQuery Selectors

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# Basic jQuery Selectors



```
1 const headingElement = $('.heading');
```

# Basic jQuery Selectors



```
1 const headingElement = $('#main-title');
```



# Basic jQuery Selectors



```
1 const headingElement = $('[data-slug="main-title"]');
```

# Filtering Elements

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# Filtering Elements

We know how to grab them, but how do you exclude items?

We use the jQuery **filter** method: <http://api.jquery.com/filter/>

Let's look at the two main ways to use it.

# Filtering Elements



```
1 <ul>
2     <li>List item 1</li>
3     <li>List item 2</li>
4     <li>List item 3</li>
5     <li>List item 4</li>
6     <li>List item 5</li>
7     <li>List item 6</li>
8 </ul>
```

# Filtering Elements



```
1 const listItems = $('li');  
2  
3 listItems.filter(':even').addClass('dark');
```

What if we actually wanted to select even items?

# Filtering Elements



```
1 const listItems = $('li');  
2  
3 listItems.filter(index => {  
4     return !((index + 1) % 2);  
5 })  
6 .addClass('dark');
```

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<https://codepen.io/hankchizljaw/pen/PxGOVQ>

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# Events

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# What is an event?

Events are used to notify code of interactions and changes.

We subscribe to these changes and use an **event handler** to respond to them.

# Events



```
1 const buttonItem = $('button').first();  
2  
3 buttonItem.on('click', event => {  
4     alert('Button clicked!');  
5 });
```

# jQuery 'on' function


- The jQuery 'on' function allows us to specify our event as a string
- Much closer representation of vanilla JavaScript
- jQuery offers 'alias' methods such as click (<https://api.jquery.com/click/>)
- I recommend using 'on'

# Accessibility

- Always attach events to appropriate elements.  
Example: attach events to **<button>** not **<div>** elements
- Attaching a click event to a **<button>** will give you keyboard events for free

Useful article: <https://css-tricks.com/small-tweaks-can-make-huge-impact-websites-accessibility/>

# Events



```
1 const statusElement = $('[role="status"]').first();
2 const windowElement = $(window);
3
4 windowElement.on('scroll', event => {
5     statusElement.text('Scroll position: ' + windowElement.scrollTop() + 'px');
6 });
```

# Live Coding Example

I'm going to show you the following example with a contact form.

We'll:

- Select the email field
- Attach an **'input'** event that fires every time its content changes
- Determine if it's an email address or not. If it's empty we'll add an error class to it
- Attach a **'submit'** event to the form and prevent it from posting back
- Allow the form to post back *if* the email field isn't blank

Completed example

<https://codepen.io/hankchizljaw/pen/xQEZaP>

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# Recap

We learned how to:

- Select elements with jQuery using various selectors
- Filter elements with jQuery
- Attach and listen to both contextual and global JavaScript events

Bonus:

- We had a quick look at modern ES6+ code
- We learned about accessibility best practices for events

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