Advanced jQuery

Our Goals

- Events with jQuery
- Animations with jQuery
- Plugins with jQuery
- Chaining with jQuery
- DOM Readiness
- Talk about patterns and anti-patterns

Pure DOM Events

```javascript
var button = document.getElementById( "btn" );

var myButtonCallback = function () {
    console.log( "Button was clicked!" );
};

button.addEventListener( "click", myButtonCallback );
```

jQuery Events

```javascript
// Named Function - my preferred method
var myButtonCallback = function () {
    console.log( "Button was clicked" );
};

$("#btn").on( "click", myButtonCallback );

// Anonymous functions
$("#btn").on("click", function () {
    console.log( "Button was clicked!" );
});
```

There are lots of events!

- Keyboard events
- Mouse events
- Form events
- Browser events

They always look the same!

Keyboard Events

```javascript
var myCallback = function () {};

$("p").on( "keydown", myCallback );

$("p").on( "keypress", myCallback );

$("p").on( "keyup", myCallback );
```

Mouse Events

```javascript
var myCallback = function () {};
var mySecondCallback = function () {};

$("p").on( "click", myCallback );

$("p").on( "dblclick", myCallback );

$("p").on( "hover", myCallback, mySecondCallback );

$("p").on( "mousemove", myCallback );

$("p").on( "contextmenu", myCallback );
```

Form Events

```javascript
var myCallback = function () {};

$("input").on( "focus", myCallback );

$("input").on( "blur", myCallback );

$("input").on( "change", myCallback );

$("input").on( "select", myCallback );

$("form").on( "submit", myCallback );
```

Browser Events

```javascript
var myCallback = function () {};

$(window).on( "resize", myCallback );

$(window).on( "scroll", myCallback );

$(window).on( "resize", myCallback );
```

Now it is your turn!

It's all about callbacks

The `event`

An argument gets given to our callbacks for all event listeners! You can call it anything

```javascript
$( "a" ).on("click", function (event) {
    console.log( event );
});

var myCallback = function (e) {
    e.preventDefault();
};

$( "a" ).on( "click", myCallback );
```

Effects and animations

Lots of cool things!

- toggle, fadeToggle, and slideToggle
- animate

```javascript
// $().animate( cssObject, timer, onComplete );

$("div").animate({
    width: "500px",
    padding: "15px"
}, 100, function () {
    console.log( "Animation complete" );
});
```

Have a crack at these exercises

jQuery Plugins

jQuery Plugins

" *If you want to create an animation, effect, or UI component, chances are pretty good that someone has done the work for you already.*

Where do you find jQuery libraries?

- plugins.jquery.com
- javascripting.com

How do you pick them?

- Documented?
- Flexible?
- Responsive community?
- Actively maintained?
- File size?
- Browser support?
- Responsive?

See here for more information

How do you use them?

- Download the plugin and associated files
- In the HTML reference any associated CSS files (if there are any)
- After jQuery, reference the plugin
- Use the plugin in your code

Have a crack at these exercises

Patterns and Anti-patterns

```javascript
// Patterns //
// Name jQuery selected elements with a $
var $allParagraphs = $("p");

var myCallback = function () {}

// Pass in named functions
// Bind events to the document
$(document).on( "click", "a", myCallback );
```

Chaining

```javascript
$("p").css("color", "red");
$("p").html("Welcome");
$("p").show();

// Is the same as...

$("p").css("color", "red").html("Welcome").show();

// Is the same as...

$("p").css("color", "red")
      .html("Welcome")
      .show();

$("p").animate({}, 100).animate({}, 100).animate({}, 100);
```

DOM Readiness

You can't work with HTML if it isn't on the page yet!

```javascript
$(document).ready(function () {

    console.log( "The page is ready" );
    // All HTML is completely loaded!

});
```

Homework

- Get good at jQuery
    - Try jQuery
    - Code Academy: jQuery
    - Learn jQuery
    - jQuery Fundamentals

But here is the project brief