

AQUENT

GYMNASIUM

JQUERY: BUILDING BLOCKS

Lesson 2

MATERIALS & ASSIGNMENTS

THIS LESSON'S CORE CONCEPTS

You'll start your code work by learning the basics of animation in jQuery. Not only is animation a good way to learn the fundamentals of jQuery but the results can be used immediately in your projects:

1. Animation is the “eye light” of the web. In filmmaking, the eye light is a special but universal lighting technique which adds a spark to actors' eyes, giving them a liveliness that is otherwise missing. Done well, animation gives your website that same spark of life.
2. Animation helps lend your user interfaces affordance. Affordance is the way in which objects — including real, and make-believe objects on a screen — communicate their purpose: Cup handles look holdable, door handles look pullable, and buttons look pushable, in real life and on the screen. In software, animation can draw the user's attention to important things, and lend a transience to interactive elements.
3. jQuery makes animation easy with `jQuery.animate()`. `jQuery.animate()` takes three arguments: a properties hash, a duration (in milliseconds), and a timing function.
4. The properties hash is a JavaScript object with CSS properties and the values to which you'd like to animate them. For example: `{ left: 45, top: 14 }`. (Note that numbers are treated as “px” values; you can animate percentages too with `{ left: '20%', top: '4%' }`.)
5. Use the optional duration argument to specify the length (in milliseconds) that you want your animation to take. The default is 400 milliseconds (0.4 seconds), although animations that the user directly triggers should be shorter, and affordance-lending animations that trigger without the user's direct input may be longer.
6. The optional third argument is the name of a timing function. Timing functions refer to the speed and acceleration of the animation throughout its run. If the animation moves at the same speed throughout, it is linear. The default is swing, which has a nice ease-in, ease-out curve. Many other options are available in jQuery UI or the stand-alone jQuery Easing Plugin; see easings.net for animated representations of each option.
7. In jQuery, calling `.animate()` on an element while another animation is in progress queues the animation to run next. If you want to interrupt the current animation, call `.stop()`. Keep in mind that you can chain the `.animate()` call right onto the end of the `.stop()` call: `$(selector).stop().animate(...)`;
8. Along with creating jQuery lists by calling the jQuery function with a CSS selector (e.g., `$('.class-name')`), you can use the elements themselves. For example, to get a jQuery list containing the document element itself, you would use `$(document)`.
9. If your page has a `<script>` block in the header (where it belongs), it will run before the document's body has loaded. To run code which requires that the body exists, use jQuery's handy ready event handler: `$(document).ready(function() { ... });`
10. To run code when the user hovers the mouse over an element, use jQuery's handy hover event handler: `$(selector).hover(mouseOverFunction, mouseOutFunction);`

11. If you're in a position where you can't simply use hierarchical CSS selectors to select from elements' children — for example, if you've created the jQuery list by calling `$()` with actual HTML elements — you can use the `.children()` method. Simply calling `.children()` selects all children; you can narrow the selection by calling it with a standard selector string. For example: `$(elementVar).children('li.shelf-item');`

ASSIGNMENTS

1. Quiz
2. Review jQuery `.animate()` documentation at api.jquery.com/animate.

READING

- Experiment with the standard jQuery easing functions, handily demonstrated at: <http://easings.net/>
- Documentation on the various mouse events
- <http://api.jquery.com/category/events/mouse-events/>
- Demonstrations of what happens if you use animations both with and without using jQuery `.stop();`
<http://css-tricks.com/examples/jQueryStop/>
- Jonathan Snook's article "Using jQuery for Background Image Animations"
<http://snook.ca/archives/javascript/jquery-bg-image-animations/>
- Read more on the eye light
<http://www.videomaker.com/article/14089-the-eye-light>