Head First jQuery

Wouldn't it be dreamy if there were a book to help me learn how to use jQuery that was more fun than going to the dentist? It's probably nothing but a fantasy...

Ryan Benedetti
Ronan Cranley

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Table of Contents (Summary)

Table of Contents (the real thing)

Intro

Your brain on jQuery. Here you are trying to learn something, while here your brain is doing you a favor by making sure the learning doesn't stick. Your brain's thinking, "Better leave room for more important things, like which wild animals to avoid and whether naked snowboarding is a bad idea." So how do you trick your brain into thinking that your life depends on knowing jQuery?

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getting started with jQuery

Web page action

You want more for your web pages.

You've got HTML and CSS under your belt and want to add scripting to your skill set, but you don't want to spend your life writing lines and lines of script. You need a scripting library that allows you to change web pages on the fly. And since we're wishing, can it play well with AJAX and PHP, too? Can it do in 3 lines of code what most client-side languages do in 15? Wishful thinking? No way! You need to meet jQuery.

jQuery( )

You want web page power

HTML and CSS are fine, but...

...you need the power of script

Enter jQuery (and JavaScript)!

Look into the browser

The hidden structure of a web page

jQuery makes the DOM less scary

How does that work?

jQuery selects elements the same way CSS does

Style, meet script

jQuery selectors at your service

jQuery in translation

Your first jQuery gig

Set up your HTML and CSS files

Slide on in...

May the fade be with you

You rescued the Furry Friends campaign

Your jQuery Toolbox
jQuery helps you grab web page elements and do all kinds of things with them. In this chapter, we'll dig into jQuery selectors and methods. With jQuery selectors, we can grab elements on our page, and with methods we can do stuff to those elements. Like a massive book of magic spells, the jQuery library lets us change tons of things on the fly. We can make images disappear and reappear out of thin air. We can select a certain piece of text and animate the change to its font size. So, on with the show—let's grab some web page elements and go!
jQuery events and functions

Making things happen on your page

jQuery makes it easy to add action and interactivity to any web page. In this chapter, we'll look at making your page react when people interact with it. Making your code run in response to user actions takes your website to a whole new level. We'll also look at building reusable functions so you can write the code once and use it multiple times.

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Use conditional logic to make decisions 109
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Methods can change the CSS 115
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Mod the DOM

Just because the page is finished loading doesn’t mean it has to keep the same structure. Back in Chapter 1, we saw how the DOM gets built as the page loads to set up the page’s structure. In this chapter, we’ll look at how to move up and down through the DOM structure and work with element hierarchy and parent/child relationships to change the page structure on the fly using jQuery.

The Webville Eatery wants an interactive menu
Go vegetarian
Class up your elements
Button things up
What’s next?
Swinging through the DOM tree
Traversal methods climb the DOM
Chain methods to climb farther
Variables can store elements, too
There’s that dollar sign again…
Expand your storage options with arrays
Store elements in an array
Change out elements with replaceWith
How can replaceWith help?
Think ahead before using replaceWith
replaceWith doesn’t work for every situation
Insert HTML content into the DOM
Use filter methods to narrow your selections (Part 1)
Use filter methods to narrow your selections (Part 2)
Bring the burger back
Where’s the beef (cr…meat)?
A meaty array
The each method loops through arrays
That’s it…right?
Your jQuery Toolbox
jQuery effects and animation

A little glide in your stride

Making things happen on your page is all well and good, but if you can’t make it look cool, people won’t want to use your site. That’s where jQuery effects and animation come in. In this chapter, you’ll learn how to make elements transition on your page over time, show or hide specific pieces of elements that are relevant, and shrink or grow an element on the page, all before your users’ eyes. You’ll also see how to schedule these animations so they happen at various intervals to give your page a very dynamic appearance.

DoodleStuff needs a web app
Do the Monster Mashup
Monster Mashup needs layout and positioning
A little more structure and style
Make the interface click
Make the lightning effect
How does jQuery animate elements?
Fade effects animate the CSS opacity property
Sliding is all about height
Put fade effects to work
Combine effects with method chains
Striking back with a timed function
Add the lightning functions to your script
DIY effects with animate
What can and can’t be animated
animate changes style over time
From where to where exactly?
Absolute vs. relative element movement
Move stuff relatively with operator combinations
Add the animate functions to your script
Look, Ma, no Flash!
Your jQuery Toolbox
jQuery and JavaScript

Luke jQuery, I am your father!

jQuery can't do it all alone. Although it is a JavaScript library, unfortunately it can't do everything its parent language can do. In this chapter, we'll look at some of the features of JavaScript that you'll need to create really compelling sites, and how jQuery can use them to create custom lists and objects as well as loop through those lists and objects to make your life much easier.

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custom functions for custom effects

What have you done for me lately?

When you combine jQuery's custom effects with JavaScript functions you can make your code—and your web app—more efficient, more effective, and more powerful. In this chapter, you'll dig deeper into improving your jQuery effects by handling browser events, working with timed functions, and improving the organization and reusability of your custom JavaScript functions.

A storm is brewing
We've created a monster...function
Get control of timed effects with the window object
Respond to browser events with onBlur and onFocus
Timer methods tell your functions when to run
Write the stopLightning and goLightning functions
Feature request for Monster Mashup
Let's get (more) random
You already know the current position...
...and the getRandom function too
Move relative to the current position
Monster Mashup v2 is a hit!
Your jQuery Toolbox
jQuery and Ajax

Please pass the data

Using jQuery to do some cool CSS and DOM tricks is fun, but soon you'll need to read information (or data) from a server and display it. You may even have to update small pieces of the page with the information from the server, without having to reload the page. Enter Ajax. Combined with jQuery and JavaScript, it can do just that. In this chapter, we'll learn how jQuery deals with making Ajax calls to the server and what it can do with the information returned.
handling JSON data

**Client, meet server**

As useful as reading data from an XML file was, that won’t always cut the mustard. A more efficient data interchange format (JavaScript Object Notation, aka JSON) will make it easier to get data from the server side. JSON is easier to generate and read than XML, too. Using jQuery, PHP, and SQL, you’ll learn how to create a database to store information so you can retrieve it later, using JSON, and display it on the screen using jQuery. A true web application superpower!

Webville MegaCorp’s Marketing Department doesn’t know XML

XML errors break the page

Collect data from a web page

What to do with the data

Format the data before you send it

Send the data to the server

Store your data in a MySQL database

Create your database to store runner info

Anatomy of an insert statement

Use PHP to access the data

Handle POST data on the server

Connect to a database with PHP

Use select to read data from a database

Get data with PHP

JSON to the rescue!

jQuery + JSON = Awesome

A few PHP rules...

A few (more) PHP rules...

Format the output using PHP

Access data in the JSON object

Data sanitization and validation in PHP

Your jQuery/Ajax/PHP/MySQL Toolbox
jQuery UI

Extreme form makeover

The Web lives and dies by users and their data.

Collecting data from users is a big business and can be a time-consuming challenge for a web developer. You've seen how jQuery can help make Ajax, PHP, and MySQL web apps work more effectively. Now let's look at how jQuery can help us build the user interface for the forms that collect data from users. Along the way, you'll get a healthy dose of jQuery UI, the official user interface library for jQuery.

Cryptozoologists.org needs a makeover

Pimp your HTML form

Save coding headaches (and time) with jQuery UI

What's inside the jQuery UI package

Build a date picker into the sightings form

jQuery UI behind the scenes

Widgets have customizable options

Styling up your buttons

Control numerical entries with a slider

Computers mix color using red, green, and blue

Build the refreshSwatch function

One last little thing...

Your jQuery Toolbox
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jQuery and APIs

Objects, objects everywhere

As talented a developer as you are, you can’t do it all alone... We’ve seen how we can include jQuery plug-ins, like jQuery UI or the tabs navigation to help boost our jQuery app, without much effort. To take our applications to the next level, apply some of the really cool tools out there on the Internet, and use information provided by the big hitters—like Google, Twitter, or Yahoo!—we need something...more. Those companies, and many others, provide APIs (application programming interfaces) to their services so you can include them in your site. In this chapter, we’ll look at some API basics and use a very common one: the Google Maps API.

Where’s Sasquatch?

The Google Maps API

APIs use objects

Include Google maps in your page

Getting JSON data with SQL and PHP

Points on a map are markers

Multicreature checklist

Listening for map events

You did it!

Your jQuery API Toolbox
**leftovers**

**The top ten things (we didn’t cover)**

Even after all that, there's still plenty we didn’t get around to. There are lots of other jQuery and JavaScript goodies we didn’t manage to squeeze into the book. It would be unfair not to tell you about them, so you can be more prepared for any other facet of jQuery you might encounter on your travels.

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set up a development environment

Get ready for the big times

You need a place to practice your newfound PHP skills without making your data vulnerable on the Web. It's always a good idea to have a safe place to develop your PHP application before unleashing it on the world (wide web). This appendix contains instructions for installing a web server, MySQL, and PHP to give you a safe place to work and practice.

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