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Web Development Recipes

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Web Development Recipes

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It's no longer enough to know how to wrangle HTML, CSS, and a bit of Java-Script. Today's web developer needs to know how to write testable code, build interactive interfaces, integrate with other services, and sometimes even do some server configuration, or at least a little bit of backend work. This book is a collection of more than forty practical recipes that range from clever CSS tricks that will make your clients happy to server-side configurations that will make life easier for you and your users. You'll find a mix of tried-and-true techniques and cutting-edge solutions, all aimed at helping you truly discover the best tools for the job.

Who's This Book For?

If you make things on the Web, this book is for you. If you're a web designer or frontend developer who's looking to expand into other areas of web development, you'll get a chance to play with some new libraries and workflows that will help you be more productive, and you'll get exposed to a little bit of that server-side stuff along the way.

If you've been spending a lot of time on the backend and you need to get up to speed on some frontend techniques, you'll find some good recipes here as well, especially the sections on workflow and testing.

One last thing—a lot of these recipes assume you've had a little experience writing client-side code with JavaScript and jQuery. If you don't think you have that experience, read through the recipes anyway and pick apart the provided source code. Consider the more advanced recipes as a challenge.

What's in This Book?

We've included a bunch of great topics to get you started on the path to more advanced web development. Each recipe poses a general problem and then lays out a specific solution to a scenario you're likely to encounter, whether it's how to test your site across multiple web browsers, how to quickly build and automatically deploy a simple static site, how to create a simple contact form that emails results, or how to configure Apache to redirect URLs and serve pages securely. We'll take you through both the how and the why so you can feel comfortable using these solutions in your projects. Since this is a book of recipes, we can't go into a lot of detail about more complex system architecture, but you'll find some suggestions on where to go next in each recipe's "Further Exploration" section.

We've organized the recipes into chapters by topic, but you should feel free to jump around to the topics that interest you. Each chapter contains a mix

of beginner and intermediate recipes, with the more complex recipes at the end of each chapter.

In Chapter 1, *Eye-Candy Recipes*, on page ?, we cover some ways you can use CSS and other techniques to spice up the appearance of your pages.

In Chapter 2, *User Interface Recipes*, on page ?, you'll use a variety of techniques to craft better user interfaces, including JavaScript frameworks like Knockout and Backbone, and you'll look at how to make better templates for sending HTML emails.

In Chapter 3, *Data Recipes*, on page ?, you'll look at ways you can work with user data. You'll construct a simple contact form, and you'll take a peek at how to build a database-driven application using CouchDB's CouchApps.

In Chapter 4, *Mobile Recipes*, on page ?, you'll take user interfaces a step further and look at ways you can work with the various mobile computing platforms. You'll spend some time with jQuery Mobile, look at how to handle multitouch events, and dig a little deeper into how to determine how and when to serve a mobile version of a page to your visitors.

In Chapter 5, *Workflow Recipes*, on page ?, we'll show you ways you can improve your processes. We'll investigate how SASS can make your life easier when managing large style sheets, and we'll introduce you to CoffeeScript, a new dialect for writing JavaScript that produces clean, compliant results.

In Chapter 6, *Testing Recipes*, on page ?, you'll create more bullet-proof sites by using automated tests, and we'll show you how to start testing the JavaScript code you write.

Finally, we'll turn our attention to moving into production in Chapter 7, *Hosting and Deployment Recipes*, on page ?. We'll walk you through building a virtual machine so you have a testing environment to try things before you set up your real production environment, and we'll cover how to set up secure sites, do redirects properly, and protect your content. We'll also show you how to automate the deployment of websites so you won't accidentally forget to upload a file.

What You Need

We'll be introducing you to many new technologies in this book. Some of these are fairly new and somewhat subject to change, but we think they're compelling and stable enough to talk about at an introductory level. That said, web development moves quickly. We've taken steps to ensure you can still

follow along, by providing copies of the libraries we use in these recipes with the book's source code.

We've tried to keep the prerequisites to a minimum, but there are a few things you'll want to get set up before you dig in.

HTML5 and jQuery

We'll use HTML5-style markup in our examples. For example, you won't find any self-closing tags in our markup, and you'll see some new tags like <header> and <section> in some of the examples. If you're not familiar with HTML5, you may want to read *HTML5 and CSS3: Develop with Tomorrow's Standards Today* [Hog10].

We'll also use jQuery, because many of the libraries we introduce in these recipes rely on it. In most cases, our code examples will fetch jQuery 1.7 from Google's content delivery network. There are a couple of cases where libraries will require specific versions of jQuery, and we'll be sure to point those out.

The Shell

You'll work with various command-line programs in these recipes whenever possible. Working on the command line is often a huge productivity boost, because a single command can replace multiple mouse clicks, and you can write your own scripts to automate these command-line tools. The *shell* is the program that interprets these commands. If you're on a Windows machine, you'll use the command prompt. If you're on OS X or Linux, that's the Terminal.

Shell commands will look something like this:

```
$ mkdir javascripts
```

The $ represents the prompt in the shell, so you're not meant to type it in. The commands and processes you'll use are platform-independent, so whether you're on Windows, OS X, or Linux, you'll have no trouble following along.

Ruby

Several recipes in this book require that you have the Ruby programming language installed. We'll be using some tools that require Ruby to run, such as Rake and Sass. We've included a short appendix that walks you through installing Ruby, which you can find in Appendix 1, *Installing Ruby*, on page ?.

QEDServer

Several of the recipes in this book make use of an existing product management web application. You can work with this application by installing QEDServer,[1] a stand-alone web application and database that requires very little setup. QEDServer works on Windows, OS X, and Linux. All you need is a Java Runtime Environment. Whenever you see us refer to our "development server," we're talking about this. It gives us a stable web application backend for our demonstrations, and it gives you a hassle-free way to work with Ajax requests on your local machine.

The examples of this book will run against the version of QEDServer that we've bundled with the book's code examples, which you should download from the book's website.

To use QEDServer, you start the server with server.bat on Windows or ./server.sh on OS X and Linux. This creates a public folder that you can use for your workspace. If you create a file called index.html in that public folder, you can view it in your web browser by visiting http://localhost:8080/index.html.

A Virtual Machine

Several chapters in this book use a Linux-based web server with Apache and PHP. You'll learn how to set up your own copy of this server in Recipe 37, *Setting Up a Virtual Machine*, on page ?, but we've provided a virtual machine that's already configured, which you can get from http://www.webdevelopmentrecipes.com/. You'll need the free VirtualBox[2] application to run the virtual machine.

Online Resources

The book's website[3] has links to an interactive discussion forum as well as a place to submit errata for the book. You'll also find the source code for all the projects we build. Readers of the ebook can click the box above the code excerpts to download that snippet directly.

We hope you enjoy this book and that it gives you some ideas for your next web project!

Brian, Chris, CJ, Mike, and Aaron

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1. A version for this book is available at http://webdevelopmentrecipes.com/.
2. http://www.virtualbox.org/
3. http://pragprog.com/titles/wbdev/