

Beginning
Web Programming with
HTML, XHTML, and CSS

Second Edition

Jon Duckett



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Beginning Web Programming with HTML, XHTML, and CSS

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Introduction

There are a lot of books about designing and building web pages, so thank you for picking up this one. Why do I think it is different? Well, the Web has been around for over a decade now, and during its life many technologies have been introduced to help you create web pages, some of which have lasted, others of which have disappeared. Many books that teach you to write web pages are revisions of earlier versions of the same book and therefore still take the same approach as the previous edition did. The purpose of this book, however, is to teach you how to create pages for the Web as it is today and will be for the next few years. Then, once you have worked through this book, it should continue to serve as a helpful reference text you can keep nearby and dip into when you need to.

At one time, you needed to learn only one language to write web pages: HTML. As the Web has advanced, however, so have the technologies you need to learn in order to create effective and attractive web pages. As the title of this book suggests, you will be learning a few different languages:

- ❑ **HTML and XHTML:** HTML and XHTML are needed to explain the *structure* of any web pages. They're used to indicate what text should be considered a heading, where paragraphs start and end, and what images should appear in the document, and to specify links between different pages. As you might be relieved to hear, you shouldn't think of HTML and XHTML as two separate languages. Rather, you can consider XHTML as more like the latest version of HTML.
- ❑ **CSS:** CSS is used to control how a document should appear. For example, you can use it to specify that a typeface should be a large, bold, Arial typeface or that the background of a page should be a light green. It can also be used to control where different items appear on a page. For example, you can use CSS to present text in two columns on the same page.
- ❑ **JavaScript:** You learn a little bit of JavaScript to add interactivity to the web pages you create, and to work with the browser displaying the web page.

Despite the fact that you are looking at several languages, not just HTML, you can consider it a very good time to be coming to the Web because many of the technologies used to create web pages have matured, and favored methods, or "best practices," for creating web sites have been emerging. It is these that you will be learning.

About the Book

As you have already seen, you'll be learning how to control the structure of a web page with HTML and XHTML, how to style it with CSS, and how to add interactivity with JavaScript. Just learning about the latest technologies, however, is not enough to ensure that you can write great web pages. As these technologies to write web pages have improved, so too have browsers (the programs and devices used to access the Web). Browsers have reflected — and on occasion even informed — the way the languages used to create web pages have developed. The problem, as you can probably imagine, is that not everyone has the latest software installed on his or her computer, and as a result you will not only want to be able to write

Introduction

pages that take advantage of some of the latest features of browsers, but you will also want to make sure that your pages work in some older browsers that are still popular today.

Because there has been so much change in the way web pages are built, and because there are so many different versions of web browsers, some features are listed in the book but are marked as “deprecated”; this means that while that section should still work in modern browsers, you are no longer advised to use it because software might not support it much longer.

Another issue you need to be aware of when writing web pages is the increasing number of devices capable of accessing the Web, such as mobile phones, PDAs (personal digital assistants), and TV set-top boxes. You will be relieved to know that many of these devices employ the same languages that you will be learning in this book — and by learning to use XHTML with CSS you will be able to create web sites that will last much longer than those written in plain old HTML.

Another area where the Web has changed from a few years back is the increased emphasis on usability and accessibility. *Usability* refers to making the site easy for users to get around (or navigate) and achieve what they came to your site for, whereas *accessibility* addresses making a site available to as many users as possible, in particular people with disabilities (who may have impaired vision or difficulty using a mouse). Many governments around the world will not issue a contract to build web sites for them unless the site will meet strict accessibility guidelines. A little careful thought before you build your web site means that people with vision impairments can either view your site with larger text or have it read to them by a screen reader. There are books dedicated to the topics of usability and accessibility and that are aimed at web developers who need to learn how to make their code more accessible and usable, but my aim is to teach you to code with many of these principles in mind from the start.

By the end of this book, you will be writing web pages that not only use the latest technologies, but also are still viewable by older browsers. Pages that look great can still be accessed by those with visual and physical impairments. These are pages that not only address the needs of today’s audiences but can also work on emerging technologies — and the skills you learn should be relevant longer.

Whom This Book Is For

This book is written for anyone who wants to learn how to create web pages, and for people who might have dabbled in writing web pages (perhaps using some kind of web-page authoring tool) but want to really understand the languages of the Web to create better pages.

More experienced web developers can also benefit from this book because it teaches some of the latest technologies, such as XHTML, and encourages you to embrace web standards that not only meet the needs of the new devices that access the Web, but also help make your sites available to more visitors.

You don’t need any previous programming experience to work with this book. This is one of the first steps on the programming ladder. Whether you are just a hobbyist or want to make a career of web programming, this book teaches you the basics of programming for the Web. Sure, the term “programmer” might be associated with geeks, but as you will see by the end of the book, even if you prefer to be known as a web designer, you *need* to know how to code in order to write great web sites.

What This Book Covers

By the end of this book, you will be able to create professional looking and well-coded web pages.

Not only will you learn the code that makes up markup languages such as XHTML, but you will also see how to apply this code so you can create sophisticated layouts for your pages, positioning text and images where you would like them to appear and getting the colors and fonts you want. Along the way, you will see how to make your pages easy to use and available to the biggest audience possible. You will also learn practical techniques such as how to make your web site available on the Internet and how to get search engines to recognize your site.

The main technologies covered in this book are HTML, XHTML, and CSS. You will also learn the basics of JavaScript, enough to work on some examples that add interactivity to your pages and allow you to work with basic scripts. Along the way, I introduce and point you to other technologies you might want to learn in the future.

The code I will encourage you to write is based on what are known as *web standards*; HTML, XHTML, and CSS are all created and maintained by the World Wide Web Consortium, or W3C (www.w3.org/), an organization dedicated to creating specifications for the Web. You will also learn about some features that are not standards; it is helpful to know some of these in case you come across such markup and need to know what it does. (In such cases, I make it clear that the features are not part of the standard.)

What You Need to Use This Book

All you need to work through this book is a computer with a web browser (preferably Firefox 2 or higher, Safari 2 or higher, or Internet Explorer 6 or higher), and a simple text editor such as Notepad on Windows or TextEdit on Mac.

If you have a web-page editor program, such as Macromedia Dreamweaver or Microsoft FrontPage, you are welcome to use it, but I will not be teaching you how to use these programs. Each of these programs is different and entire books have been written about them. Even with such programs available, you can write much better sites when you really understand the code these programs generate because you'll often want to go in and edit this by hand.

How This Book Is Organized

The first chapter of this book will show you how the main task in creating a web site is *marking up* the text you want to appear on your site using things called *elements* and *attributes*. As you will see, these elements and attributes describe the structure of a document (what is a heading, what is a paragraph of text, what is a link, and so on).

The first six chapters of the book describe the different elements and attributes that make up HTML and XHTML and how you can use them to write web pages. The chapters are organized into task-related areas,

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such as structuring a document into headings and paragraphs, creating links between pages, adding color and images, displaying tables, and so on. With each task or topic that is introduced you will see an example first to give you an idea of what is possible; then you can look at the elements and attributes used in detail.

I should mention that you do not need to read all the detailed explanations of every aspect of an element on your first reading of the book — as long as you have an idea of what is possible. For the sake of completeness (and to keep related information in the same place), I have included some functionality that you will rarely want to use. You can always come back to the finer detail later when you find the need to use some of the more obscure functionality. So, if you want to move on at a faster pace, feel free to get the gist of the markup and then move on.

Each chapter ends with exercises designed to get you working with the concepts you've just learned. Don't worry if you have to go back and review the content of the chapter in order to complete the exercises; this book has been created with the intention that it should be a helpful reference for years to come, so don't feel you need to learn everything by heart. Along the way, you'll see which browsers support each element, and you'll learn plenty of handy tips, tricks, and techniques for creating professional web pages.

Once you have seen how to create and structure a document using HTML and XHTML, you then learn how to make your pages look more attractive using cascading style sheets (CSS). You learn how to change the typefaces and size of fonts used, color of text, backgrounds and borders around items, and alignment of objects to the center, left, or right of the page.

Having worked through these two chapters, and using the examples in the book, you should be able to write quite complex web pages. These chapters will serve as a helpful reference you can keep coming back to and the examples will act as a toolkit for building your own sites.

Chapters 9 and 10 look at important web-page design issues. You see some examples of popular page layouts and how to construct them; you learn how to create a good navigation bar to allow users to find the pages they want on your site; you find out what makes a form effective; and you learn how to make your web sites available to as many people as possible. These chapters really build upon the theory you learned in the first half of the book and help you create professional-looking pages that attract users and make your site easy to use.

Chapters 11 and 12 introduce you to JavaScript, a programming language known as a *scripting language* that you use in web pages. While the entire JavaScript language is too large to teach you in two chapters, you should get a feel for how it works and see how to integrate scripts into your pages.

Chapter 13, the final chapter, prepares you to put your site on the Internet and covers web hosting, FTP, and validating your code. Finally, I give you some ideas of where you can go now that you've worked through this book; there are a lot of other things you might want to add to your site or learn in order to advance your web skills, and this chapter gives you an idea of what else is possible and what you need to learn to do that.

I have included several helpful appendixes, including a reference to the XHTML elements and CSS properties. There is an appendix that explains how XHTML and CSS specify colors. Other appendixes show you available character encodings, language codes, and escape characters that can be used with HTML, XHTML, CSS and JavaScript. Finally, there is an appendix on old markup that should not really be used any longer, in case you come across some of these older techniques when working on a site.

Conventions

To help you get the most from the text and keep track of what's happening, this book uses a number of typographical conventions.

Boxes like this one hold important, not-to-be forgotten information that is directly relevant to the surrounding text.

Tips, hints, tricks, and asides to the current discussion are set off and placed in italics like this.

As for styles in the text:

- ❑ Important words are *italicized* when first introduced.
- ❑ Keystrokes appear like this: Ctrl+A.
- ❑ Filenames, URLs, and code within the text appear in monospace, like so: `www.wrox.com`.
- ❑ Code appears two different ways: General code examples are shown without a background. When I want to draw particular attention to a line of code, it will be highlighted on a gray background.

Source Code

As you work through the examples in this book, you may choose either to type in all the code manually or to use the source code files that accompany the book. All of the source code used in this book is available for download at `www.wrox.com`. Once at the site, simply locate the book's title (either by using the Search box or by using one of the title lists) and click the Download Code link on the book's detail page to obtain all the source code for the book.

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Errata

I've made every effort to ensure that there are no errors in the text or in the code. However, no one is perfect, and mistakes do occur. If you find an error in this book, such as a spelling mistake or faulty piece of code, I would be very grateful for your feedback. By sending in errata, you may save another reader hours of frustration, and at the same time you will be helping to provide even higher quality information.

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2. Read the terms of use and click Agree.
3. Complete the required information to join as well as any optional information you wish to provide and click Submit.
4. You will receive an e-mail with information describing how to verify your account and complete the registration process.

You can read messages in the forums without joining P2P, but in order to post your own messages, you must join.

Once you join, you can post new messages and respond to messages other users post. You can read messages at any time on the Web. If you would like to have new messages from a particular forum e-mailed to you, click the Subscribe to this Forum icon by the forum name in the forum listing.

For more information about how to use the Wrox P2P, be sure to read the P2P FAQs for answers to questions about how the forum software works as well as many common questions specific to P2P and Wrox books. To read the FAQs, click the FAQ link on any P2P page.