Praise for
Developing Business Applications for the Web

"Business developers now have a step-by-step guide to HTML, CSS, JavaScript, and more, and can complete their learning with the exercises provided. The journey to developing business applications for the Web starts with this book."

Alan Seiden
Alan Seiden Consulting LLC

"*Developing Business Applications for the Web* provides a great way to learn how to take business to the Web with exercises and examples to guide you through the process. It not only teaches basic Web development skills, but also how to take existing business applications to the Web to reach a broader audience. A great starting point for developing business Web applications!"

Amanda Walsh
Senior Programmer/Analyst (IBM i and Web developer)

Introduction

Developing business applications for the Web is a topic of great interest. Getting down to business with Web application development, in our opinion, is even more interesting and is a topic that's highly relevant to any business developer. We have enjoyed writing this book and have put forth much effort to provide an inclusive resource for business developers who want to expand their skill set into developing Web applications for business.

Why Another Book About Web Application Development?

With so many books already written about Web application development, why write another? We felt that few, if any, books capture the real needs of business application programmers. Too often, Web development books focus on a single technology or language. Learning to write HTML, JavaScript, and Cascading Style Sheets (CSS) is only half the battle. We're reminded of a commercial from years ago, in which a young programmer excitedly shows off his latest company Web page, complete with flaming, spinning logos, to his boss. The boss nods in appreciation, and then says, "Great, now can you integrate it with accounts payable?"

How many veteran application developers, with many years' experience building complex and productive applications, have suddenly been thrown off balance when asked to develop an application for the Web? How many students trying to find their way into the work world are unsure of what it takes to develop skills fitting to a career as a business Web developer? And where does someone who wants to become a business application developer begin?

To address such questions, we wrote this book. It provides a comprehensive guide not only for HTML, but for many aspects of browser-based applications. In short, this book is written by business application developers and educators for business application developers. You will learn to do much more than create Web pages with flaming logos: you will learn to actually deploy real-time data to Web-based applications and create fully interactive modern applications.

How Is This Book Arranged?

The early chapters of the book introduce HTML, the foundational language for browser-based applications. The HTML covered within this book is extensive, but also focused. Rather than trying to teach every possible feature of HTML, we focus on those portions most useful to business programmers. Later chapters introduce common methods for integrating real application data into Web applications.

When we review specific coding techniques, you will see the commands/tags and any pertinent parameters separated with borders, like this:
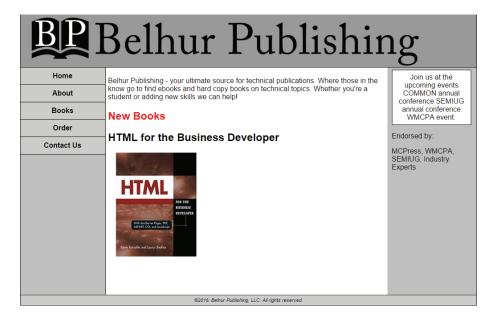
Tag:

```
<a
   parameter 1
   parameter 2
   parameter 3
>
</a>
```

Consistently displaying commands in this way makes it easier for you to use this book as a reference, so you can easily skim the book looking for the command you need.

You'll review simple HTML pages for a hypothetical business, Belhur Publishing. The first examples show the creation of a home page for the business, which provides a Web presence and contact information. Later pages add more content and more sophisticated design techniques. After that, browser-based application programs are reviewed. You will see example applications that present practical, day-to-day business uses. Use these examples to help develop your own applications. After reading and learning from the examples, you'll gain confidence in your ability to develop a business Web application.

The screenshot below shows our starting point for the Belhur Publishing website: a simple Web page. It's not much—just a simple, static HTML document. Very little is happening on this Web page, as far as images, formatting, or style sheets. These features will be added later in the book, but since we're application developers, not graphic designers, the focus is on the code involved, not on design and creating aesthetically pleasing Web pages. (That said, it's a good idea to acquaint yourself with at least the fundamentals of Web page design. A quick Internet search will reveal many resources to guide you in this area.)

Once we've covered the basics of the HTML, we'll discuss other languages that interact with HTML. It's inconceivable to have a business Web application created with only HTML. Virtually every Web application incorporates other elements, such as languages, to produce the necessary dynamic content. We've selected several of the most common languages used to develop Web applications. Each one has its own chapter in this book.

Intended Audience

The intended audience for this book is business developers or those who are considering or are interested in becoming business developers. Many books teach Web development, each focusing on a specific language or technology. This is not just another book about Web application development: this book focuses on getting down to business. Building a static site is one thing, but accessing databases and providing business applications is another. Many developers have extensive experience in developing business applications. These developers might be very familiar with traditional mainframe/midrange programming environments, but know little about Web-based applications. The world is ever changing, and many business programmers find themselves needing to learn about doing business on the Web. Possibly you're a student being introduced to the Web and/or business applications, pondering where you should start and how you can develop the skills needed to be a successful business Web developer.

In larger shops, the business application developer might not be the one to create and support the organization's website, but may still be expected to develop new business applications to deploy through the site. This kind of collaborative environment is nothing new. Most IT staffs are comfortable with team-based development and collaborative effort. Do you need to know all the website development bits and pieces to code business applications? No, probably not. We intentionally included many of the pieces for a traditional site to help you see how they work together; this insight can help you make better decisions throughout the application development process. We cover the basics and then dive into the fun stuff, always with the business developer in mind.

As a business developer or someone studying to become a business developer, you likely already have a programming language or languages with which you are very literate and comfortable. It might be RPG on IBM i, COBOL on a mainframe, or C++ on a PC. While traditional developers often work on a single platform, Web development might require using more than one platform. The thought of stepping outside of the box—and your comfort zone—can be overwhelming. Our intention for this book is to make you feel more comfortable with Web application development and also to help you learn new skills that you can apply within your organization (or prospective organization) to become more productive, versatile, and valuable.

Do I Need to Start from Scratch?

Does going to the Web mean starting from scratch? Do you need to scrap your existing business applications and start over? Absolutely not! Doing so would be inefficient and cost-prohibitive. A more sensible approach is to continue to use what you have and learn some new tools to reach a

broader audience or provide broader access to your applications. In this way, you can retain much of your organization's existing investment in complex business logic.

Does Web development mean new hardware? Not necessarily. Many of the tools we discuss can be used with a variety of platforms. Java technologies can be used on any platform that supports use of the Java Virtual Machine (JVM). Often, a separate server is used for hosting sites. Is this necessary? No, not always; depending on the size of your servers, available capacity, security issues, and application workloads, you might be able to host your applications on existing servers. Since opening applications up to the Web often creates new security considerations, however, you might need separate servers, even if your existing servers have sufficient capacity.

Choosing Development Tools

How to choose the best technology for a development project is a complicated subject. There is a lot of debate on which tools are the best tools. Often, arguments seem biased based on the technology comfort zone of those providing opinions. The bias also lies in the thought that a single technology needs to be used. The further a business programmer delves into Web application development, the clearer it is that a wide variety of tools are available. All these tools have beneficial features and functionality, as well as limitations.

If a business developer is looking for a quick way to generate dynamic Web content, PHP might be the right solution, as it is easy to learn, inexpensive, and available on many platforms. On the other hand, advocates of Microsoft .NET technology are very pleased with their development tools and the resulting solutions, even though they are generally constrained to a Windows-based environment. Java-related technologies are very robust and are available for use on a wide variety of platforms and servers, but developers are often deterred from using Java because of its learning curve. Many tools have been around a long time, but there seems to be a trend in replacing some tools with other easier, established, more flexible technologies.

Which is the right fit for your organization? It might well be a combination of these or other technologies.

Summary

This book introduces HTML, covering the basics and enabling you to begin developing Web pages. Then we add CSS, JavaScript, and form processing to these basic skills. Once we've covered the basics, we are ready to delve into the really fun stuff of application development! We'll start with introducing you to browser-based applications, then introduce technologies including JavaScript, PHP, JSP, and ASP.NET, which transform HTML into a useful business application development language.

Which of these is the correct choice for your needs? After reading this book, you might see that it takes a combination of languages and tools to satisfy your development requirements. Upon completion of this book, you'll have enough knowledge to "get down to business" yourself and start developing your own business Web applications.