

Beginning PHP, Apache, MySQL[®] Web Development

Michael Glass
Yann Le Scouarnec
Elizabeth Naramore
Gary Mailer
Jeremy Stolz
Jason Gerner



Wiley Publishing, Inc.

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Beginning PHP, Apache, MySQL® Web Development

Published by

Wiley Publishing, Inc.

10475 Crosspoint Boulevard

Indianapolis, IN 46256

www.wiley.com

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Published by Wiley Publishing, Inc., Indianapolis, Indiana

Published simultaneously in Canada

Library of Congress Control Number: 2004101426

ISBN: 0-7645-5744-0

Manufactured in the United States of America

10 9 8 7 6 5 4 3 2 1

1MA/SV/QS/QU/IN

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Thanks, Staci, for putting up with long and late hours at the computer. Elizabeth and Jason, it wouldn't have been the same project without you two. And thanks to my code testers at www.ultimatespin.com: Spidon, Kaine, Garmy, Spidermanalf, Ping, Webhead, and FancyDan. You guys rock!

To Donna and Gerry, who have influenced my life more than they can ever know, and who taught me the importance of finishing what you've started.

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I thank all the innocent bystanders who got pushed around because of this project: Debra and Nancy, who were patient enough not to have homicidal thoughts; and my wife and kids, who barely saw me for six months.

Elizabeth Naramore

Elizabeth has been programming with computers since a very young age, and, yes, she remembers when software was packaged on cassette tapes. Graduating from Miami University at age 20 with a degree in Organizational Behavior, she found a world of opportunity awaiting her—in corporate marketing. Her first love was always computers, however, and she found herself sucked back to the programming world in 1997 through Web site design and development (once a computer geek, always a computer geek). While she plans to return to Miami to get her Masters in Computer Science, she currently stays busy running several Web sites. Her main focus is in e-commerce and running www.giftsforengineers.com.

Elizabeth has spent the past six years developing Web sites and coordinating all phases of Web site publication and production. She is currently a moderator at PHPBuilder.com, an online help center for PHP. Her other interests include poetry, arts and crafts, camping, and juggling the many demands of career, family, and the “other duties as assigned” that come along in life. She lives in Cincinnati, Ohio, with her husband, beautiful daughter, and a new baby on the way.

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After graduation from university in 1998, Gary worked in a major software house in central London as a quality assurance engineer, and also as the departmental Web developer (using ASP). This gave him a taste of Web development. After a few years, he made the jump into full-time Web development and has not looked back since.

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He is currently a freelance developer for a European communications company. Gary has been and continues to be an active member of and contributor to the PHPBuilder.com site.

Jeremy “stolzboy” Stolz

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Thanks to my employer and colleagues for giving me the time and space to participate in this project. Also, thanks to Debra Williams Cauley at Wiley for getting me involved in this project for Wrox.

I dedicate this book to my wife and family for helping me get through the long hours of preparation and writing.

Jason “goldbug” Gerner

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Introduction

Welcome to *Beginning PHP, Apache, MySQL® Web Development*, your guide to developing dynamic Web sites using these popular open source solutions. Consider us your tour guide as we travel through the various adventures that await you. Okay, so perhaps it won't be that glamorous or exciting, but we do promise an enjoyable learning experience.

The main purpose of this book is to provide you with a taste of what can be done with Web development using these three modules together. While we've given you only the tip of the iceberg, it will be enough to get you started and to get those creative juices flowing when designing and developing your own site. Each of these modules is complex in and of itself, and this book merely covers the basics of all three. This book is not meant to be an in-depth and comprehensive resource but rather an introduction.

Who's This Book For?

We assume that anyone reading this book has some experience with Web site development concepts and a basic working knowledge of HTML. Knowledge of other programming languages besides PHP is not a prerequisite for this book, but certainly any programming experience you have will help you understand and apply the concepts.

This book is geared toward the "newbie" to these three areas, and we've brought many of the concepts and code snippets to the most basic level. As your experience and comfort level grow with your knowledge and practical applications, you will find more complex and perhaps more efficient ways of doing things. When that happens, you will know that you have come over to the dark side and joined us as PHP, Apache, and MySQL enthusiasts.

What's Covered in the Book

A variety of topics are covered in this book:

- Installation and configuration of PHP, Apache, and MySQL
- Basic introduction to each module and how the modules interact with one another
- Gathering input from and interacting with your Web site visitors
- Handling and avoiding errors and general troubleshooting tips
- User registration and logins
- E-mailing and setting up e-mail lists using the three modules
- Content management systems
- Adding e-commerce to a Web site
- Incorporating a discussion forum into your site
- Using activity logs and error logs to enhance your Web site
- Locating a third-party Web host
- Finding the text editor that's right for you
- Using PEAR to enhance your Web site

As you read through the chapters and learn about these topics, you will be creating two complete Web sites. The first is a movie review Web site that displays information about films and their respective reviews. This project will cover the basics, such as writing PHP code, creating a MySQL database, filling it with data, and showing it to your visitors based on what they want to see.

The second project is a comic book fan Web site, which acts as a resource for any comic book fan. This site will be developed in the latter part of the book and will incorporate some of the more complex topics. You will create a truly interactive Web site, where your visitors can interact with you and with other members of the site.

We take you step by step through the development of each of these sites, and you will continually build upon them as new concepts are introduced. Note, however, that each of the chapters is a stand-alone chapter, so that if you are not particularly interested in reading a specific one, you won't be left in the dust.

If you thought the days of the "pop" quiz were over, you might want to think again. We have provided handy-dandy exercises at the end of some of the chapters to test your knowledge of the chapter topics and to challenge you to think one step further. Don't worry, however, as we've provided the answers in Appendix A.

Other general references are provided for your reading pleasure in additional appendixes. These are not intended to be comprehensive resources, but they are great for referencing the general topics covered in the meat of the chapters.

As any programmer knows, software is constantly being improved and debugged, and while we used the latest and greatest versions of our modules at the time of publishing, chances are those versions won't be around for long. It is important for you to visit the source Web sites for PHP, Apache, and MySQL (URLs provided frequently for you throughout this book) to get the most updated versions and recent release notes. When developing Web sites using applications, we recommend that you always use the most recent stable release. Using software versions that have not been fully tested can be dangerous to your application and leave bugs in your code. The same is true for the new learner—you should be learning on a stable release of the application, not on a beta version.

The most recent stable versions that were in effect at the time of this book's writing were:

- ❑ **PHP:** Version 4.3.3 (PHP5 is still in beta at this writing, although we do address it and its current implications)
- ❑ **Apache:** Version 2.0.47
- ❑ **MySQL:** Version 4.0.15a

Future editions of this book will address changes and improvements in these programs as they become available.

What You Need to Use This Book

This book is designed to be multiplatform and covers topics and issues for both Windows- and Linux-based systems. We have provided you with instructions for downloading and installing all three components onto your machine. Each is an open source program, so you can download and use them free of charge.

The only other external piece of software needed is a text editor. If you're not sure what that is or what you should be using, don't worry—we cover that topic, too.

Source Code

We have provided the two applications and accompanying code that are discussed in the text. The complete source code from the book is available for download from www.wrox.com. As PHP5 is in beta production at the time this book was written, we will update the code and applications on the companion Web site with any pertinent changes that come as a result of the stable release of PHP5. We encourage you to visit the companion site periodically to view these updates. Although all the code you need is listed in the book, we suggest you download a copy of the code to save yourself a lot of typing.

Conventions

Throughout the book, we have used certain typographic conventions to get our points across. While you don't need a secret decoder ring to get the gist of what we mean, knowing *how* we say what we're saying will certainly help.

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

Filenames, field names, and commands or functions are shown in monospaced type—for example, “Open the `create.php` file and . . .”

We present code in two ways:

```
//This is an example of code that is being seen for the first time
```

```
//This is an example of code that you have already seen, but is being referenced later
```

```
//or code that we're quoting from another source, such as from a configuration file
```

Changes to an existing program created earlier in a chapter will be shown in bold:

```
//This is old code here.  
//This is the line we want you to add.
```

You will be prompted to get your fingers typing and your brain working in our “Try It Out” sections, which entice you to actually apply the concepts we’re covering and get a firsthand glimpse into coding. We then follow up with a “How It Works” section to explain what you just accomplished.

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Part I: Getting Started

Chapter 1: Introduction and Installation Configuration

