PHP编程（影印版）

第三版

*Programming*

# PHP

*Kevin Tatroe, Peter MacIntyre*
*& Rasmus Lerdorf* 著
*Michael Bourque* 序

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*Kevin Tatroe, Peter MacIntyre, Rasmus Lerdorf* 著

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*I would like to dedicate my portions of this book to my wonderful wife, Dawn Etta Riley. I love you Dawn!*

—Peter MacIntyre

# Foreword

When the authors first asked me if I'd be interested in writing a foreword for the third edition of this book, I eagerly said yes—what an honor. I went back and read the foreword from the previous edition, and I got overwhelmed. I started to question why they would ask me to write this in the first place. I am not an author; I have no amazing story. I'm just a regular guy who knows and loves PHP! You probably already know how widespread PHP is in applications like Facebook, Wikipedia, Drupal, and WordPress. What could I add?

All I can say is that I was just like you not too long ago. I was reading this book to try and understand PHP programming for the first time. I got into it so much that I joined Boston PHP (the largest PHP user group in North America) and have been serving as lead organizer for the past four years. I have met all kinds of amazing PHP developers, and the majority of them are self-taught. Chances are that you, like most PHP people I know (including myself), came into the language quite by accident. You want to use it to build something new.

Our user group once held an event where we invited everyone in the community to come and demonstrate a cool new way to use PHP. A realtor showed us how to create a successful business with an online virtual reality application that lets you explore real estate in your area with beautiful views of properties. An educational toy designer showed us his clever website to market his unique educational games. A musician used PHP to create music notation learning tools for a well-known music college. Yet another person demoed an application he built to assist cancer research at a nearby medical institution.

As you can see, PHP is accessible and you can do almost anything with it. It's being used by people with different backgrounds, skill sets, and goals. You don't need a degree in computer science to create something important and relevant in this day and age. You need books like this one, communities to help you along, a bit of dedication, and some elbow grease, and you're on your way to creating a brand-new tool.



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Learning PHP is easy and fun. The authors have done a great job of covering basic information to get you started and then taking you right through to some of the more advanced topics, such as object-oriented programming. So dig in, and practice what you read in this book. You should also look for PHP communities, or user groups, in your area (*http://www.zend.com/en/community/local-php-groups*) to help you along and to get "plugged in." There are also many PHP conferences going on in other parts of the world, as this list shows (*http://php.net/conferences/*). Boston PHP, along with two other user groups, hosts a PHP conference (*http://www.northeastphp.org*) each year in August. Come and meet some excellent folks (both Peter MacIntyre, one of the co-authors, and I will be there) and get to know them; you'll be a better PHPer because of it.

—Michael P. Bourque
*VP, PTC*
*Organizer for Boston PHP User Group*
*Organizer for Northeast PHP Conference*
*Organizer for The Reverse Startup*

# Preface

Now more than ever, the Web is a major vehicle for corporate and personal communications. Websites carry satellite images of Earth in its entirety, search for life in outer space, and house personal photo albums, business shopping carts, and product lists. Many of those websites are driven by PHP, an open source scripting language primarily designed for generating HTML content.

Since its inception in 1994, PHP has swept the Web and continues its phenomenal growth with recent endorsements by IBM and Oracle (to name a few). The millions of websites powered by PHP are testament to its popularity and ease of use. Everyday people can learn PHP and build powerful dynamic websites with it. Marc Andreessen, partner in Andreessen Horowitz and founder of Netscape Communications, recently described PHP as having replaced Java as the ideal programming language for the Web.

The core PHP language (version 5+) features powerful string- and array-handling facilities, as well as greatly improved support for object-oriented programming. With the use of standard and optional extension modules, a PHP application can interact with a database such as MySQL or Oracle, draw graphs, create PDF files, and parse XML files. You can write your own PHP extension modules in C—for example, to provide a PHP interface to the functions in an existing code library. You can even run PHP on Windows, which lets you control other Windows applications, such as Word and Excel with COM, or interact with databases using ODBC.

This book is a guide to the PHP language. When you finish it, you will know how the PHP language works, how to use the many powerful extensions that come standard with PHP, and how to design and build your own PHP web applications.

## Audience

PHP is a melting pot of cultures. Web designers appreciate its accessibility and convenience, while programmers appreciate its flexibility, power, diversity, and speed. Both cultures need a clear and accurate reference to the language. If you are a programmer, then this book is for you. We show the big picture of the PHP language, and then discuss the details without wasting your time. The many examples clarify the explanations,

and the practical programming advice and many style tips will help you become not just a PHP programmer, but a good PHP programmer.

If you're a web designer, you will appreciate the clear and useful guides to specific technologies, such as XML, sessions, PDF generation, and graphics. And you'll be able to quickly get the information you need from the language chapters, which explain basic programming concepts in simple terms.

This book has been fully revised to cover the latest features of PHP version 5.

## Assumptions This Book Makes

This book assumes you have a working knowledge of HTML. If you don't know HTML, you should gain some experience with simple web pages before you try to tackle PHP. For more information on HTML, we recommend *HTML & XHTML: The Definitive Guide* by Chuck Musciano and Bill Kennedy (O'Reilly).

## Contents of This Book

We've arranged the material in this book so that you can either read it from start to finish or jump around to hit just the topics that interest you. The book is divided into 17 chapters and 1 appendix, as follows:

*Chapter 1, Introduction to PHP*
: Talks about the history of PHP and gives a lightning-fast overview of what is possible with PHP programs.

*Chapter 2, Language Basics*
: Is a concise guide to PHP program elements such as identifiers, data types, operators, and flow-control statements.

*Chapter 3, Functions*
: Discusses user-defined functions, including scope, variable-length parameter lists, and variable and anonymous functions.

*Chapter 4, Strings*
: Covers the functions you'll use when building, dissecting, searching, and modifying strings in your PHP code.

*Chapter 5, Arrays*
: Details the notation and functions for constructing, processing, and sorting arrays in your PHP code.

*Chapter 6, Objects*
: Covers PHP's updated object-oriented features. In this chapter, you'll learn about classes, objects, inheritance, and introspection.

*Chapter 7, Web Techniques*
: Discusses web basics such as form parameters and validation, cookies, and sessions.

*Chapter 8, Databases*
: Discusses PHP's modules and functions for working with databases, using the PEAR database library and the MySQL database as examples. Also, the new SQLite database engine and the new PDO database interface are covered.

*Chapter 9, Graphics*
: Demonstrates how to create and modify image files in a variety of formats from within PHP.

*Chapter 10, PDF*
: Explains how to create dynamic PDF files from a PHP application.

*Chapter 11, XML*
: Introduces PHP's updated extensions for generating and parsing XML data.

*Chapter 12, Security*
: Provides valuable advice and guidance for programmers creating secure scripts. You'll learn best practices programming techniques here that will help you avoid mistakes that can lead to disaster.

*Chapter 13, Application Techniques*
: Talks about advanced techniques most PHP programmers eventually want to use, including error handling and performance tuning.

*Chapter 14, PHP on Disparate Platforms*
: Discusses the tricks and traps of the Windows port of PHP. It also discusses some of the features unique to Windows such as COM.

*Chapter 15, Web Services*
: Provides techniques for creating a modern web services API via PHP, and for connecting with web services APIs on other systems.

*Chapter 16, Debugging PHP*
: Discusses techniques for debugging PHP code and for writing debuggable PHP code.

*Chapter 17, Dates and Times*
: Talks about PHP's built-in classes for dealing with dates and times.

*Appendix*
: A handy quick reference to all core functions in PHP.

## Conventions Used in This Book

The following typographical conventions are used in this book:

*Italic*
: Indicates new terms, URLs, email addresses, filenames, and file extensions.

`Constant width`
: Used for program listings, as well as within paragraphs to refer to program elements such as variable or function names, databases, data types, environment variables, statements, and keywords.

**`Constant width bold`**
: Shows commands or other text that should be typed literally by the user.

*`Constant width italic`*
: Shows text that should be replaced with user-supplied values or by values determined by context.

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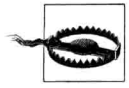

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## Acknowledgments

### Kevin Tatroe

Thanks to every individual who ever committed code to PHP or who wrote a line of code in PHP—you all made PHP what it is today.



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To my parents, who once purchased a small LEGO set for a long and frightening plane trip, beginning an obsession with creativity and organization that continues to relax and inspire.

Finally, a heaping third spoonful of gratitude to Jennifer and Hadden, who continue to inspire and encourage me even as I pound out words and code every day.

## Peter MacIntyre

I would first like to praise the Lord of Hosts who gives me the strength to face each day. He created electricity through which I make my livelihood; thanks and praise to Him for this totally unique and fascinating portion of His creation.

To Kevin, who is once again my main coauthor on this edition, thanks for the effort and desire to stick with this project to the end.

To the technical editors who sifted through our code examples and tested them to make sure we were accurate—Simon, Jock, and Chris—thanks!

And finally to all those at O'Reilly who so often go unmentioned—I don't know all your names, but I know what you have to do to make a book like this finally make it to the bookshelves. The editing, graphics work, layout, planning, marketing, and so on all has to be done, and I appreciate your work toward this end.

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