

Contents

Part I: Getting Started	1
Chapter 1: Configuring Your Installation	3
Projects in This Book	3
Brief Intro to PHP, Apache, MySQL, and Open Source	4
A Brief History of Open Source Initiatives	4
Why Open Source Rocks	4
How the Pieces of the AMP Module Work Together	5
Apache	6
PHP	6
MySQL	7
AMP Installers	8
Foxserv	8
PHPTriad	8
XAMPP	8
Configuring Your Apache Installation	8
Testing Your Installation	9
Customizing Your Installation	10
Adding PHP to the Equation	10
Document Root	11
Configuring Your PHP Installation	13
Testing Your Installation	13
Customizing Your Installation	14
Configuring PHP5 to Use MySQL	16
Configuring Your MySQL Installation	17
Testing Your Installation	17
Configuring Your Installation	19
The my.cnf File	21
Setting Up Users and Privileges	24
Where to Go for Help and Other Valuable Resources	25
Help within the Programs	25
Source Web Sites	25
Summary	26

Part II: Movie Review Web Site **27**

Chapter 2: Creating PHP Pages Using PHP5 **29**

Overview of PHP Structure and Syntax **30**

How PHP Fits with HTML 30

The Rules of PHP Syntax 30

The Importance of Coding Practices 31

 What Makes a Great Program? 32

 Why Should You Care about What Your Code Looks Like? 32

Creating Your First Program **33**

Using HTML to Spice Up Your Pages **34**

Integrating HTML with PHP 34

Considerations with HTML Inside PHP 36

Using Constants and Variables to Add Functionality **37**

Overview of Constants 37

Overview of Variables 38

Passing Variables between Pages **40**

A Word about register_globals 41

Passing Variables through a URL 42

 Special Characters in URLs 45

Passing Variables with Sessions 47

Passing Variables with Cookies 49

Passing Information with Forms 53

 Fast Primer on Forms 53

Using if/else Arguments **57**

Using if Statements 57

 Operators 57

 Special Syntax Considerations 58

Using if and else Together 59

Using Includes for Efficient Code **60**

Using Functions for Efficient Code **62**

All About Arrays **67**

Array Syntax 67

Sorting Arrays 69

foreach Constructs 69

While You're Here . . . **74**

Alternate Syntax for PHP **78**

Alternates to the <?php and ?> Tags 78

Alternates to the echo Command 78

Alternates to Logical Operators 79

Alternates to Double Quotes: Using heredoc	79
Alternates to Incrementing/Decrementing Values	79
OOP Dreams	79
A Brief OOP Example	80
Why Use OOP?	82
Summary	82
Exercises	82
Chapter 3: Using PHP5 with MySQL	85
<hr/>	
Overview of MySQL Structure and Syntax	85
MySQL Structure	86
Field Types	86
Choosing the Right Field Type	88
null/not null	89
Indexes	90
Unique	90
Auto Increment	90
Other Parameters	91
Types of MySQL Tables and Storage Engines	91
MySQL Syntax and Commands	92
How PHP Fits with MySQL	92
Connecting to the MySQL Server	93
Looking at a Ready-Made Database	94
Querying the Database	99
WHERE, oh WHERE	99
Working with PHP and Arrays of Data: foreach	102
A Tale of Two Tables	104
Referencing Two Tables	105
Joining Two Tables	107
Helpful Tips and Suggestions	109
Documentation	109
Using PHPMyAdmin	109
Summary	110
Exercises	110
Chapter 4: Using Tables to Display Data	111
<hr/>	
Creating a Table	111
Populating the Table	114
Who's the Master?	120

Contents

A Lasting Relationship	128
Summary	134
Exercises	134
Chapter 5: Form Elements: Letting the User Work with Data	135
<hr/>	
Your First Form	136
FORM Element	138
INPUT Element	139
Processing the Form	140
Driving the User Input	141
INPUT Checkbox Type	143
One Form, Multiple Processing	144
Radio INPUT Element	148
Multiple Submit Buttons	149
Basic Input Testing	149
Dynamic Page Title	149
Manipulating a String as an Array to Change the Case of the First Character	150
Ternary Operator	150
Using Form Elements Together	150
The Skeleton Script	159
Default Response	159
Adding Items	159
Summary	160
Exercises	161
Chapter 6: Letting the User Edit the Database	163
<hr/>	
Preparing the Battlefield	163
Inserting a Simple Record from phpMyAdmin	166
Inserting a Record in a Relational Database	170
Deleting a Record	178
Editing Data in a Record	183
Summary	191
Exercise	191
Chapter 7: Manipulating and Creating Images with PHP	193
<hr/>	
Working with the GD Library	193
What File Types Can I Use with GD and PHP?	194
Compiling PHP with GD	194
Allowing Users to Upload Images	196

Converting Image File Types	203
Black and White	208
Adding Captions	214
Adding Watermarks and Merging Images	218
Creating Thumbnails	220
Summary	225
Exercises	225
Chapter 8: Validating User Input	227
<hr/>	
Users Are Users Are Users . . .	227
Incorporating Validation into the Movie Site	228
Forgot Something?	229
Checking for Format Errors	239
Summary	250
Exercise	250
Chapter 9: Handling and Avoiding Errors	251
<hr/>	
How the Apache Web Server Deals with Errors	251
Apache's ErrorDocument Directive	252
Apache's ErrorDocument: Advanced Custom Error Page	256
Error Handling and Creating Error Handling Pages with PHP	260
Error Types in PHP	260
Generating PHP Errors	261
Other Methods of Error Handling	269
Exceptions	269
Not Meeting Conditions	271
Parse Errors	272
Summary	272
Exercises	272
Part III: Comic Book Fan Site	273
Chapter 10: Building Databases	275
<hr/>	
Getting Started	275
What Is a Relational Database?	276
Keys	277
Relationships	277
Referential Integrity	278
Normalization	278

Contents

Designing Your Database	279
Creating the First Table	279
What's So Normal About These Forms?	283
Standardization	283
Finalizing the Database Design	284
Creating a Database in MySQL	285
Creating the Comic Character Application	290
charlist.php	316
charedit.php	320
Summary	323
Exercises	324
Chapter 11: Sending E-mail	325
Setting Up PHP to Use E-mail	325
Sending an E-mail	326
Dressing Up Your E-mails with HTML	331
Multipart Messages	334
Storing Images	337
Getting Confirmation	339
Creating a Reusable Mail Class	355
Summary	362
Exercises	363
Chapter 12: User Logins, Profiles, and Personalization	365
The Easiest Way to Protect Your Files	365
Friendlier Logins Using PHP's Session and Cookie Functions	370
Using Database-Driven Information	375
Using Cookies in PHP	399
Administrator Registration	402
Summary	413
Exercises	413
Chapter 13: Building a Content Management System	415
Getting Your Users to Return	415
Content	415
Management	416
System	416
Putting It All Together	416
Preparing the Database	417

Coding for Reusability	422
outputfunctions.php	426
header.php	429
http.php	431
Transaction Pages	431
User Interface	444
General Functionality	444
User Management	454
Article Publishing	458
Additional CMS Features	472
Summary	479
Exercises	479
Chapter 14: Mailing Lists	481
What Do You Want to Send Today?	481
Coding the Administration Application	482
Sign Me Up!	497
user.php	504
user_transact.php	505
thanks.php	509
Mailing List Ethics	514
A Word About Spam	514
Opt-In versus Opt-Out	514
Summary	515
Exercises	515
Chapter 15: Online Stores	517
Adding E-Commerce to the Comic Book Fan Site	518
Something to Sell	518
A Shopping Cart	519
Shopping Cart Software	519
Your Own Cart Software Code	519
E-Commerce, Any Way You Slice It	559
Information Is Everything	560
Importance of Trust	560
Privacy Policy	561
Return Policy	561
Warm Bodies	561
Secure Credit Card Processing	561
Professional Look	562

Contents

Easy Navigation	562
Common Links	562
Search Function	562
Typical Design	562
Competitive Pricing	562
Appropriate Merchandise	563
Timely Delivery	563
Communication	563
Customer Feedback	563
Summary	564
Exercises	564
Chapter 16: Creating a Bulletin Board System	567
Your Bulletin Board	567
Preparing the Database	569
Reusable Code	577
Pagination	586
Breadcrumbs	590
A Last Look at User Authentication	592
Transaction Pages	593
Account Functionality	604
User Administration	617
Forum Functionality	618
Board Administration	622
Forum Administration	623
BBcode Administration	624
Regular Expressions	624
The Two Types of regex Functions	624
How to Write a PCRE regex	625
Searching	636
Afterthoughts	638
Summary	639
Exercises	639
Chapter 17: Using Log Files to Improve Your Site	641
Locating Your Logs	642
Apache	642
PHP	644
MySQL	644

Analyzing Your Log Data	646
Webalizer	646
Analog	647
WebTrends	648
AWStats	649
HTTP Analyze	650
Putting the Analysis to Work	651
Site Health	651
User Preferences and Information	651
Number of Hits and Page Views	651
Trends over Time	652
Referring Sites	652
Summary	652
Chapter 18: Troubleshooting	653
<hr/>	
Installation Troubleshooting	653
Parse Errors	653
Cleanup on Line 26 . . . Oops, I Mean 94	654
Elementary, My Dear Watson!	654
Empty Variables	655
The Ultimate Bait-and-Switch	655
Consistent and Valid Variable Names	656
Open a New Browser	656
“Headers Already Sent” Error	657
General Debugging Tips	658
Using echo	658
Divide and Conquer	659
Test, Test, Test!	659
Where to Go for Help	659
www.wrox.com	659
PHPBuilder.com	659
Source Web Sites	660
Search and Rescue	660
IRC Channels	660
Summary	660

Contents

Appendix A: Answers to Exercises	661
Appendix B: PHP Quick Reference	703
Appendix C: PHP5 Functions	707
Appendix D: MySQL Data Types	747
Appendix E: MySQL Quick Reference	751
Appendix F: Comparison of Text Editors	755
Appendix G: Choosing a Third-Party Host	759
Appendix H: An Introduction to PEAR	763
Appendix I: AMP Installation	771
Index	777