

CONTENTS

PREFACE	XVII
---------------	------------

GETTING STARTED

CHAPTER 1	
USING THIS BOOK	3
The Path of Least Resistance.....	3
Something for Everyone	4
For the Clueless	
For Beginning CGI/Perl Programmers	4
For Intermediate CGI/Perl	5
For CGI/Perl Experts	5
The Big Picture	
Getting Started..	
The Programs	6
Appendices	8
Prerequisites .....	.
Programming Ability	9
.....	9
Conventions Used in the Book.....	10
Diversity.....	1
Variable Names ..	11
.....	
In Case of Trouble .....	.12

CHAPTER 2	
USING CGI AND PERL	15
Of Protocols and Programming Languages	15
The Common Gateway Interface	16

CONTENTS

xvi

Getting Information From the Server	16
Sending Information to the Server	17
The Practical Extraction and Report Language	17
Regular Expressions	18
Ease of Learning	19
Portability	20
Wherever the Twain Shall Meet	20
Digging Deeper	21

CHAPTER 3 INSTALLING CGI PROGRAMS 23

Overview	23
A Few Assumptions	24
You Have Access to a Web Server	24
Perl Is Installed on Your Server	25
You Have Access to a CGI Directory	25
You Know How to Transfer Files to Your Web Server	25
Installing CGI Programs	26
Unix Servers	26
Windows Servers	27
MacOS Servers	28
Installing Required Files	28
Installing Support Files	28
Troubleshooting	29
“404 Not Found” Error	29
“403 Forbidden” Error	29
“500 Server Error” Error	29

THE PROGRAMS

CHAPTER 4 MANAGING FILES: FILESEEK.CGI	33
Features	33
Usage Guide	37
Creating a Page Header Template File	37
Creating a Page Footer Template File	40
Using the Program	40
Installation	42
Directory and File Setup	42
Configuration Variable Setup	43

The Program.....	4 ⁵
Configuration	45
Pulling in Required Files	46
Initializing Constants	47
.....	48
.....
Searching for Files	51
Getting the Contents of a Directory	53
.....
Sorting the Files	54
Outputting the Results	56
.....	58
.....
Ideas for Enhancements	6 ⁶
CHAPTER 5	
GATHERING INPUT: FORMHANDLER.CGI	69
Features	69
Usage Guide	74
Using Form Configuration Variables	74
Creating a Form	81
Creating Template Files	85
Creating a Log Template File	86
Creating Email Template Files	87
Creating a Confirmation Template File	88
Creating a Missing Fields Template File	88
Bonus: Running a Mailing List	90
Adding Visitors to the List	91
Sending Messages to the List	93
Creating the Message Template	94
Installation	94
Directory and File Setup	94
Configuration Variable Setup	95
The Program.....	97
Configuration	98
Pulling in Required Files	98
Checking Access Rights	99
Preparing the Form Data.....	100
Checking for Required Fields.....	102
Initializing Date Variables	103

Processing Address Variables	104
Sending Form Results	107
Sending a Reply	112
Updating the Log File	115
Providing Feedback to the Visitor	119
Checking for a Valid Directory (Subroutine)	121
Reporting Error Messages (Subroutine)	122
Ideas for Enhancements	124
 CHAPTER 6	
SPREADING THE WORD: BROADCASTER.CGI	127
Features	127
Usage Guide	133
Creating a Data File	133
Using the Program	135
Installation	139
Directory and File Setup	139
Configuration File Setup	142
The Program	145
Configuration	146
Initializing Variables and Output	147
Checking Security	148
Generating the File Selection Form	149
Generating the Field Selection Form	153
Generating the Sample Message Form	163
Sending the Messages	171
Generating the BODY Tag (Subroutine)	186
Displaying a List of Messages (Subroutine)	187
Displaying a Message (Subroutine)	188
Parsing a CSV Format Record (Subroutine)	189
Ideas for Enhancements	191
 CHAPTER 7	
DOING BUSINESS: WEBSHOP.CGI	193
Features	193
Usage Guide	197
Creating Database Files	199
Creating a Referring Page	205

Creating Templates.....	205
Creating Page Templates	208
Creating Email Message Templates	216
Installation.....	217
Directory and File Setup	218
Configuration Variable Setup.....	219
Configuration File Setup	220
The Program.....	223
Configuration	223
Pulling in Required Files	223
Loading the Configuration File	224
Checking for Expired Orders	225
Identifying the Visitor.....	226
Processing a Product Information Request	228
Processing a Product Purchase Request	229
Processing an Order Review Request	232
Processing an Invoice Request	232
Processing an Empty Cart Request	233
Processing a Checkout Request	234
Processing an Invalid Request	236
Creating a New User (Subroutine)	236
Getting the Product Information (Subroutine).	237
Updating the Order Expiration Time (Subroutine).	239
Building the Table of Purchases (Subroutine).	240
Parsing a Template File (Subroutine)	250
Displaying an Error Message (Subroutine)	255
Ideas for Enhancements.....	260
CHAPTER 8	
GETTING OPINIONS: FEEDBACK.CGI	263
Features	263
Feedback Features	264
FeedbackAdmin Features	267
Usage Guide	268
Creating the Feedback Input Page	269
Creating the Feedback Page	270
Creating an Archive Page	271
ID File	271
	272

Using Variable Tags in Template Files .....	.272
Creating Page Templates .....	.273
Creating Email Message Templates .....	.277
Creating the Feedback Administration Page .....	.278
Using FeedbackAdmin .....	.279
Installation .....	.282
Directory and File Setup .....	.283
Configuration Variable Setup .....	.283
Configuration File Setup .....	.285
The Program: Feedback .....	.290
Configuration .....	.291
Initializing Constants .....	.291
Pulling in Required Files .....	.291
Parsing the Form .....	.292
Reading the Configuration File .....	.292
Getting and Formatting the Current Date and Time .....	.292
Checking for Banned Hosts .....	.293
Checking for Duplicate Entries .....	.294
Checking for Required Fields .....	.295
Checking for Censored Words .....	.297
Checking for Prohibited HTML	
Processing the Message .....	.300
Sending a Reply to the Visitor .....	.305
Sending a Message the Administrator .....	.305
.....	.306
Updating the Log File .....	.313
Displaying a Confirmation Page .....	.314
ID (Subroutine) .....	.315
Updating the Message ID File (Subroutine). ....	.316
Displaying Errors (Subroutine). ....	.316
Generating the Error Page Header (Subroutine) .....	.323
Generating the Error Page Footer (Subroutine) .....	.324
The Program: FeedbackAdmin .....	.325
Configuration .....	.325
Pulling in Required Files .....	.325
Parsing the Form .....	.326
Reading the Configuration File .....	.326
Generating Command Forms .....	.326

Approving Messages.....	336
Removing Messages.....	340
Archiving Messages.....	341
Changing Passwords.....	345
Processing Invalid Commands.....	347
Updating the Banned Hosts File	347
Defining the Configuration Array (Subroutine).....	348
Generating an HTML Page Header (Subroutine)	349
Adding a Message to the Feedback File (Subroutine).....	350
Archiving Messages by Month (Subroutine).	351
Archiving Messages by Number (Subroutine)	353
Administrator Authentication (Subroutine).....	355
Displaying Errors (Subroutine).....	356
Generating the Error Page Header (Subroutine)	362
Generating the Error Page Footer (Subroutine)	363
Ideas for Enhancements.....	363
CHAPTER 9	
KEEPING TRACK: PAGECONTROL.CGI	365
Features	365
Usage Guide	369
Accessing the Program	369
Setting Up Your Pages	371
Installation..	375
Directory and File Setup	375
Configuration Variable Setup	376
The Program.....	380
Configuration.....	380
Pulling in Required Files	381
Initializing Constants	382
Checking Authentication	383
Determining the Requested Page	383
Checking for a Special Request	384
Checking for a Valid File Request	386
Preprocessing the Requested Page	387
Setting the Support Filenames	389
Reading in Link Information	390
Determining if the Visitor Is Allowed Access	393

Updating the Site Access Log	394
Turning Away Visitors Who Have Been Denied Access	396
Processing Link Requests.....	397
Retrieving and Updating the Page Count	398
Making the Variables Accessible	402
Processing the Body of the Requested Page	403
Adding an Optional Footer.....	412
Writing the Links File (Subroutine).	414
Ideas for Enhancements	415
CHAPTER 10	
RESTRICTING ACCESS: AUTHENTICATE.CGI	417
Features	417
Usage Guide	421
Installation..	42 2
Directory and File Setup	422
Configuration Variable Setup.....	423
The Program.....	433
Configuration.....	433
Pulling in Required Files	435
Initializing Variables.....	435
Parsing the Form and Checking for Cookies	436
Processing a Request for Registration Validation	437
Processing an Initial Request	438
Processing a Request for the Lost ID Form.....	441
Processing a Request for the Registration Form	441
Processing a Response from the Authentication Form	442
Processing a Response from the Registration Form	449
Processing a Response from the Lost ID Form.....	454
Sending the Appropriate Page or Form	457
A Sample Registration Subroutine	460
Initializing Variables	460
Checking the Required Fields.....	461
Validating the Fields.	461
Password-Protecting a Program.....	463
Configuring and Using <i>auth_check()</i>	464
The Subroutine.....	46 4
Ideas for Enhancements	46 6

CHAPTER 11	
GETTING SUPPORT: THE SUBROUTINES	469
Features	469
Using the Subroutines	471
Converting IP Addresses: <i>addr_to_host</i>	472
Usage Guide	472
The Subroutine.....	473
Base64 Encoding a File: <i>base64_encode_file</i>	475
Usage Guide	476
The Subroutine.....	477
Checking Credit Cards: cc-validate	480
Usage Guide	480
The Subroutine.....	481
Checking Email Addresses: <i>email_check</i>	485
Usage Guide	485
The Subroutine.....	486
Reporting an Error: <i>error</i>	488
Usage Guide	489
The Subroutine.....	489
Formatting Dates: format-date	493
Usage Guide	493
The Subroutine.....	497
Converting IP Addresses to 8-Character Filenames: <i>ip_convert</i>	502
Usage Guide	502
The Subroutine.....	503
Locking Files: lock and unlock	505
Usage Guide..	50 5
The Subroutines.....	50 8
Parsing Form Fields: parseform	512
Usage Guide	512
The Subroutine.....	514
Parsing Template Files: parse-template	518
Usage Guide	519
The Subroutine.....	52 2
Encoding Information: scramble and unscramble	525
Usage Guide	525
The Subroutines	
Email	send_email
	.530

Usage Guide	530
The Subroutine.....	535
Uuencoding a File: <i>uuencode</i>	550
Usage Guide	551
The Subroutine.....	552

APPENDICES

APPENDIX A	
CGI DEBUGGING SECRETS	557
Adding a Method to the Madness	.557
.....	.558
File Access Errors	.559
Syntax Errors .....	.559
Configuration Errors .....	.560
Output Format Errors..	.560
Using the Perl Debugger	.561
.....	.561
Faking a CGI Call .....	.564
Seeing the Invisible .....	.565
APPENDIX B	
CGI ENVIRONMENT VARIABLES	567
Accessing the %ENV Array.....	.567
The Variables.....	.569
Visitor Identity .....	.570
REMOTE_ADDR .....	.570
REMOTE-HOST .....	.570
AUTH_TYPE .....	.571
REMOTE-USER .....	.571
REMOTE_IDENT.....	.571
Form and Cookie Information .....	.571
REQUEST-METHOD .....	.572
CONTENT_TYPE.....	.572
CONTENT-LENGTH .....	.572
QUERY-STRING .....	.572
PATH-INFO .....	.572
PATH-TRANSLATED .....	.573

HTTP_COOKIE.....	573
Server Information	573
SERVER_NAME.....	573
SERVER-ADMIN	573
SERVER-SOFTWARE	573
GATEWAY-INTERFACE	573
DOCUMENT_ROOT.....	574
Browser Request Information.....	574
HTTP-USER-AGENT	574
HTTP-REFERER	574
SERVER-PROTOCOL	574
SERVER_PORT.....	574
HTTP_ACCEPT.....	575
Program Information	575
SCRIPT-NAME.....	575
Server-Side Include Information.....	575
DOCUMENT-NAME.....	575
DOCUMENT_URI	576
LAST-MODIFIED	576
DATE_LOCAL.....	576
DATE_GMT.....	576
APPENDIX C	
CGI SECURITY	577
The Potential for Harm	577
Areas of Concern.....	578
Making Assumptions	578
Hijacking a Form.....	578
Protecting Yourself	579
A Plan of Action	583
APPENDIX D	
HTTP HEADERS	585
The Purpose of Headers	585
Using HTTP Headers in a CGI Program	585
Useful HTTP Headers	585
The Basics	587
Content-Type	587
Content-Length	587

Location	588
Set-Cookie	588
Keeping Things Fresh	589
Refresh	589
Expires	590
Pragma	590
Last-Modified.....	591
APPENDIX E CGI/PERL RESOURCES	593
Online Resources.....	593
CGI Program Archives	594
CGI Resources.....	594
Perl Resources	595
Newsgroups..	596
Specifications	596
Other Resources	596
APPENDIX F CD-ROM GUIDE	597
What's on the CD-ROM?.....	597
Hardware Requirements	598
Installing the Software	598
Using the Software.....	599
User Assistance and Information.....	599
APPENDIX G THE PERL ARTISTIC LICENSE	601
The "Artistic License"	601
Preamble..	601
Definitions.	602
Terms	602
BIBLIOGRAPHY	605
INDEX	*