

# Contents

<i>About the Author</i> .....	<i>xv</i>
<i>Acknowledgments</i> .....	<i>xvii</i>
<i>Introduction</i> .....	<i>xix</i>
<i>How To Use This Book</i> .....	<i>xx</i>
<b><i>Chapter 1 Moving from VB6</i></b> .....	<b><i>1</i></b>
<i>What Is .NET?</i> .....	<i>1</i>
<i>Exploring Visual Studio .NET</i> .....	<i>3</i>
<i>Creating a Web Application</i> .....	<i>9</i>
<i>How Your Code Changes</i> .....	<i>13</i>
Understanding the Framework .....	<i>13</i>
Integer Upgrades .....	<i>14</i>
Strings .....	<i>14</i>
Variant and Currency .....	<i>15</i>
Array Alterations .....	<i>15</i>
New Operators .....	<i>15</i>
Declaring Properties .....	<i>16</i>
User-Defined Types .....	<i>17</i>
Change the Scope .....	<i>17</i>
ByVal Is Default .....	<i>17</i>
Set Has Disappeared .....	<i>18</i>
Error Handling Changes .....	<i>18</i>
The Class Keyword .....	<i>19</i>
<i>Conclusion</i> .....	<i>20</i>
<b><i>Chapter 2 Creating Great Windows Applications</i></b> .....	<b><i>21</i></b>
<i>The Essentials</i> .....	<i>22</i>
<i>Developer Secrets</i> .....	<i>26</i>
Making Your Form Transparent .....	<i>27</i>
Who Stole the ToolTips? .....	<i>27</i>
Tricks of the Trade: Resizing Made Easy! .....	<i>28</i>
Five Steps to Split Panels, Explorer-Style .....	<i>28</i>
Highlighting Errors with the ErrorProvider .....	<i>29</i>
Learning the LinkLabel Control .....	<i>30</i>
Customizing the MonthCalendar Control .....	<i>31</i>

Creating Your Own Number-Only Text Box .....	32
Displaying Animated GIFs Without the Browser Control .....	32
The Two Methods of Changing Tab Order .....	33
Secrets of Working with the System Tray .....	33
Save User Time: Add Autocomplete to Combo Boxes .....	34
The Power of Command-Line Parameters .....	37
How to Reset a Form .....	37
How to Snap the Cursor to a Button .....	39
Capturing the Screen, Quick and Easy .....	40
Stunning Navigation Bars with a Little-Known Freebie .....	41
Seven Steps to Taking Advantage of Windows XP Themes .....	42
The .NET Way of Checking for Previous Instances .....	44
Converting RTF to HTML .....	45
Drag and Drop from Windows Explorer .....	48
Dialog Boxes: What Did the User Click? .....	50
Text Printing Class... That Works! .....	51
The Secret Rebirth of .PrintForm .....	54
The Facts on Visual Inheritance .....	56
Looking at Windows, Performance Counters, and More .....	57
<i>Protecting Your Code with Obfuscation</i> .....	59
Best of All Worlds: Creating an Ultra-Thin Client .....	60
The Easy Way to Download Full Application Updates .....	62
<b>Chapter 3 Web Sites in Seconds!</b> .....	63
<i>The Essentials</i> .....	64
<i>Developer Secrets</i> .....	69
User Interface .....	69
Code Techniques .....	69
Optimization, Errors, and Other Tips .....	70
<i>User Interface</i> .....	71
Five-Step Checklist for the Validation Controls .....	71
Displaying Web Warning Messages: Technique 1 .....	73
Displaying Web Warning Messages: Technique 2 .....	75
Unveiled: How to Create a Default Enter Button .....	77
Wonders of the Little-Known SmartNavigation Property .....	78
The Secret Behind User Controls .....	78
Why the Panel Control Is Super Useful .....	79
Moving List Items Up and Down, Easily .....	81
Resizing in Web Applications .....	82
Stopping Your User from Right-Clicking .....	82
Creating Scrollable Micro Windows .....	83
Why You Should Learn CSS .....	84

<i>Code Techniques</i> .....	85
Three Steps to Changing Your Page Title in Code .....	85
How to Automatically Fill Out Email Fields .....	85
Sending Mail in ASP.NET .....	87
The Trick to Creating User-Friendly URLs .....	88
Adding Real-Time HTML to Your Page .....	89
The Secret to Uploading Files with Ease .....	90
Storing Uploaded Files in Your Database .....	92
Working with Uploaded Images .....	95
Creating Images Dynamically .....	96
Code for Generating Thumbnails on the Fly .....	98
Five Steps to ASP.NET Authentication .....	100
Forms Authentication, Without Web.config .....	102
Authenticating Just Part of Your Site .....	103
The Best Place to Store Your Settings .....	104
Steal Fantastic Forum Code from Microsoft and Save Yourself Hours .....	105
Integrating with PayPal's Instant Payment Notification .....	106
<i>Optimization, Errors, and Other Tips</i> .....	106
Subfolders in Web Applications: Confused? .....	106
Choosing a Directory Other Than c:\inetpub\wwwroot\ .....	107
Create Super-Fast ASP.NET Applications, with Caching .....	108
Nine Steps to Successful Debugging .....	109
Hiding Error Code from Your Clients .....	111
Forget 404: Customizing Your "Page Not Found" .....	112
Server.Transfer vs. Response.Redirect .....	113
Using .IsClientConnected for Long Processes .....	114
Preventing Client Caching, with Meta Tags .....	115
Uploading Files Larger Than 4MB .....	115
What to Do When Session_End Doesn't Work .....	116
Spying on Your Web Host: Checking Uptime in .NET .....	117
Can It Cope? Stress Testing Your Web Apps .....	119
The Two Methods of Moving Web Servers .....	121
Where to Put Your Files with an ASP.NET Host .....	122
Uh-oh: Installing IIS After Visual Studio .NET .....	123
 <i>Chapter 4 Working with Data</i> .....	 125
<i>The Essentials</i> .....	126
<i>Developer Secrets</i> .....	130
Generating GUIDs in a Flash .....	131
Making Your Own Connection String Creator .....	132
Finding the Last Identity Number Added .....	133
Cheating with SQL .....	134

Returning Multiple Tables into a DataSet .....	136
Checking Whether SQL Server Is Available .....	137
Seven Steps to a Quick, Editable Windows Grid .....	138
Nine Steps to a Quick, Editable Web Grid .....	141
How to Use HTML in a Web Grid .....	147
Using Hyperlinks in Your Web Grid .....	148
Dates, Currency, Percentages: Formatting Your Web Grid Data .....	149
Looking Good: Color-Coding Your Web Grid .....	151
Little-Known Technique for Confirming Web Deletes .....	153
Selecting Multiple Web Form Grid Items, Hotmail-Style .....	154
Click Anywhere and Select, with a Web Grid .....	156
The Lowdown on Using Dropdown Boxes in a Web Grid .....	158
Speedy, Personalized Web Data Binding .....	167
Quick and Easy Data Paging, with Your Web Grid .....	168
Sorting in Seconds, with Your Web Grid .....	169
Amazingly Simple Method for Exporting Your Web Grid to Excel .....	171
Returning a DataSet from an Excel Spreadsheet .....	173
Get Microsoft to Write Your Code:	
Amazing Undocumented SQL Server Tool! .....	175

**Chapter 5 The Lowdown on Web Services .....**177

<i>The Essentials</i> .....	178
<i>Developer Secrets</i> .....	180
Exposing Database Information, the Quick and Easy Way .....	181
Five Things You Need to Do Before Publicizing Your Web Service .....	184
Improving Performance with Easy Caching .....	185
Online Translations: Get Your Programs Speaking Spanish in Seconds! ....	185
Adding Google Search to Your Programs .....	187
Querying the Amazon.com Web Service .....	190
View the Real World in Your Application, with TerraServer .....	193
Asynchronous Access: Secrets of Calling a Web Service in the Background .....	197
Web Services, Proxies, Connection Closed—Oh My! .....	198
Change a Web Service URL, Without Recompiling .....	199
Where to Find the Best Web Services Around .....	199

**Chapter 6 From Microwaves to Pocket PCs:  
Special Project Types .....**201

Plug into Windows: Creating Your Own Windows Service .....	202
Installing Your Service .....	203
Get the DOS Feel: Creating a Basic Console Application .....	206

From Mobiles to Microwaves: Creating Applications with the MIT .....	208
Creating Your Mobile Web Application .....	210
Writing Mobile-Aware Code .....	212
Testing Your Mobile Web Application .....	214
Portable Computing: Creating Apps for Your PDA! .....	215
Building for the Compact Framework .....	216
Deploying Your Applications .....	218
Going On from Here .....	220
<b>Chapter 7 More .NET Secrets .....</b>	<b>221</b>
<i>Developer Secrets .....</i>	<i>221</i>
<i>Working with the Internet .....</i>	<i>225</i>
Creating Your Own Web Browser .....	225
How to Snatch the HTML of a Web Page .....	227
How to Snatch HTML, with a Timeout .....	227
Tricks of Parsing a Web Page for Links and Images .....	229
Converting HTML to Text, Easily .....	231
Real Code for Posting Data to the Web .....	232
Adding a Web Shortcut to the Favorites .....	234
Retrieving Your IP Address—And Why You May Want To .....	235
Is an Internet Connection Available? .....	236
<i>Manipulating Files and Folders .....</i>	<i>237</i>
Two Easy-to-Use Functions for Reading and Writing Files .....	237
Files: Moving, Deleting, Attributes, and More! .....	238
Checking Whether Two Files Are Identical .....	239
The Trick to Temporary Files .....	241
Doing Directories .....	242
“Watching” a Directory for Changes .....	243
How Big Is That File—in English? .....	244
Retrieving Special Folder Paths .....	245
Which Program Handles That File Extension? .....	246
Retrieving a Drive Serial Number .....	247
The .NET Replacement for App.Path .....	248
INI Files Will Never Die: How to in .NET .....	248
<i>Dates, Numbers, Strings .....</i>	<i>251</i>
Is That a Whole Number, or Not? .....	252
Checking for a Date the Intelligent .NET Way .....	252
1st, 2nd, 3rd: Using Ordinal Numbers in Your App .....	253
Random Numbers... That Work! .....	255
Finding the Number of Days in a Month .....	256
Adding and Subtracting Days, Months, Years .....	257
Calculating the Next Working Day .....	258
Easy Check for a Leap Year .....	258

Figuring Out Quarters .....	259
Calculating the Years Between Two Dates .....	260
Converting a String to “Proper Case” .....	261
Storing Text Snippets on the Clipboard .....	262
Generating Memorable Passwords, Automatically .....	263
Encryption in Just Twelve Lines of Code! .....	265
Implementing Powerful MD5 Encryption .....	266
Converting a String into the Color Type .....	268
Binding a Combo Box to Enumeration Values .....	269
<i>Graphics and Fonts</i> .....	270
Designing Your Own Arty Icons .....	270
The Basics of Working with Fonts .....	271
Crafty Conversion Between Graphic Formats .....	272
Rotating and Flipping Is Easy! .....	273
Drawing with Windows Forms .....	274
Add an Exciting Gradient Backdrop, in Code! .....	277
Starting Your Own Screensaver .....	278
<i>Using the Registry and Event Log</i> .....	279
How to Read and Write the Registry .....	280
Putting Messages in the Event Log .....	281
<i>Distributed Computing</i> .....	283
The Cheat’s Guide to XML .....	283
Six Steps to Basic Transactions with COM+ .....	292
Quick Guide to Using MSMQ .....	297
Which to Choose: Web Services vs. Remoting .....	300
<i>Visual Studio Tips</i> .....	302
Writing a Developer TODO: List .....	302
Storing Often-Used Code in the Toolbox .....	303
Organizing Your Project with Folders .....	303
Figuring out the Command Window .....	304
Discovering Whether You’re Running in the IDE .....	305
Saving Time by Recording Macros .....	306
Using the VS .NET Command Prompt .....	306
The Old School: Upgrading, COM, and the API .....	307
 <b>Chapter 8 Unveiled: The Hidden .NET Language</b> .....	 309
<i>How It Works</i> .....	310
<i>Your Regex Library</i> .....	311
Exactly-One-Digit Checker .....	312
Real Number Matcher .....	313
Alphanumerical Matcher: No Spaces or Dots .....	313
24-Hour Clock Time Check .....	314

Identifying Valid Dates .....	314
File Path and Extension Check .....	315
Checking for Repeated Words .....	315
Getting Capitalized Words .....	316
Matching Numbers from a String .....	317
Who Are You?—Name Checker .....	318
Naughty-Word Filter Expression .....	319
True Email Address Validation .....	319
Validating a Web Site Address .....	320
Internet URL Matcher: FTP, HTTP, HTTPS .....	320
Checking for a Valid Domain .....	322
IP Address Checker .....	322
Extracting Links and Images from HTML .....	323
Checking HTML Color Codes .....	323
Credit Card Validation .....	324
Password Format Enforcing Expression .....	324
Defining Your Own HTML: Custom Tags, with Expressions .....	325
ISBN Checker .....	328
Is That a GUID? .....	328
U.S. ZIP Code Checker .....	329
U.S. Social Security Number Checker .....	329
U.S. Phone Number Checker .....	330
U.S. State Checker .....	330
U.K. Postal Code Matcher .....	331
U.K. National Insurance Number Check .....	331
U.K. Telephone Number Validator .....	332
Converting American and British Dates .....	332
French, German, and Japanese Expressions .....	333
The Simple Cure for “Loose” Expressions .....	333
<b>Chapter 9 The Quick C# Translation Guide .....</b>	<b>335</b>
<i>Translating C# to VB .NET .....</i>	<i>336</i>
Translation Listing .....	337
1. Comments: // welcome to C# .....	338
2. Remove the End-of-Line Semicolon; .....	338
3. Data Types: int, bool, float, DateTime .....	339
4. Functions: public bool writeEventLog(string entry) .....	339
5. Methods: public void activateAlarm() .....	340
6. Variables: string strText; .....	340
7. String Contents: \n and @ .....	341
8. Objects: myObject = new myClass(); .....	341
9. Scope: public, private, internal, static .....	342

10. Arguments: ref and out keywords .....	342
11. Arithmetic: x++; .....	343
12. If-Then: if (x > y) { ... } else {...} .....	343
13. Comparison: == and != and & and   .....	344
14. Select Case: switch {x} {...} .....	344
15. Loops: for (x=1; x<=10; x+=1) {...} .....	345
16. Errors: try {...} catch {...} finally {...} .....	347
17. The Mystery of this .....	348
18. Events: obj.event += new class.delegate(handler); .....	348
20. Classes: Constructors and Finalizers .....	350
21. Class Interfaces: myInterface myObject2 = (myInterface)myObject1; ...	351
22. Class Inheritance Keywords: base, virtual, abstract, sealed .....	352
<i>Cheating at the Conversion</i> .....	353
<i>Where to Go from Here</i> .....	353
<b>Appendix</b> .....	355
<i>I: Installing VS.NET</i> .....	355
<i>II: Default Project Files</i> .....	358
Windows Application .....	358
Class Library .....	359
Web Application .....	359
Web Service .....	361
<i>III: Windows Form Controls</i> .....	362
<i>IV: VB.NET Data Types</i> .....	365
<i>V: VB.NET Naming Conventions</i> .....	366
<b>Index</b> .....	369