

Contents

Acknowledgments	xiii
Introduction	xv
Part I: Getting Familiar	1
Chapter 1: Basic Installation	3
Where Did Basic Come From?	3
And Then Came Visual Basic	4
The Old and the New	5
Let's Get Started	6
What It Looks Like	7
The Major Components	9
Your First Program	11
<i>Try It Out: Creating Your First Program</i>	11
That Was Too Easy	12
<i>Try It Out: Your Very Own Web Browser</i>	13
Summary	15
Exercises	15
Chapter 2: Why Do All That Work?	17
Object-Oriented Programming 101	17
Starting Out Right	19
<i>Try It Out: Using Starter Kits</i>	20
<i>Try It Out: Modifying Starter Kit Projects</i>	23
Wizards, Too	25
<i>Try It Out: Using a Wizard</i>	26
Everything Is Optional	28
<i>Try It Out: Customizing the Options</i>	30
It's All There in the Documentation	30
Summary	31
Exercises	32

Contents

Chapter 3: Using Databases	33
SQL Server Express	33
Data to Database	34
<i>Try It Out: Creating the Database</i>	41
Connecting Database to a Project	45
<i>Try It Out: Connecting a Database and Project</i>	47
Alternatives to SQL Server Express	48
Summary	49
Exercise	49
Chapter 4: What the User Sees	51
User Interface Basics	51
User Interface Fundamentals	52
Adding and Customizing Controls	53
<i>Try It Out: Adding a Control to a Form</i>	54
The Controls	55
Basic Controls	55
Layout Controls	58
Menu and Status Controls	59
Dialog Controls	61
Graphic Controls	61
Other Controls	62
Anchoring and Docking	63
Anchoring	63
Docking	64
Building the User Interface for the Personal Organizer	64
<i>Try It Out: Creating the Main User Interface</i>	64
Summary	67
Exercises	67
Chapter 5: How Do You Make That Happen?	69
Writing Code	69
The Basics of Basic	70
<i>Try It Out: Writing Code #1</i>	74
Want Something More?	76
<i>Try It Out: Adding Conditional Code</i>	77
<i>Try It Out: Writing Event Handlers</i>	82
Objects: A Special Case	83
Applying the Knowledge	83
<i>Try It Out: Connecting User Interface Elements</i>	84

Summary	88
Exercises	89
Part II: Extending Yourself Is Good	91
Chapter 6: Take Control of Your Program	93
Adding Some Class to Your Program	93
Creating Custom Classes	94
Special Method Actions	101
<i>Try It Out: Creating a Class</i>	103
Control Freaks Are Cool	104
Design-time Properties	105
<i>Try It Out: Modifying the Menu and Toolbar</i>	108
Custom Controls — Empower Yourself	111
<i>Try It Out: Adding Properties to Persons</i>	112
Go That Extra Mile	115
<i>Try It Out: Creating Dynamic Buttons</i>	116
Summary	119
Exercises	119
Chapter 7: Who Do You Call?	121
Using the Database Connection	121
An Alternate Method	124
What about Existing Controls?	125
<i>Try It Out: Adding a Database to Personal Organizer</i>	126
Database Programming	127
Actions You Can Perform	128
<i>Try It Out: Accessing the Database through Code</i>	129
Summary	141
Exercise	141
Chapter 8: It's My World — Isn't It?	143
They're My Classes	143
It's All about the Computer	144
<i>Try It Out: Using the Clipboard</i>	145
<i>Try It Out: Accessing System Information</i>	147
<i>Try It Out: Sending Keystrokes with SendKeys</i>	149
Getting to the App	153
<i>Try It Out: Using My Project and My.Application</i>	154

Contents

You Can Use It Again and Again . . . and Again	156
<i>Try It Out: Using Code Snippets</i>	156
Reusing Code Properly	158
Partial Classes	158
Generics	160
<i>Try It Out: Adding the Login Form</i>	162
Summary	167
Exercises	167
Chapter 9: Getting into the World	169
Creating a Web Browser	169
WebBrowser Properties	170
WebBrowser Methods	171
WebBrowser Events	172
<i>Try It Out: Creating a Custom Web Browser Control</i>	174
Web Services	179
<i>Try It Out: Consuming a Web Service</i>	181
Commercial Web Services	183
<i>Try It Out: Web Service Registration</i>	183
Amazon's ItemSearch	184
<i>Try It Out: Adding "Suggested Gift Ideas"</i>	185
Visual Web Developer 2005 Express	196
<i>Try It Out: Using Web Developer Express</i>	196
Summary	198
Exercise	198
Chapter 10: When Things Go Wrong	199
Protecting Your Code	199
Try, Try, and Try Again	200
<i>Try It Out: Using Try and Catch</i>	201
Let the Others Know!	203
<i>Try It Out: Throwing Exceptions Around</i>	204
Troubleshooting Your Code	205
Telling the Program to Stop	205
Keeping Track of Variables	207
<i>Try It Out: Using the Debug Object</i>	210
Gone Too Far and Don't Want to Stop?	211
<i>Try It Out: Using Edit and Continue</i>	212
Summary	213
Exercise	213

Part III: Making It Hum	215
Chapter 11: It's Printing Time!	217
Timing Is Everything — Well, Almost	217
A Use for Timers	218
<i>Try It Out: Using the Timer Effectively</i>	220
Printing	224
<i>Try It Out: Printing</i>	226
System Components	231
<i>Try It Out: Using System Components</i>	232
Summary	239
Exercises	240
Chapter 12: Using XML	241
So What Is XML?	241
Extensible Means Just That	243
XML Attributes	244
Validating Data	244
Databases and XML	245
<i>Try It Out: Exporting and Importing XML</i>	246
The System.Xml Namespace	253
<i>Try It Out: Creating a Wizard Form</i>	256
Summary	277
Exercises	278
Chapter 13: Securing Your Program	279
Program Security	279
Role-Based Security	280
A Closer Look at Identity and Principal	282
<i>Try It Out: Using Role-Based Security</i>	282
Code-Based Security	283
Cryptography and Encryption	284
Secret Key Cryptography	285
Public Key Cryptography	285
<i>Try It Out: Encrypting a Password</i>	286
Summary	291
Exercise	291

Chapter 14: Getting It Out There	293
Installing the “Hard” Way	293
Just ClickOnce	294
<i>Try It Out: Using ClickOnce</i>	295
ClickOnce Options	299
ClickOnce Has Security and Signing, Too	302
<i>Try It Out: Advanced Settings in ClickOnce</i>	304
Summary	306
Exercise	306
Appendix A: Need More? What’s on the CD and Website	307
Appendix B: .NET — The Foundation	309
Appendix C: Answers to Exercises	317
Index	341