

# Beginning ASPNET 2.0

Chris Hart, John Kauffman, David Sussman, Chris Ullman



Who This Book Is For What This Book Covers Chapter 1: An Introduction to ASPNET 2.0 and the Wrox United Application Chapter 2: Site Design Chapter 3: Page Design Chapter 4: Membership and Identity Chapter 5: Styling with Themes Chapter 6: Events and Code Chapter 7: Reading Data Chapter 8: Writing Data Chapter 9: Code Chapter 9: Code Chapter 10: Componentization Chapter 11: Roles and Profiles Chapter 12: Web Services Chapter 13: E-Commerce Chapter 14: Performance Chapter 15: Dealing with Errors Chapter 16: Deployment, Builds, and Finishing Up How This Book Is Structured What You Need to Use This Book Conventions Source Code Errata The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Connection to Data   **XXIII.**  **X	Acknowledgments	xxi
What This Book Covers  Chapter 1: An Introduction to ASPNET 2.0 and the Wrox United Application  Chapter 2: Site Design  Chapter 3: Page Design  Chapter 4: Membership and Identity  Chapter 5: Styling with Themes  Chapter 6: Events and Code  Chapter 7: Reading Data  Chapter 9: Code  Chapter 9: Code  Chapter 10: Componentization  Chapter 11: Roles and Profiles  Chapter 12: Web Services  Chapter 13: E-Commerce  Chapter 14: Performance  Chapter 15: Dealing with Errors  Chapter 16: Deployment, Builds, and Finishing Up  How This Book Is Structured  What You Need to Use This Book  Conventions  Source Code  Errata  p2p.wrox.com  The Site You Will Build  ASP.NET 2.0—A Powerful Tool to Build Dynamic Web Sites  Simple Solutions for Common Web Site Tasks  Connection to Data		xxiii
Chapter 1: An Introduction to ASPNET 2.0 and the Wrox United Application Chapter 2: Site Design Chapter 3: Page Design Chapter 4: Membership and Identity Chapter 5: Styling with Themes Chapter 6: Events and Code Chapter 7: Reading Data Chapter 8: Writing Data Chapter 9: Code Chapter 10: Componentization Chapter 11: Roles and Profiles Chapter 12: Web Services Chapter 13: E-Commerce Chapter 14: Performance Chapter 15: Dealing with Errors Chapter 16: Dealing with Errors Chapter 16: Deployment, Builds, and Finishing Up How This Book Is Structured What You Need to Use This Book Conventions Source Code Errata The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Roles Connection to Data   Xxi Connection to Data  Xxi Connection to Data  Xxi Xxi Xxi Xxi Xxi Xxi Xxi Xxi Xxi Xx		xxiii
Chapter 2: Site Design Chapter 3: Page Design Chapter 4: Membership and Identity Chapter 5: Styling with Themes Chapter 6: Events and Code Chapter 7: Reading Data Chapter 8: Writing Data Chapter 9: Code Chapter 9: Code Chapter 10: Componentization Chapter 11: Roles and Profiles Chapter 12: Web Services Chapter 13: E-Commerce Chapter 14: Performance Chapter 15: Dealing with Errors Chapter 16: Deployment, Builds, and Finishing Up How This Book Is Structured What You Need to Use This Book Conventions Source Code Errata Surviii P2p.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Personalization Navigation Login, Security, and Roles Connection to Data		xxiv
Chapter 3: Page Design Chapter 4: Membership and Identity Chapter 5: Styling with Themes Chapter 6: Events and Code Chapter 7: Reading Data Chapter 8: Writing Data Chapter 9: Code Chapter 9: Code Chapter 10: Componentization Chapter 11: Roles and Profiles Chapter 12: Web Services Chapter 12: Web Services Chapter 13: E-Commerce Chapter 14: Performance Chapter 15: Dealing with Errors Chapter 16: Deployment, Builds, and Finishing Up  Whow This Book Is Structured What You Need to Use This Book Conventions Source Code Errata pp.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Personalization Navigation Login, Security, and Roles Connection to Data		xxiv
Chapter 4: Membership and Identity Chapter 5: Styling with Themes Chapter 6: Events and Code Chapter 7: Reading Data Chapter 8: Writing Data Chapter 9: Code Chapter 10: Componentization Chapter 11: Roles and Profiles Chapter 12: Web Services Chapter 12: Web Services Chapter 13: E-Commerce Chapter 14: Performance Chapter 15: Dealing with Errors Chapter 15: Dealing with Errors Chapter 16: Deployment, Builds, and Finishing Up  How This Book Is Structured What You Need to Use This Book Conventions Source Code Errata Source Code Errata The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Personalization Navigation Login, Security, and Roles Connection to Data	·	xxiv
Chapter 5: Styling with Themes Chapter 6: Events and Code Chapter 7: Reading Data Chapter 8: Writing Data Chapter 9: Code Chapter 10: Componentization Chapter 11: Roles and Profiles Chapter 12: Web Services Chapter 13: E-Commerce Chapter 15: Dealing with Errors Chapter 16: Deployment, Builds, and Finishing Up  How This Book Is Structured What You Need to Use This Book Conventions Source Code Errata Source Code Errata The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Roles Connection to Data		xxiv
Chapter 6: Events and Code Chapter 7: Reading Data Chapter 8: Writing Data Chapter 9: Code Chapter 10: Componentization Chapter 11: Roles and Profiles Chapter 12: Web Services Chapter 13: E-Commerce Chapter 14: Performance Chapter 15: Dealing with Errors Chapter 16: Deployment, Builds, and Finishing Up How This Book Is Structured What You Need to Use This Book Conventions Source Code Errata Errata Errata Errata Example Solutions for Common Web Site Tasks Consistency and Personalization Navigation Login, Security, and Roles Connection to Data	·	XXV
Chapter 7: Reading Data Chapter 8: Writing Data Chapter 9: Code Chapter 10: Componentization Chapter 11: Roles and Profiles Chapter 12: Web Services Chapter 12: Web Services Chapter 13: E-Commerce Chapter 14: Performance Chapter 15: Dealing with Errors Chapter 16: Deployment, Builds, and Finishing Up How This Book Is Structured What You Need to Use This Book Conventions Source Code Errata p2p.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Personalization Navigation Login, Security, and Roles Connection to Data		xxv
Chapter 8: Writing Data Chapter 9: Code Chapter 10: Componentization Chapter 11: Roles and Profiles Chapter 12: Web Services Chapter 13: E-Commerce Chapter 14: Performance Chapter 15: Dealing with Errors Chapter 15: Dealing with Errors Chapter 16: Deployment, Builds, and Finishing Up How This Book Is Structured What You Need to Use This Book Conventions Source Code Errata p2p.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Personalization Navigation Login, Security, and Roles Connection to Data		xxv
Chapter 9: Code Chapter 10: Componentization Chapter 11: Roles and Profiles Chapter 12: Web Services Chapter 13: E-Commerce Chapter 14: Performance Chapter 15: Dealing with Errors Chapter 16: Deployment, Builds, and Finishing Up  How This Book Is Structured What You Need to Use This Book Conventions Source Code Errata Source Code Errata p2p.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Personalization Navigation Login, Security, and Roles Connection to Data	<del>-</del>	xxv
Chapter 10: Componentization Chapter 11: Roles and Profiles Chapter 12: Web Services Chapter 13: E-Commerce Chapter 14: Performance Chapter 15: Dealing with Errors Chapter 16: Deployment, Builds, and Finishing Up Kaxvi Chapter 16: Deployment, Builds, and Finishing Up Kaxvi What You Need to Use This Book Conventions Source Code Errata Source Code Errata The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Personalization Navigation Login, Security, and Roles Connection to Data	·	XXV
Chapter 11: Roles and Profiles  Chapter 12: Web Services  Chapter 13: E-Commerce  Chapter 14: Performance  Chapter 15: Dealing with Errors  Chapter 16: Deployment, Builds, and Finishing Up  How This Book Is Structured  What You Need to Use This Book  Conventions  Source Code  Errata  p2p.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application  The Site You Will Build  ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites  Simple Solutions for Common Web Site Tasks  Consistency and Personalization  Navigation  Login, Security, and Roles  Connection to Data	, , , , , , , , , , , , , , , , , , ,	xxv
Chapter 12: Web Services		xxv
Chapter 13: E-Commerce Chapter 14: Performance Chapter 15: Dealing with Errors Chapter 16: Deployment, Builds, and Finishing Up  How This Book Is Structured What You Need to Use This Book Conventions Source Code Errata p2p.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application  The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Personalization Navigation Login, Security, and Roles Connection to Data	Chapter 11: Roles and Profiles	xxvi
Chapter 14: Performance Chapter 15: Dealing with Errors Chapter 16: Deployment, Builds, and Finishing Up  How This Book Is Structured What You Need to Use This Book Conventions Source Code Errata p2p.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application  The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Personalization Navigation Login, Security, and Roles Connection to Data	·	xxvi
Chapter 15: Dealing with Errors Chapter 16: Deployment, Builds, and Finishing Up  How This Book Is Structured What You Need to Use This Book Conventions Source Code Errata p2p.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Personalization Navigation Login, Security, and Roles Connection to Data	Chapter 13: E-Commerce	xxvi
Chapter 16: Deployment, Builds, and Finishing Up  How This Book Is Structured  What You Need to Use This Book  Conventions  Source Code  Errata  p2p.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application  The Site You Will Build  ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites  Simple Solutions for Common Web Site Tasks  Consistency and Personalization  Navigation  Login, Security, and Roles  Connection to Data		xxvi
How This Book Is Structured  What You Need to Use This Book  Conventions  Source Code  Errata  p2p.wrox.com   Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application  The Site You Will Build  ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites  Simple Solutions for Common Web Site Tasks  Consistency and Personalization  Navigation  Login, Security, and Roles  Connection to Data	Chapter 15: Dealing with Errors	xxvi
What You Need to Use This Book  Conventions  Source Code  Errata  p2p.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application  The Site You Will Build  ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites  Simple Solutions for Common Web Site Tasks  Consistency and Personalization  Navigation  Login, Security, and Roles  Connection to Data	Chapter 16: Deployment, Builds, and Finishing Up	xxvi
Conventions Source Code Errata p2p.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Personalization Navigation Login, Security, and Roles Connection to Data	How This Book Is Structured	xxvii
Source Code Errata p2p.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Personalization Navigation Login, Security, and Roles Connection to Data	What You Need to Use This Book	xxvii
Errata p2p.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application The Site You Will Build ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites Simple Solutions for Common Web Site Tasks Consistency and Personalization Navigation Login, Security, and Roles Connection to Data	Conventions	xxvii
p2p.wrox.com  Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application  The Site You Will Build  ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites  Simple Solutions for Common Web Site Tasks  Consistency and Personalization  Navigation  Login, Security, and Roles  Connection to Data	Source Code	xxviii
Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United Application  The Site You Will Build  ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites  Simple Solutions for Common Web Site Tasks  Consistency and Personalization  Navigation  Login, Security, and Roles  Connection to Data	Errata	xxviii
The Site You Will Build  ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites  Simple Solutions for Common Web Site Tasks  Consistency and Personalization  Navigation  Login, Security, and Roles  Connection to Data	p2p.wrox.com	xxix
ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites  Simple Solutions for Common Web Site Tasks  Consistency and Personalization  Navigation  Login, Security, and Roles  Connection to Data	Chapter 1: An Introduction to ASP.NET 2.0 and the Wrox United App	lication 1
ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites  Simple Solutions for Common Web Site Tasks  Consistency and Personalization  Navigation  Login, Security, and Roles  Connection to Data	The Site You Will Build	3
Simple Solutions for Common Web Site Tasks  Consistency and Personalization  Navigation  Login, Security, and Roles  Connection to Data	ASP.NET 2.0 — A Powerful Tool to Build Dynamic Web Sites	
Consistency and Personalization Navigation Login, Security, and Roles Connection to Data	· · · · · · · · · · · · · · · · · · ·	
Navigation  Login, Security, and Roles  Connection to Data		
Login, Security, and Roles  Connection to Data		5
Connection to Data	<del>-</del>	5
<u> </u>	= -	6
	Code	6

Componentization	6
Web Services	6
Performance and Caching	7
Errors and Exception Handling	7
Deployment	7
Development Tools	7
Where Does ASP.NET 2.0 Fit with Other Technology?	8
Exploring the Wrox United Application	9
Getting Started with Your Wrox United Site	10
VWD Express — A Development Environment	10
Introducing Cassini	11
VWD's Solution Explorer	11
Creating, Opening, and Using Web Sites and Pages with VWD	14
The Sample Code Directories	14
Running a Page	16
Design Surface	17
Toolbox	18
Properties Window	21
Error List Window	22
VWD's Database Explorer	25
Summary	26
Exercises	26
Chapter 2: Site Design	29
General Design Objectives	30
Master and Content Pages	31
Creating a Master Page	31
Creating Content Pages	33
A Sample of Master and Content Pages	35
Using Cascading Style Sheets in a Master Page	36
Additional Capabilities of Master Pages	42
Multiple Levels of Master Pages	42
Master Pages Support Multiple Content Placeholders	43
Creating a Site Map	44
General Guidelines for Site Design	47
Standard Files for ASP.NET 2.0 Applications	47
Web.config Holds Settings for the Entire Site	48
Global.asax Holds Code for the Entire Site	52
Editing Site Configuration Through a Web Browser	52
Troubleshooting Site Design Errors	55
Summary	55
Exercises	56

Chapter 4: Membership and Identity  Security Basics Identity—Who Am I? Authentication—This Is Who I Am Authorization—This Is What I Can Do Logging In to a Site  ASP.NET Security Login Controls Personalization Membership Authentication Wrox United Security Summary Exercises  106  106  107  108  109  109  109  109  109  109  109	Chapter 3: Page Design	57
The World of HTML         66           From HTML to XHTML Code         66           Dynamic Content         77           Dynamic Client Code and Dynamic Server Code         77           Introduction to Server Controls         72           The Server Control Toolbox         73           What Are Server Controls?         73           Source View in WD         76           Types of Server Controls         83           Standard Controls         84           Navigation Controls         84           Navigation Controls         86           Summary         102           Exercises         103           Chapter 4: Membership and Identity         105           Security Basics         106           Identity—Who Am I?         106           Authentication—This Is Whot I Am         106           Authorization—This Is What I Can Do         106           Loging In to a Site         107           ASP.NET Security         107           Login Controls         107           Personalization         121           Membership         124           Authentication         130           Wrox United Security         136	Static Page Design	55
From HTML to XHTML Code  Dynamic Content  Dynamic Client Code and Dynamic Server Code  Introduction to Server Controls  The Server Control Toolbox  What Are Server Controls?  Source View in WD  Types of Server Controls  Standard Controls  HTML Controls  Navigation Controls  Summary  Exercises  Chapter 4: Membership and Identity  105  Security Basics  Identity—Who Am I?  Authentication—This Is Who I Am  Authorization—This Is What I Can Do  Logging In to a Site  ASP.NET Security  Login Controls  Membership  Authentication  Morox United Security  Summary  Exercises  Chapter 5: Styling with Themes  Styling a Site  Style Attributes  CSS—Cascading Style Sheets  Themes  Applying Styling to a Site	The World of HTML	
Dynamic Content	From HTML to XHTML Code	
Dynamic Client Code and Dynamic Server Code   772   Introduction to Server Controls   773   774   775   77	Dynamic Content	
Introduction to Server Controls	Dynamic Client Code and Dynamic Server Code	
The Server Control Toolbox What Are Server Controls? Source View in VWD  Types of Server Controls Standard Controls Standard Controls HTML Controls Avigation Controls Summary Exercises  Chapter 4: Membership and Identity  Security Basics Identity—Who Am I? Authentication—This Is Who I Am Authorization—This Is Who I Am Authorization—This Is What I Can Do Logging In to a Site  ASP.NET Security Login Controls Personalization Membership Authentication Wrox United Security Summary Exercises  Chapter 5: Styling with Themes  Styling a Site Applying Styling to a Site  Applying Styling to a Site  Time Sacurity 168  Time Sa		
What Are Server Controls?       73         Source View in VWD       78         Types of Server Controls       83         Standard Controls       84         HTML Controls       86         Navigation Controls       86         Summary       102         Exercises       103         Chapter 4: Membership and Identity       105         Security Basics       106         Identity — Who Am I?       106         Authentication — This Is Who I Am       106         Authorization — This Is What I Can Do       106         Logging In to a Site       107         ASP.NET Security       107         Login Controls       107         Personalization       121         Membership       124         Authentication       130         Wrox United Security       132         Summary       136         Exercises       136         Chapter 5: Styling with Themes       137         Style Attributes       137         Chapting Styling to a Site       168	The Server Control Toolbox	
Source View in VWD	What Are Server Controls?	
Types of Server Controls         83           Standard Controls         83           HTML Controls         86           Navigation Controls         86           Summary         102           Exercises         103           Chapter 4: Membership and Identity         105           Security Basics         106           Identity—Who Am I?         106           Authentication—This Is Who I Am         106           Authorization—This Is What I Can Do         106           Logging In to a Site         107           ASP.NET Security         107           Login Controls         107           Personalization         121           Membership         124           Authentication         130           Wrox United Security         132           Summary         136           Exercises         136           Chapter 5: Styling with Themes         137           Style Attributes         137           Style Attributes         142           Applying Styling to a Site         168	Source View in VWD	
Standard Controls       84         HTML Controls       84         Navigation Controls       86         Summary       102         Exercises       103         Chapter 4: Membership and Identity       105         Chapter 4: Membership and Identity       105         Security Basics       106         Identity—Who Am I?       106         Authentication—This Is Who I Am       106         Authentication—This Is What I Can Do       106         Logging In to a Site       107         ASP.NET Security       107         Login Controls       107         Personalization       121         Membership       124         Authentication       130         Wrox United Security       132         Summary       136         Exercises       136         Chapter 5: Styling with Themes       137         Styling a Site       137         Style Attributes       138         CSS—Cascading Style Sheets       142         Themes       151         Applying Styling to a Site       168	Types of Server Controls	
HTML Controls	Standard Controls	
Navigation Controls	HTML Controls	
Summary Exercises         102           Chapter 4: Membership and Identity         105           Security Basics         106           Identity — Who Am !?         106           Authentication — This Is Who I Am         106           Authorization — This Is What I Can Do         106           Logging In to a Site         107           ASP.NET Security         107           Login Controls         107           Personalization         124           Authentication         124           Authentication         130           Wrox United Security         132           Summary         136           Exercises         136           Chapter 5: Styling with Themes         137           Styling a Site         138           CSS — Cascading Style Sheets         142           Themes         151           Applying Styling to a Site         168	Navigation Controls	
Exercises         103           Chapter 4: Membership and Identity         105           Security Basics         106           Identity — Who Am I?         106           Authentication — This Is Who I Am         106           Authorization — This Is What I Can Do         106           Logging In to a Site         107           ASP.NET Security         107           Login Controls         107           Personalization         121           Membership         124           Authentication         130           Wrox United Security         132           Summary         136           Exercises         136           Chapter 5: Styling with Themes         137           Styling a Site         138           CSS — Cascading Style Sheets         142           Themes         151           Applying Styling to a Site         168		
Security Basics       106         Identity — Who Am I?       106         Authentication — This Is Who I Am       106         Authorization — This Is What I Can Do       106         Logging In to a Site       107         ASP.NET Security       107         Login Controls       107         Personalization       121         Membership       124         Authentication       130         Wrox United Security       132         Summary       136         Exercises       136         Chapter 5: Styling with Themes       137         Style Attributes       138         CSS — Cascading Style Sheets       142         Themes       151         Applying Styling to a Site       168	Exercises	103
Identity — Who Am I?       106         Authentication — This Is Who I Am       106         Authorization — This Is What I Can Do       106         Logging In to a Site       107         ASP.NET Security       107         Login Controls       107         Personalization       121         Membership       124         Authentication       130         Wrox United Security       132         Summary       136         Exercises       136         Chapter 5: Styling with Themes       137         Styling a Site       137         Style Attributes       138         CSS — Cascading Style Sheets       142         Themes       151         Applying Styling to a Site       168	Chapter 4: Membership and Identity	105
Identity — Who Am I?       106         Authentication — This Is Who I Am       106         Authorization — This Is What I Can Do       106         Logging In to a Site       107         ASP.NET Security       107         Login Controls       107         Personalization       121         Membership       124         Authentication       130         Wrox United Security       132         Summary       136         Exercises       136         Chapter 5: Styling with Themes       137         Styling a Site       137         Style Attributes       138         CSS — Cascading Style Sheets       142         Themes       151         Applying Styling to a Site       168	Security Basics	106
Authentication — This Is Who I Am Authorization — This Is What I Can Do Logging In to a Site  ASP.NET Security Login Controls Personalization Membership Authentication Wrox United Security Summary Exercises  Chapter 5: Styling with Themes  Styling a Site Style Attributes CSS — Cascading Style Sheets Themes Applying Styling to a Site	· ·	
Authorization — This Is What I Can Do       106         Logging In to a Site       107         ASP.NET Security       107         Login Controls       107         Personalization       121         Membership       124         Authentication       130         Wrox United Security       132         Summary       136         Exercises       136         Chapter 5: Styling with Themes       137         Styling a Site       138         CSS — Cascading Style Sheets       142         Themes       151         Applying Styling to a Site       168		
Logging In to a Site       107         ASP.NET Security       107         Login Controls       107         Personalization       121         Membership       124         Authentication       130         Wrox United Security       132         Summary       136         Exercises       136         Chapter 5: Styling with Themes       137         Styling a Site       137         Style Attributes       138         CSS — Cascading Style Sheets       142         Themes       151         Applying Styling to a Site       168		
ASP.NET Security       107         Login Controls       107         Personalization       121         Membership       124         Authentication       130         Wrox United Security       132         Summary       136         Exercises       136         Chapter 5: Styling with Themes       137         Styling a Site       138         CSS—Cascading Style Sheets       142         Themes       151         Applying Styling to a Site       168		
Login Controls       107         Personalization       121         Membership       124         Authentication       130         Wrox United Security       132         Summary       136         Exercises       136         Chapter 5: Styling with Themes       137         Styling a Site       138         Style Attributes       138         CSS—Cascading Style Sheets       142         Themes       151         Applying Styling to a Site       168	<del>-</del>	
Personalization       121         Membership       124         Authentication       130         Wrox United Security       132         Summary       136         Exercises       136         Chapter 5: Styling with Themes       137         Styling a Site       138         CSS — Cascading Style Sheets       142         Themes       151         Applying Styling to a Site       168	Login Controls	
Membership Authentication  Wrox United Security  Summary Exercises  Chapter 5: Styling with Themes  Styling a Site Style Attributes CSS—Cascading Style Sheets Themes Applying Styling to a Site  124 130 132 133 136 136 137 137 138 138 138 138 138 138 138 138 138 138	Personalization	
Authentication Wrox United Security Summary Exercises  Chapter 5: Styling with Themes  Styling a Site Style Attributes CSS—Cascading Style Sheets Themes Applying Styling to a Site  130 132 133 136 136 137 138 138 139 139 139 139 139 139 139 139 139 139	Membership	
Wrox United Security Summary Exercises 136  Chapter 5: Styling with Themes 137  Styling a Site Style Attributes CSS—Cascading Style Sheets Themes Applying Styling to a Site 138  Applying Styling to a Site 168	Authentication	
Summary Exercises 136  Chapter 5: Styling with Themes 137  Styling a Site 138  Style Attributes 138  CSS—Cascading Style Sheets 142  Themes 151  Applying Styling to a Site 168	Wrox United Security	
Exercises  Chapter 5: Styling with Themes  Styling a Site Style Attributes CSS—Cascading Style Sheets Themes Applying Styling to a Site  136  137  138  138  139  139  139  139  139  139	Summary	
Styling a Site Style Attributes CSS—Cascading Style Sheets Themes Applying Styling to a Site  137 138 138 142 151 168	Exercises	136
Style Attributes  CSS—Cascading Style Sheets  Themes  Applying Styling to a Site  138  142  151  168	Chapter 5: Styling with Themes	137
Style Attributes  CSS—Cascading Style Sheets  Themes  Applying Styling to a Site  138  142  151  168	Styling a Site	137
CSS — Cascading Style Sheets Themes Applying Styling to a Site 142 151 168		
Themes 151 Applying Styling to a Site 168	CSS—Cascading Style Sheets	
Applying Styling to a Site 168		
	Applying Styling to a Site	

Styling and Layout Best Practices	177
Usability	177
Accessibility	178
Summary	179
Exercises	179
Chapter 6: Events and Code	181
Web Server Architecture	181
HTTP Is Stateless	182
Server-Side Events	183
Adding Events to the Page	184
The Postback Architecture	190
What Events Are Available?	191
Which Events Should I Use?	193
Events Aren't Triggered by Users Only	195
Indirect Events	200
Canceling Events	203
Global Events	206
Summary	207
Exercises	208
Chapter 7: Reading Data	209
Introducing Databases	210
Using ASP.NET 2.0's Data Controls	211
Introducing Data Source Controls	211
Introducing Data-Bound Controls	212
Data Source Controls and Data-Bound Controls Work Together	216
Configuring Data Controls with VWD	217
Data Source Controls	217
The Basic Properties of Data Source Controls	218
Hiding the Connection String	221
Details of the Connection String and Provider	223
Data-Bound Controls	224
Data-Bound Selection Lists	224
The GridView Control	230
The DataList and Repeater Controls	236
The DetailsView and FormView Controls	244
Data Source Controls with Parameters	247

Multiple Data Controls Working Together	252
Working with XML Data	258
Reading XML Data	260
Binding Syntax	262
Summary	263
Exercises	264
Chapter 8: Writing Data	265
Introduction to Writing Data	265
Options for Writing Data	266
DataKeyNames	266
Changing Existing Records	267
Adding New Records	273
Deleting Records	275
Uploading Pictures	278
Improving the Upload of Pictures	281
Summary	286
Exercises	287
Chapter 9; Code	289
Variables and Data Types	289
Common Language Runtime Types	291
Declaring Variables	292
Assigning Values	292
Data Conversion	293
Null Values	295
Working with Strings	295
Working with Dates	297
Working with Arrays and Collections	301
Deciding Whether to Use Arrays or Collections	307
Enumerations	307
Constants	309
Statements	310
Operators	310
Decisions	317
Loops	320
Namespaces	328
Working with Classes	329
Creating Classes	330
Inheritance	339

Variable Scope and Lifetime	344
Generics	345
Summary	346
Exercises	347
Chapter 10: Componentization	349
The Separation of Code from Content	350
The Separation of Code from Design	351
Code-Behind	352
The Page Directive	352
Partial Classes	353
Event Handlers/Functions	353
Creating a Code-Behind File	354
Compilation in ASPNET 2.0	357
The App_Code Folder	359
Data Layers	359
Two-Tier Applications	359
Three-Tier Applications	360
What's New in ASPNET 2.0	361
The Wrox United ObjectDataSource	367
User Controls	370
User Control Structure	372
A Simple User Control	373
The Wrox United News User Control	377
Composite Controls	382
Assemblies and Custom Server Controls	382
Summary	383
Exercises	383
Chapter 11: Roles and Profiles	385
The Importance of Roles	386
Introducing Roles in Wrox United	387
Configuring Page-Level Authorization	397
Controlling Page Visibility	399
Working with Roles in Code	406
Enabling User Profiles	407
Building a Profile	408
Profiles in Wrox United	410
Storing Preferences	418
Managing Anonymous Shopping Carts	424
Summary	425
Exercises	426
xvi	

Chapter 12: Web Services	427
Looking at Web Services	428
Consuming a Third-Party Web Service	429
The Life Cycle of a Web Service	433
Calling the Web Service	433
Transmitting the Web Service	434
Returning the Response	436
Using the Response	438
The Structure of Your Web Service	438
Processing Directive	438
Namespaces	439
Public Class	439
Web Methods	439
Creating a Web Service	441
Testing Your Web Service	444
The WSDL Contract	446
Web Service Discovery	447
DISCO	448
UDDI	448
Discovering Your Web Service	448
Adding the Fixture Service to Your Application	451
Putting It All Together	454
Remote Web Services — PocketPC Application	458
Web Service Security	463
Encryption and Message-Based Security	463
Authentication and Access Controls for Services	463
Summary	464
Exercises	464
Chapter 13: E-Commerce	465
The E-Commerce Pipeline	466
The Product Catalog	467
The Structure of the Catalog	467
The Design of the Catalog	467
Implementation of the Catalog	468
The Product Item Page	475
The Shopping Cart	481
The Shopping Object	482
The Profile	490
The Shopping Cart Control	492

	505
Checkout	505
Order Processing	506
Login	506
Address/Delivery Details	506
Credit Card Handling	507
How You Intend to Checkout	508
Secure Transactions	523
What Else Can You Do?	524
Summary	524
Exercises	525
Chapter 14: Performance	527
Simple Techniques	527
Object Disposal	528
Database Connections	531
Stored Procedures	531
Strongly Typed Collections	540
Session State	541
View State	542
Pages and Code	543
Data Binding and Postback	543
Object References	544
StringBuilder Versus String Concatenation	544
Picking the Right Collection	546
Caching	547
Page Caching	547
Designing for Performance	552
Web Server Hardware and Software	553
Testing Performance	553
Tracing	554
Stress Testing Tools	556
Performance Monitor	557
Summary	557
Exercises	557
Chapter 15: Dealing with Errors	559
Defensive Coding	559
Parameter Checking	560
Avoiding Assumptions	561
Query Parameters	562
Validation	563

Exception Handling	568
What Are Exceptions? The Exception Object	569
How to Trap Exceptions	569
Logging Exceptions	570 570
Mailing Exceptions	576
Raising Exceptions	580
Exceptions Best Practices	582 <b>582</b>
Global Exception Handling	583
Custom Error Pages	585
Configuring Custom Error Pages	585 585
Debugging and Tracing	587
Using ASP.NET Tracing	587 587
Using the Debugger	592
Summary	599
Exercises	600
Chapter 16: Deployment, Builds, and Finishing Up	601
Site Deployment	602
Checklist	602
Compiling and Running Your Application	603
Publishing the Site	604
XCOPY Deployment	609
Common Problems Encountered When Deploying a Site	611
Testing and Maintenance	615
Testing Before and After	615
Maintenance	616
Where To Now?	623
References	623
Summary	624
Exercises	624
Appendix A: Exercise Answers	625
Appendix B: Setup	653
Appendix C: Wrox United Database Design	671

Appendix	D:	VWD	<u>Database</u>	Explorer	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				

## ence

679

699

723

# Appendix E: CSS and HTML Quick Reference

Index