

Contents

Introduction	xxxvii
Chapter 1: Application and Page Frameworks	1
Application Location Options	1
Built-In Web Server	2
IIS	3
FTP	3
Web Site Requiring FrontPage Extensions	5
The ASP.NET Page Structure Options	5
Inline Coding	7
Code-Behind Model	9
ASP.NET 3.5 Page Directives	11
@Page	12
@Master	15
@Control	17
@Import	18
@Implements	20
@Register	20
@Assembly	21
@PreviousPageType	21
@MasterType	21
@OutputCache	22
@Reference	22
ASP.NET Page Events	23
Dealing with PostBacks	24
Cross-Page Posting	25
ASP.NET Application Folders	32
\App_Code Folder	32
\App_Data Folder	37
\App_Themes Folder	37
\App_GlobalResources Folder	38
\App_LocalResources	38
\App_WebReferences	38
\App_Browsers	38

Contents

Compilation	39
Build Providers	43
Using the Built-in Build Providers	44
Using Your Own Build Providers	45
Global.asax	50
Working with Classes Through VS2008	53
Summary	59
Chapter 2: ASP.NET Server Controls and Client-Side Scripts	61
<hr/>	
ASP.NET Server Controls	61
Types of Server Controls	62
Building with Server Controls	63
Working with Server Control Events	65
Applying Styles to Server Controls	68
Examining the Controls' Common Properties	68
Changing Styles Using Cascading Style Sheets	70
HTML Server Controls	73
Looking at the HtmlControl Base Class	76
Looking at the HtmlContainerControl Class	77
Looking at All the HTML Classes	78
Using the HtmlGenericControl Class	79
Manipulating Pages and Server Controls with JavaScript	80
Using Page.ClientScript.RegisterClientScriptBlock	82
Using Page.ClientScript.RegisterStartupScript	83
Using Page.ClientScript.RegisterClientScriptInclude	85
Client-Side Callback	86
Comparing a Typical Postback to a Callback	86
Using the Callback Feature — A Simple Approach	87
Using the Callback Feature with a Single Parameter	92
Using the Callback Feature — A More Complex Example	95
Summary	101
Chapter 3: ASP.NET Web Server Controls	103
<hr/>	
An Overview of Web Server Controls	103
The Label Server Control	104
The Literal Server Control	106
The TextBox Server Control	107
Using the Focus() Method	108
Using AutoPostBack	108
Using AutoCompleteType	110

Contents

The Button Server Control	111
The CausesValidation Property	111
The CommandName Property	111
Buttons That Work with Client-Side JavaScript	112
The LinkButton Server Control	114
The ImageButton Server Control	115
The HyperLink Server Control	116
The DropDownList Server Control	117
Visually Removing Items from a Collection	119
The ListBox Server Control	121
Allowing Users to Select Multiple Items	121
An Example of Using the ListBox Control	122
Adding Items to a Collection	124
The CheckBox Server Control	124
How to Determine Whether Check Boxes Are Checked	126
Assigning a Value to a Check Box	126
Aligning Text Around the Check Box	126
The CheckBoxList Server Control	127
The RadioButton Server Control	129
The RadioButtonList Server Control	131
Image Server Control	132
Table Server Control	134
The Calendar Server Control	136
Making a Date Selection from the Calendar Control	137
Choosing a Date Format to Output from the Calendar	138
Making Day, Week, or Month Selections	139
Working with Date Ranges	139
Modifying the Style and Behavior of Your Calendar	141
AdRotator Server Control	145
The Xml Server Control	146
Panel Server Control	147
The Placeholder Server Control	150
BulletedList Server Control	150
HiddenField Server Control	155
FileUpload Server Control	156
Uploading Files Using the FileUpload Control	157
Giving ASP.NET Proper Permissions to Upload Files	160
Understanding File Size Limitations	161
Uploading Multiple Files from the Same Page	162
Placing the Uploaded File into a Stream Object	164
Moving File Contents from a Stream Object to a Byte Array	165

Contents

MultiView and View Server Controls	166
Wizard Server Control	170
Customizing the Side Navigation	171
Examining the AllowReturn Attribute	172
Working with the StepType Attribute	172
Adding a Header to the Wizard Control	173
Working with the Wizard's Navigation System	173
Utilizing Wizard Control Events	174
Using the Wizard Control to Show Form Elements	176
ImageMap Server Control	180
Summary	182
Chapter 4: Validation Server Controls	185
Understanding Validation	185
Client-Side versus Server-Side Validation	186
ASP.NET Validation Server Controls	187
Validation Causes	188
The RequiredFieldValidator Server Control	189
The CompareValidator Server Control	194
The RangeValidator Server Control	198
The RegularExpressionValidator Server Control	201
The CustomValidator Server Control	202
The ValidationSummary Server Control	208
Turning Off Client-Side Validation	211
Using Images and Sounds for Error Notifications	212
Working with Validation Groups	213
Summary	217
Chapter 5: Working with Master Pages	219
Why Do You Need Master Pages?	219
The Basics of Master Pages	221
Coding a Master Page	223
Coding a Content Page	225
Mixing Page Types and Languages	229
Specifying Which Master Page to Use	231
Working with the Page Title	232
Working with Controls and Properties from the Master Page	233
Specifying Default Content in the Master Page	240
Programmatically Assigning the Master Page	241
Nesting Master Pages	243

Contents

Container-Specific Master Pages	247
Event Ordering	248
Caching with Master Pages	249
ASP.NET AJAX and Master Pages	249
Summary	252
Chapter 6: Themes and Skins	253
<hr/>	
Using ASP.NET Themes	253
Applying a Theme to a Single ASP.NET Page	253
Applying a Theme to an Entire Application	255
Removing Themes from Server Controls	256
Removing Themes from Web Pages	257
Understanding Themes When Using Master Pages	257
Understanding the StyleSheetTheme Attribute	258
Creating Your Own Themes	258
Creating the Proper Folder Structure	258
Creating a Skin	259
Including CSS Files in Your Themes	261
Having Your Themes Include Images	264
Defining Multiple Skin Options	267
Programmatically Working with Themes	269
Assigning the Page's Theme Programmatically	269
Assigning a Control's SkinID Programmatically	270
Themes, Skins, and Custom Controls	270
Summary	274
Chapter 7: Data Binding in ASP.NET 3.5	275
<hr/>	
Data Source Controls	275
SqlDataSource Control	277
LINQ Data Source Control	289
AccessDataSource Control	294
XmlDataSource Control	294
ObjectDataSource Control	295
SiteMapDataSource Control	300
Configuring Data Source Control Caching	300
Storing Connection Information	301
Using Bound List Controls with Data Source Controls	304
GridView	304
Editing GridView Row Data	320
Deleting GridView Data	327

Contents

DetailsView	330
Inserting, Updating, and Deleting Data Using DetailsView	335
ListView	336
FormView	345
Other Databound Controls	350
DropDownList, ListBox, RadioButtonList, and CheckBoxList	350
TreeView	350
Ad Rotator	351
Menu	351
Inline Data-Binding Syntax	352
Data-Binding Syntax Changes	353
XML Data Binding	353
Expressions and Expression Builders	354
Summary	359
Chapter 8: Data Management with ADO.NET	361
Basic ADO.NET Features	362
Common ADO.NET Tasks	362
Basic ADO.NET Namespaces and Classes	367
Using the Connection Object	368
Using the Command Object	370
Using the DataReader Object	371
Using Data Adapter	373
Using Parameters	376
Understanding DataSet and DataTable	379
Using Oracle as Your Database with ASP.NET 3.5	384
The DataList Server Control	387
Looking at the Available Templates	387
Working with ItemTemplate	388
Working with Other Layout Templates	390
Working with Multiple Columns	392
The ListView Server Control	393
Looking at the Available Templates	394
Using the Templates	394
Creating the Layout Template	396
Creating the ItemTemplate	398
Creating the EditItemTemplate	398
Creating the EmptyItemTemplate	399
Creating the InsertItemTemplate	399
The Results	400

Contents

Using Visual Studio for ADO.NET Tasks	402
Creating a Connection to the Data Source	402
Working with a Dataset Designer	404
Using the CustomerOrders DataSet	409
Asynchronous Command Execution	414
Asynchronous Connections	435
Summary	435
Chapter 9: Querying with LINQ	437
<hr/>	
LINQ to Objects	437
Traditional Query Methods	437
Replacing Traditional Queries with LINQ	446
Data Grouping	453
Other LINQ Operators	454
LINQ Joins	455
Paging Using LINQ	457
LINQ to XML	458
Joining XML Data	461
LINQ to SQL	462
Insert, Update, and Delete Queries through LINQ	471
Extending LINQ	475
Summary	475
Chapter 10: Working with XML and LINQ to XML	477
<hr/>	
The Basics of XML	478
The XML InfoSet	480
XSD–XML Schema Definition	481
Editing XML and XML Schema in Visual Studio 2008	483
XmlReader and XmlWriter	486
Using XDocument Rather Than XmlReader	488
Using Schema with XmlTextReader	489
Validating Against a Schema Using an XDocument	491
Including NameTable Optimization	493
Retrieving .NET CLR Types from XML	495
ReadSubtree and XmlSerialization	497
Creating CLR Objects from XML with LINQ to XML	498
Creating XML with XmlWriter	499
Creating XML with LINQ for XML	502
Improvements for XmlReader and XmlWriter in 2.0	504

Contents

XmlDocument and XPathDocument	505
Problems with the DOM	505
XPath, the XPathDocument, and XmlDocument	505
DataSets	510
Persisting DataSets to XML	510
XmlDataDocument	511
The XmlDataSource Control	513
XSLT	517
XslCompiledTransform	518
XSLT Debugging	523
Databases and XML	524
FOR XML AUTO	524
SQL Server 2005 and the XML Data Type	528
Summary	535
Chapter 11: IIS7	537
Modular Architecture of IIS7	537
IIS-WebServer	538
IIS-WebServerManagementTools	541
IIS-FTTPublishingService	542
Extensible Architecture of IIS7	542
IIS7 and ASP.NET Integrated Pipeline	542
Building a Customized Web Server	544
Update Dependencies	545
Installing IIS7 on Windows Vista	545
Installing IIS7 on Windows Server 2008	545
Command-Line Setup Options	546
Unattended Setup Option	548
Upgrade	548
Internet Information Services (IIS) Manager	549
Application Pools	550
Web Sites	554
Hierarchical Configuration	555
Delegation	561
Moving an Application from IIS6 to IIS7	564
Summary	566
Chapter 12: Introduction to the Provider Model	567
Understanding the Provider	568
The Provider Model in ASP.NET 3.5	569
Setting Up Your Provider to Work with Microsoft SQL Server 7.0, 2000, 2005, or 2008	571

Contents

Membership Providers	577
Role Providers	581
The Personalization Provider	585
The SiteMap Provider	586
SessionState Providers	588
Web Event Providers	590
Configuration Providers	598
The WebParts Provider	601
Configuring Providers	603
Summary	604
Chapter 13: Extending the Provider Model	605
Providers Are One Tier in a Larger Architecture	605
Modifying Through Attribute-Based Programming	606
Simpler Password Structures Through the SqlMembershipProvider	607
Stronger Password Structures Through the SqlMembershipProvider	610
Examining ProviderBase	611
Building Your Own Providers	613
Creating the CustomProviders Application	613
Constructing the Class Skeleton Required	614
Creating the XML User Data Store	617
Defining the Provider Instance in the web.config File	618
Not Implementing Methods and Properties of the MembershipProvider Class	619
Implementing Methods and Properties of the MembershipProvider Class	620
Using the XmlMembershipProvider for User Login	628
Extending Pre-Existing Providers	629
Limiting Role Capabilities with a New LimitedSqlRoleProvider Provider	630
Using the New LimitedSqlRoleProvider Provider	634
Summary	638
Chapter 14: Site Navigation	639
XML-Based Site Maps	640
SiteMapPath Server Control	642
The PathSeparator Property	644
The PathDirection Property	646
The ParentLevelsDisplayed Property	646
The ShowToolTips Property	647
The SiteMapPath Control's Child Elements	648
TreeView Server Control	648
Identifying the TreeView Control's Built-In Styles	652
Examining the Parts of the TreeView Control	653

Contents

Binding the TreeView Control to an XML File	654
Selecting Multiple Options in a TreeView	656
Specifying Custom Icons in the TreeView Control	659
Specifying Lines Used to Connect Nodes	661
Working with the TreeView Control Programmatically	663
Menu Server Control	669
Applying Different Styles to the Menu Control	670
Menu Events	675
Binding the Menu Control to an XML File	676
SiteMap Data Provider	678
ShowStartingNode	678
StartFromCurrentNode	679
StartingNodeOffset	680
StartingNodeUrl	681
SiteMap API	681
URL Mapping	684
Sitemap Localization	685
Structuring the Web.sitemap File for Localization	685
Making Modifications to the Web.config File	686
Creating Assembly Resource (.resx) Files	687
Testing the Results	687
Security Trimming	689
Setting Up Role Management for Administrators	690
Setting Up the Administrators' Section	691
Enabling Security Trimming	692
Nesting SiteMap Files	694
Summary	696
Chapter 15: Personalization	699
<hr/>	
The Personalization Model	699
Creating Personalization Properties	700
Adding a Simple Personalization Property	701
Using Personalization Properties	702
Adding a Group of Personalization Properties	706
Using Grouped Personalization Properties	707
Defining Types for Personalization Properties	707
Using Custom Types	708
Providing Default Values	711
Making Personalization Properties Read-Only	711
Anonymous Personalization	711
Enabling Anonymous Identification of the End User	711
Working with Anonymous Identification	714

Contents

Anonymous Options for Personalization Properties	715
Warnings about Anonymous User Profile Storage	716
Programmatic Access to Personalization	717
Migrating Anonymous Users	717
Personalizing Profiles	718
Determining Whether to Continue with Automatic Saves	719
Personalization Providers	721
Working with SQL Server Express Edition	721
Working with Microsoft's SQL Server 7.0/2000/2005/2008	722
Using Multiple Providers	724
Managing Application Profiles	725
Properties of the ProfileManager Class	725
Methods of the ProfileManager Class	726
Building the ProfileManager.aspx Page	726
Examining the Code of ProfileManager.aspx Page	730
Running the ProfileManager.aspx Page	731
Summary	732
Chapter 16: Membership and Role Management	733
Authentication	734
Authorization	734
ASP.NET 3.5 Authentication	734
Setting Up Your Web Site for Membership	734
Adding Users	737
Asking for Credentials	752
Working with Authenticated Users	760
Showing the Number of Users Online	762
Dealing with Passwords	764
ASP.NET 3.5 Authorization	769
Using the LoginView Server Control	769
Setting Up Your Web Site for Role Management	771
Adding and Retrieving Application Roles	775
Deleting Roles	777
Adding Users to Roles	778
Getting All the Users of a Particular Role	779
Getting All the Roles of a Particular User	781
Removing Users from Roles	781
Checking Users in Roles	782
Understanding How Roles Are Cached	783
Using the Web Site Administration Tool	784
Public Methods of the Membership API	784
Public Methods of the Roles API	786
Summary	786
	xxiii

Contents

Chapter 17: Portal Frameworks and Web Parts	787
Introducing Web Parts	787
Building Dynamic and Modular Web Sites	789
Introducing the WebPartManager Control	789
Working with Zone Layouts	790
Understanding the WebPartZone Control	794
Allowing the User to Change the Mode of the Page	797
Modifying Zones	808
Working with Classes in the Portal Framework	814
Creating Custom Web Parts	818
Connecting Web Parts	824
Building the Provider Web Part	825
Building the Consumer Web Part	828
Connecting Web Parts on an ASP.NET Page	830
Understanding the Difficulties in Dealing with Master Pages When Connecting Web Parts	833
Summary	834
Chapter 18: HTML and CSS Design with ASP.NET	835
Caveats	836
HTML and CSS Overview	836
Introducing CSS	837
Creating Style Sheets	837
CSS Rules	840
CSS Inheritance	849
Element Layout and Positioning	850
Working with HTML and CSS in Visual Studio	857
ASP.NET 2.0 CSS-Friendly Control Adapters	864
Summary	865
Chapter 19: ASP.NET AJAX	867
Understanding the Need for AJAX	867
Before AJAX	868
AJAX Changes the Story	868
ASP.NET AJAX and Visual Studio 2008	871
Client-Side Technologies	872
Server-Side Technologies	873
Developing with ASP.NET AJAX	874
ASP.NET AJAX Applications	874
Building a Simple ASP.NET Page without AJAX	876
Building a Simple ASP.NET Page with AJAX	878

Contents

ASP.NET AJAX's Server-Side Controls	884
The ScriptManager Control	884
The ScriptManagerProxy Control	887
The Timer Control	888
The UpdatePanel Control	890
The UpdateProgress Control	895
Using Multiple UpdatePanel Controls	897
Working with Page History	901
Script Combining	907
Summary	912
Chapter 20: ASP.NET AJAX Control Toolkit	913
Downloading and Installing	914
New Visual Studio Templates	915
Adding the New Controls to the VS2008 Toolbox	916
The ASP.NET AJAX Controls	917
ASP.NET AJAX Control Toolkit Extenders	920
AlwaysVisibleControlExtender	920
AnimationExtender	923
AutoCompleteExtender	924
CalendarExtender	928
CollapsiblePanelExtender	929
ConfirmButtonExtender and ModalPopupExtender	931
DragPanelExtender	933
DropDownExtender	935
DropShadowExtender	937
DynamicPopulateExtender	939
FilteredTextBoxExtender	944
HoverMenuExtender	945
ListSearchExtender	946
MaskedEditExtender and MaskedEditValidator	947
MutuallyExclusiveCheckBoxExtender	950
NumericUpDownExtender	952
PagingBulletedListExtender	953
PopupControlExtender	954
ResizableControlExtender	956
RoundedCornersExtender	958
SliderExtender	959
SlideShowExtender	961
TextBoxWatermarkExtender	964
ToggleButtonExtender	965

Contents

UpdatePanelAnimationExtender	967
ValidatorCalloutExtender	968
ASP.NET AJAX Control Toolkit Server Controls	969
Accordion Control	969
CascadingDropDown	972
NoBot Control	975
PasswordStrength Control	977
Rating Control	978
TabContainer Control	979
Summary	981
Chapter 21: Security	983
Authentication and Authorization	984
Applying Authentication Measures	984
The <authentication> Node	985
Windows-Based Authentication	986
Forms-Based Authentication	994
Passport Authentication	1004
Authenticating Specific Files and Folders	1004
Programmatic Authorization	1005
Working with User.Identity	1006
Working with User.IsInRole()	1007
Pulling More Information with WindowsIdentity	1008
Identity and Impersonation	1011
Securing Through IIS	1013
IP Address and Domain Name Restrictions	1013
Working with File Extensions	1014
Using the ASP.NET MMC Snap-In	1017
Using the IIS 7.0 Manager	1018
Summary	1019
Chapter 22: State Management	1021
What Are Your Choices?	1022
Understanding the Session Object in ASP.NET	1024
Sessions and the Event Model	1024
Configuring Session State Management	1026
In-Process Session State	1026
Out-of-Process Session State	1034
SQL-Backed Session State	1040
Extending Session State with Other Providers	1042
Cookieless Session State	1044

Contents

Choosing the Correct Way to Maintain State	1046
The Application Object	1046
QueryStrings	1047
Cookies	1047
PostBacks and Cross-Page PostBacks	1048
Hidden Fields, ViewState, and ControlState	1050
Using HttpContext.Current.Items for Very Short-Term Storage	1055
Summary	1056
Chapter 23: Caching	1057
Caching	1057
Output Caching	1057
Partial Page (UserControl) Caching	1060
Post-Cache Substitution	1061
HttpCachePolicy and Client-Side Caching	1064
Caching Programmatically	1066
Data Caching Using the Cache Object	1066
Controlling the ASP.NET Cache	1067
Cache Dependencies	1067
Using the SQL Server Cache Dependency	1073
Enabling Databases for SQL Server Cache Invalidation	1074
Enabling Tables for SQL Server Cache Invalidation	1074
Looking at SQL Server 2000	1075
Looking at the Tables That Are Enabled	1076
Disabling a Table for SQL Server Cache Invalidation	1076
Disabling a Database for SQL Server Cache Invalidation	1077
SQL Server 2005 Cache Invalidation	1077
Configuring Your ASP.NET Application	1078
Testing SQL Server Cache Invalidation	1080
Adding More Than One Table to a Page	1082
Attaching SQL Server Cache Dependencies to the Request Object	1082
Attaching SQL Server Cache Dependencies to the Cache Object	1083
Summary	1087
Chapter 24: Debugging and Error Handling	1089
Design-Time Support	1089
Syntax Notifications	1090
Immediate and Command Window	1092
Task List	1092
Tracing	1093
System.Diagnostics.Trace and ASP.NET's Page.Trace	1094

Contents

Page-Level Tracing	1094
Application Tracing	1094
Viewing Trace Data	1095
Tracing from Components	1098
Trace Forwarding	1100
TraceListeners	1100
Diagnostic Switches	1105
Web Events	1106
Debugging	1108
What's Required	1108
IIS versus ASP.NET Development Server	1109
Starting a Debugging Session	1110
New Tools to Help You with Debugging	1114
Client-side Javascript Debugging	1116
SQL Stored Proc Debugging	1119
Exception and Error Handling	1119
Handling Exceptions on a Page	1120
Handling Application Exceptions	1121
Http Status Codes	1122
Summary	1123
Chapter 25: File I/O and Streams	1125
Working with Drives, Directories, and Files	1126
The DriveInfo Class	1126
The Directory and DirectoryInfo Classes	1129
File and FileInfo	1135
Working with Paths	1140
File and Directory Properties, Attributes, and Access Control Lists	1144
Reading and Writing Files	1151
Streams	1152
Readers and Writers	1156
Compressing Streams	1161
Working with Serial Ports	1166
Network Communications	1167
WebRequest and WebResponse	1167
Sending Mail	1174
Summary	1175
Chapter 26: User and Server Controls	1177
User Controls	1178
Creating User Controls	1178

Contents

Interacting with User Controls	1180
Loading User Controls Dynamically	1182
Server Controls	1187
WebControl Project Setup	1188
Control Attributes	1193
Control Rendering	1194
Adding Tag Attributes	1199
Styling HTML	1201
Themes and Skins	1204
Adding Client-Side Features	1205
Detecting and Reacting to Browser Capabilities	1214
Using ViewState	1217
RaisingPostBack Events	1221
HandlingPostBack Data	1225
Composite Controls	1227
Templated Controls	1230
Creating Control Design-Time Experiences	1237
Summary	1257
Chapter 27: Modules and Handlers	1259
Processing HTTP Requests	1259
IIS 5/6 and ASP.NET	1259
IIS 7 and ASP.NET	1260
ASP.NET Request Processing	1261
HttpModules	1262
HttpHandlers	1272
Summary	1279
Chapter 28: Using Business Objects	1281
Using Business Objects in ASP.NET 3.5	1281
Creating Precompiled .NET Business Objects	1282
Using Precompiled Business Objects in Your ASP.NET Applications	1284
COM Interop: Using COM Within .NET	1286
The Runtime Callable Wrapper	1286
Using COM Objects in ASP.NET Code	1287
Error Handling	1292
Deploying COM Components with .NET Applications	1295
Using .NET from Unmanaged Code	1297
The COM-Callable Wrapper	1297
Using .NET Components Within COM Objects	1299
Early versus Late Binding	1303

Contents

Error Handling	1303
Deploying .NET Components with COM Applications	1305
Summary	1307
Chapter 29: ADO.NET Entity Framework	1309
Can We Speak the Same Language?	1310
The Conceptual and Logical Layers	1311
Mapping Between Layers	1311
Creating Your First Entity Data Model	1312
Working Through the EDM Wizard	1313
Using the ADO.NET Entity Designer	1315
Building an ASP.NET Page Using Your EDM	1316
Understanding Relationships	1320
One-to-One and One-to-Many Relationships	1320
Many-to-One and Many-to-Many Relationships	1323
Inheritance Within the EDM	1326
Using Stored Procedures	1332
The EntityDataSource Control	1335
Creating the Base Page	1335
Configuring the Data Source Control	1337
Summary	1341
Chapter 30: ASP.NET Dynamic Data	1343
Creating Your Base Application with Visual Studio 2008	1343
Looking at the Core Files Created in the Default Application	1344
The Dynamic Data Application	1345
Incorporating the Database	1351
Registering the Data Model Within the Global.asax File	1355
Styles and Layout	1357
Results of the Application	1357
Working with Dynamic Data Routes	1361
Controlling Display Aspects	1366
Summary	1368
Chapter 31: Building and Consuming Services	1369
Communication Between Disparate Systems	1369
Building a Simple XML Web Service	1371
The WebService Page Directive	1372
Looking at the Base Web Service Class File	1373

Contents

Exposing Custom Datasets as SOAP	1374
The XML Web Service Interface	1377
Consuming a Simple XML Web Service	1380
Adding a Web Reference	1380
Invoking the Web Service from the Client Application	1382
Transport Protocols for Web Services	1385
HTTP-GET	1386
HTTP-POST	1389
SOAP	1389
Overloading WebMethods	1390
Caching Web Service Responses	1393
SOAP Headers	1394
Building a Web Service with SOAP Headers	1395
Consuming a Web Service Using SOAP Headers	1397
Requesting Web Services Using SOAP 1.2	1399
Consuming Web Services Asynchronously	1401
Windows Communication Foundation	1404
The Larger Move to SOA	1404
WCF Overview	1405
Building a WCF Service	1405
Building the WCF Consumer	1413
Adding a Service Reference	1414
Working with Data Contracts	1417
Namespaces	1422
Summary	1422
Chapter 32: ADO.NET Data Services	1425
Creating Your First Service	1426
Adding Your Entity Data Model	1426
Creating the Service	1429
Querying the Interface	1434
Reading a Table of Data	1435
Reading a Specific Item from the Table	1436
Relationships	1438
Expanding on Associations	1441
Ordering in Result Sets	1445
Moving Around Result Sets	1445
Filtering Content	1446
Consuming ADO.NET Data Services in ASP.NET	1448
Summary	1452

Contents

Chapter 33: Localization	1453
Cultures and Regions	1453
Understanding Culture Types	1454
The ASP.NET Threads	1455
Server-Side Culture Declarations	1458
Client-Side Culture Declarations	1459
Translating Values and Behaviors	1461
ASP.NET 3.5 Resource Files	1468
Making Use of Local Resources	1468
Making Use of Global Resources	1475
Looking at the Resource Editor	1476
Summary	1478
Chapter 34: Configuration	1479
Configuration Overview	1480
Server Configuration Files	1481
Application Configuration File	1483
How Configuration Settings Are Applied	1484
Detecting Configuration File Changes	1485
Configuration File Format	1485
Common Configuration Settings	1486
Connecting Strings	1486
Configuring Session State	1487
Compilation Configuration	1491
Browser Capabilities	1493
Custom Errors	1495
Authentication	1496
Anonymous Identity	1499
Authorization	1500
Locking-Down Configuration Settings	1502
ASP.NET Page Configuration	1503
Include Files	1505
Configuring ASP.NET Runtime Settings	1505
Configuring the ASP.NET Worker Process	1508
Storing Application-Specific Settings	1510
Programming Configuration Files	1511
Protecting Configuration Settings	1518
Editing Configuration Files	1522
Creating Custom Sections	1523
Using the NameValueFileSectionHandler Object	1524
Using the DictionarySectionHandler Object	1526

Contents

Using the SingleTagSectionHandler Object	1527
Using Your Own Custom Configuration Handler	1528
Summary	1530
Chapter 35: Instrumentation	1531
Working with the Event Log	1531
Reading from the Event Log	1532
Writing to the Event Logs	1534
Using Performance Counters	1536
Viewing Performance Counters Through an Administration Tool	1537
Building a Browser-Based Administrative Tool	1540
Application Tracing	1545
Understanding Health Monitoring	1545
The Health Monitoring Provider Model	1547
Health Monitoring Configuration	1548
Writing Events via Configuration: Running the Example	1555
Routing Events to SQL Server	1556
Buffering Web Events	1559
E-mailing Web Events	1562
Summary	1567
Chapter 36: Administration and Management	1569
The ASP.NET Web Site Administration Tool	1569
The Home Tab	1571
The Security Tab	1571
The Application Tab	1580
The Provider Tab	1583
Configuring ASP.NET in IIS on Vista	1585
.NET Compilation	1587
.NET Globalization	1588
.NET Profile	1588
.NET Roles	1589
.NET Trust Levels	1590
.NET Users	1590
Application Settings	1591
Connection Strings	1592
Pages and Controls	1592
Providers	1593
Session State	1593
SMTP E-mail	1595
Summary	1595

Contents

Chapter 37: Packaging and Deploying ASP.NET Applications	1597
Deployment Pieces	1598
Steps to Take before Deploying	1598
Methods of Deploying Web Applications	1599
Using XCopy	1599
Using the VS Copy Web Site Option	1602
Deploying a Precompiled Web Application	1605
Building an Installer Program	1607
Looking More Closely at Installer Options	1616
Working with the Deployment Project Properties	1616
The File System Editor	1620
The Registry Editor	1624
The File Types Editor	1625
The User Interface Editor	1626
The Custom Actions Editor	1628
The Launch Conditions Editor	1629
Summary	1630
Appendix A: Migrating Older ASP.NET Projects	1631
Migrating Is Not Difficult	1631
Running Multiple Versions of the Framework Side by Side	1632
Upgrading Your ASP.NET Applications	1632
When Mixing Versions — Forms Authentication	1634
Upgrading — ASP.NET Reserved Folders	1635
ASP.NET 3.5 Pages Come as XHTML	1635
No Hard-Coded .js Files in ASP.NET 3.5	1637
Converting ASP.NET 1.x Applications in Visual Studio 2008	1638
Migrating from ASP.NET 2.0 to 3.5	1643
Appendix B: ASP.NET Ultimate Tools	1647
Debugging Made Easier	1647
Firebug	1648
YSlow	1649
IE WebDeveloper Toolbar and Firefox WebDeveloper	1650
Aptana Studio — JavaScript IDE	1651
Profilers: dotTrace or ANTS	1652
References	1654
PositionIsEverything.net, QuirksMode.org, and HTMLDog.com	1654
Visibone	1655
www.asp.net	1655

Contents

Tidying Up Your Code	1656
Refactor! for ASP.NET from Devexpress	1656
Code Style Enforcer	1657
Packer for .NET — JavaScript Minimizer	1658
Visual Studio Add-ins	1659
ASPX Edit Helper Add-In for Visual Studio	1659
Power Toys Pack Installer	1660
Extending ASP.NET	1661
ASP.NET AJAX Control Toolkit	1661
Atif Aziz's ELMAH — Error Logging Modules and Handlers	1662
Helicon's ISAPI_Rewrite	1663
General Purpose Developer Tools	1664
Telerik's Online Code Converter	1664
WinMerge and Differencing Tools	1665
Reflector	1666
CR_Documentor	1667
Process Explorer	1668
Summary	1669
Appendix C: Silverlight 2 and ASP.NET	1671
Getting Started	1671
Silverlight Controls	1674
Silverlight Control	1675
Media Player Control	1682
Silverlight and JavaScript	1684
JavaScript API	1684
HTML Bridge	1686
Summary	1691
Appendix D: ASP.NET Is Greater Than ASP.NET MVC	1693
Abstraction: What Web Forms Does Well	1694
A Basic Web Forms Application	1694
The Importance of Events	1698
The Leak: Where Web Forms Doesn't Exactly Fit	1699
ViewState	1701
Controlling Your Angle Brackets	1701
Client IDs	1701
Testing	1701
Back to Basics: ASP.NET MVC Believes . . .	1702
Orchestration vs. Composing	1702
Separation of Concerns: What It Means	1702

Contents

Approaches to Maintainability	1703
Caring About Testability	1703
Common Reactions to ASP.NET MVC	1705
This Looks Like Classic ASP from 1999!	1705
Who Moved My <asp:Cheese runat="server">?	1705
Yet Another Web Framework	1705
Why “(ASP.NET > ASP.NET MVC) == True”	1706
Convention Over Configuration	1708
Your First, er, Third, Request	1712
The Request Lifecycle	1714
Summary	1715
Appendix E: ASP.NET Online Resources	1717
Author Blogs	1717
ASP.NET Influential Blogs	1717
Web Sites	1718
Index	1719