
Table of Contents

Preface	xi
1. Introducing ASP.NET and the .NET Platform	1
What is ASP.NET?	2
Installing the Required Software	5
Installing the Web Server	6
Installing the .NET Framework and the SDK	9
Configuring the Web Server	11
Installing SQL Server 2005 Express Edition	22
Installing SQL Server Management Studio Express	22
Installing Visual Web Developer 2005	25
Writing your First ASP.NET Page	26
Getting Help	32
Summary	32
2. ASP.NET Basics	33
ASP.NET Page Structure	34
Directives	36
Code Declaration Blocks	37
Code Render Blocks	39
ASP.NET Server Controls	40
Server-side Comments	41
Literal Text and HTML Tags	42
View State	44
Working with Directives	47
ASP.NET Languages	48
Visual Basic	48
C#	49
Summary	49
3. VB and C# Programming Basics	51
Programming Basics	51
Control Events and Subroutines	52
Page Events	56
Variables and Variable Declaration	59
Arrays	62
Functions	65
Operators	68
Conditional Logic	70
Loops	72

Object Oriented Programming Concepts	76
Objects and Classes	77
Properties	80
Methods	81
Classes	81
Constructors	81
Scope	82
Events	83
Understanding Inheritance	83
Objects In .NET	84
Namespaces	86
Using Code-behind Files	87
Summary	91
4. Constructing ASP.NET Web Pages	93
Web Forms	94
HTML Server Controls	95
Using the HTML Server Controls	97
Web Server Controls	101
Standard Web Server Controls	103
List Controls	110
Advanced Controls	112
Web User Controls	126
Creating a Web User Control	126
Master Pages	132
Using Cascading Style Sheets (CSS)	135
Types of Styles and Style Sheets	136
Summary	141
5. Building Web Applications	143
Introducing the Dorknozzle Project	144
Using Visual Web Developer	147
Meeting the Features	148
Executing your Project	156
Using Visual Web Developer's Built-in Web Server	157
Using IIS	160
Core Web Application Features	166
Web.config	166
Global.asax	170
Using Application State	173
Working with User Sessions	180
Using the Cache Object	182

Using Cookies	183
Starting the Dorknozzle Project	186
Preparing the Sitemap	187
Using Themes, Skins, and Styles	189
Building the Master Page	195
Using the Master Page	199
Extending Dorknozzle	201
Debugging and Error Handling	204
Debugging with Visual Web Developer	204
Other Kinds of Errors	210
Custom Errors	212
Handling Exceptions Locally	213
Summary	218
6. Using the Validation Controls	219
Introducing the ASP.NET Validation Controls	220
Enforcing Validation on the Server	223
Using Validation Controls	229
RequiredFieldValidator	230
CompareValidator	231
RangeValidator	233
ValidationSummary	235
RegularExpressionValidator	236
CustomValidator	239
Validation Groups	242
Updating Dorknozzle	245
Summary	250
7. Database Design and Development	251
What is a Database?	252
Creating your First Database	254
Creating a New Database Using Visual Web Developer	255
Creating a New Database Using SQL Server Management Studio	256
Creating Database Tables	258
Data Types	262
Column Properties	264
Primary Keys	265
Creating the Employees Table	267
Creating the Remaining Tables	271
Populating the Data Tables	273
Relational Database Design Concepts	276

Foreign Keys	278
Using Database Diagrams	280
Implementing Relationships in the Dorknozzle Database	284
Diagrams and Table Relationships	287
Summary	292
8. Speaking SQL	293
Reading Data from a Single Table	294
Using the <code>SELECT</code> Statement	297
Selecting Certain Fields	299
Selecting Unique Data with <code>DISTINCT</code>	300
Row Filtering with <code>WHERE</code>	302
Selecting Ranges of Values with <code>BETWEEN</code>	303
Matching Patterns with <code>LIKE</code>	304
Using the <code>IN</code> Operator	305
Sorting Results Using <code>ORDER BY</code>	306
Limiting the Number of Results with <code>TOP</code>	307
Reading Data from Multiple Tables	307
Subqueries	308
Table Joins	309
Expressions and Operators	310
Transact-SQL Functions	313
Arithmetic Functions	314
String Functions	315
Date and Time Functions	317
Working with Groups of Values	318
The <code>COUNT</code> Function	319
Grouping Records Using <code>GROUP BY</code>	319
Filtering Groups Using <code>HAVING</code>	321
The <code>SUM</code> , <code>AVG</code> , <code>MIN</code> , and <code>MAX</code> Functions	322
Updating Existing Data	322
The <code>INSERT</code> Statement	323
The <code>UPDATE</code> Statement	324
The <code>DELETE</code> Statement	325
Stored Procedures	326
Summary	330
9. ADO.NET	331
Introducing ADO.NET	332
Importing the <code>SqlClient</code> Namespace	333
Defining the Database Connection	334
Preparing the Command	336

Executing the Command	337
Setting up Database Authentication	339
Reading the Data	342
Using Parameters with Queries	344
Bulletproofing Data Access Code	351
Using the Repeater Control	354
Creating the Dorknozzle Employee Directory	360
More Data Binding	365
Inserting Records	371
Updating Records	378
Deleting Records	394
Using Stored Procedures	397
Summary	399
10. Displaying Content Using Data Lists	401
DataList Basics	402
Handling DataList Events	406
Editing DataList Items and Using Templates	413
DataList and Visual Web Developer	422
Styling the DataList	424
Summary	426
11. Managing Content Using Grid View and Details View	427
Using the GridView Control	428
Customizing the GridView Columns	435
Styling the GridView with Templates, Skins, and CSS	436
Selecting Grid Records	440
Using the DetailsView Control	445
Styling the DetailsView	450
GridView and DetailsView Events	452
Entering Edit Mode	456
Using Templates	459
Updating DetailsView Records	463
Summary	468
12. Advanced Data Access	469
Using Data Source Controls	470
Binding the GridView to a SqlDataSource	472
Binding the DetailsView to a SqlDataSource	479
Displaying Lists in DetailsView	489
More on SqlDataSource	492
Working with Data Sets and Data Tables	494
What is a Data Set Made From?	497

Binding DataSets to Controls	498
Implementing Paging	504
Storing Data Sets in View State	506
Implementing Sorting	509
Filtering Data	520
Updating a Database from a Modified DataSet	521
Summary	526
13. Security and User Authentication	527
Basic Security Guidelines	528
Securing ASP.NET 2.0 Applications	530
Working with Forms Authentication	532
ASP.NET 2.0 Memberships and Roles	544
Creating the Membership Data Structures	544
Using your Database to Store Membership Data	547
Using the ASP.NET Web Site Configuration Tool	552
Creating Users and Roles	554
Changing Password Strength Requirements	556
Securing your Web Application	559
Using the ASP.NET Login Controls	561
Summary	569
14. Working with Files and Email	571
Writing and Reading Text Files	572
Setting Up Security	573
Writing Content to a Text File	576
Reading Content from a Text File	580
Accessing Directories and Directory Information	583
Working with Directory and File Paths	586
Uploading Files	590
Sending Email with ASP.NET	593
Configuring the SMTP Server	595
Sending a Test Email	597
Creating the Company Newsletter Page	601
Summary	610
A. Web Control Reference	611
The WebControl Class	611
Properties	611
Methods	612
Standard Web Controls	613
AdRotator	613
BulletedList	613

Button	614
Calendar	615
CheckBox	617
CheckBoxList	617
DropDownList	619
FileUpload	619
HiddenField	620
HyperLink	620
Image	621
ImageButton	621
ImageMap	622
Label	622
LinkButton	623
ListBox	623
Literal	624
MultiView	624
Panel	625
PlaceHolder	625
RadioButton	625
RadioButtonList	626
TextBox	627
Xml	628
Validation Controls	628
CompareValidator	628
CustomValidator	629
RangeValidator	630
RegularExpressionValidator	631
RequiredFieldValidator	632
ValidationSummary	633
Navigation Web Controls	634
SiteMapPath	634
Menu	635
TreeView	640
HTML Server Controls	643
HtmlAnchor Control	644
HtmlButton Control	644
HtmlForm Control	645
HtmlGeneric Control	646
HtmlImage Control	647
HtmlInputButton Control	647
HtmlInputCheckBox Control	648
HtmlInputFile Control	649

HtmlInputHidden Control	650
HtmlInputImage Control	651
HtmlInputRadioButton Control	652
HtmlInputText Control	653
HtmlSelect Control	653
HtmlTable Control	655
HtmlTableCell Control	656
HtmlTableRow Control	657
HtmlTextArea Control	658
Index	659