

Advanced Topics in Visual C# .NET Programming

What You Will Learn.....	1
Understanding Data Access in Visual Studio 2010	2
Understanding ADO .NET.....	2
What's New in Visual Studio 2010	3
Using the Data Source Configuration Wizard	4
Using the Data Sources Window	11
Examining Data Sources.....	11
Adding Data-Bound Objects to a Form	12
Viewing the Form	15
Filling the Dataset with Data	15
Using the BindingNavigator to Navigate Through, Insert, and Delete Rows	16
Updating the Underlying Database.....	16
Displaying Data from Related Tables.....	17
Using the Data Source Configuration Wizard to Reconfigure an Existing DataSet.....	17
Displaying Related Data on a Form.....	19
Using a DataGridView Control to Display Data	20
Working with Microsoft SQL Server Data.....	24
Configuring the SQL Server Data Source	24
Viewing Detail Data in a Windows Form.....	28
Exercise 1	29
Binding Data to Existing Controls.....	30
Understanding Simple vs. Complex Binding.....	30
Using the Data Sources Window for Simple Binding	30
Loading the Form.....	32
Using Complex Data Binding.....	33
Setting Up a BindingNavigator Control	34
Adding a BindingNavigator Control.....	34
Customizing the BindingNavigator	35
Programming the BindingNavigator Items.....	37
Using the BindingSource Component to Interact with Data	39
Using BindingSource Methods to Navigate Through Data	39
Viewing a Specific Record	41
Using Custom Controls to Insert and Delete Records	45
Filtering and Sorting Records	46

Exercise 2.....	48
Using the Dataset Designer.....	50
Creating Datasets	50
Editing a Dataset.....	52
Changing Column Properties.....	53
Adding Calculated Columns to a Data Table	54
Writing Queries for the TableAdapter	55
Understanding TableAdapter Queries.....	55
Editing the Fill Query	57
Adding New TableAdapter Queries (Using the Query Builder)	60
Executing the Query from a Form	65
Adding Queries with Parameters	66
Writing SELECT Statements to Return a Single Value (Optional).....	73
Exercise 3.....	75
Working with Related Tables	76
Creating a Relationship Between Data Tables.....	76
Using a BindingNavigator for Related Data.....	80
Creating a Lookup Table	81
Displaying Data from Multiple Tables in a DataGridView.....	82
Passing Data Between Forms.....	85
Understanding Foreign Key Constraints and Referential Integrity	87
Creating Relationships Between Tables in Different Databases	90
Exercise 4.....	95
Validating and Saving Data	97
Validating Data Using an ErrorProvider Control	97
Adding Error Handling to the Save Operation	100
Understanding Concurrency	101
Exercise 5.....	105
Creating Reports	106
Using the Report Wizard	106
Displaying the Report on a Windows Form	113
Appendix A: Programming a Dataset	114
Appendix B: Saving Data for Multiple Tables	121
Appendix C: Solutions to Exercises	123