

Advanced Topics in Visual Basic 2005: Data Access

What You Will Learn.....	1
Understanding Data Access in Visual Studio 2005	2
Understanding ADO .NET.....	2
What's New in Visual Studio 2005	2
Using the Data Source Configuration Wizard	4
Using the Data Sources Window	10
Examining Data Sources.....	10
Adding Data-Bound Objects to a Form	11
Viewing the Form	14
Filling the Dataset with Data	14
Using the BindingNavigator to Navigate Through, Insert, and Delete Rows	15
Updating the Underlying Database.....	15
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.....	31
Using Complex Data Binding.....	32
Setting Up a BindingNavigator Control	33
Adding a BindingNavigator Control.....	33
Customizing the BindingNavigator	34
Programming the BindingNavigator Items.....	36
Using the BindingSource Component to Interact with Data	37
Using BindingSource Methods to Navigate Through Data	37
Using Custom Controls to Insert and Delete Records	40
Filtering and Sorting Records	40
Exercise 2	43
Using the Dataset Designer.....	45
Creating Datasets	45

Editing a Dataset	47
Changing Column Properties	48
Adding Calculated Columns to a Data Table	49
Writing Queries for the TableAdapter	50
Understanding TableAdapter Queries	50
Editing the Fill Query	52
Adding New TableAdapter Queries (Using the Query Builder)	55
Executing the Query from a Form	60
Adding Queries with Parameters	61
Writing SELECT Statements to Return a Single Value	66
Exercise 3	68
Working with Related Tables	69
Creating a Relationship Between Data Tables	69
Using a BindingNavigator for Related Data	72
Creating a Lookup Table	73
Displaying Data from Multiple Tables in a DataGridView	75
Passing Data Between Forms	78
Understanding Foreign Key Constraints and Referential Integrity	81
Creating Relationships Between Tables in Different Databases	82
Exercise 4	89
Validating and Saving Data	91
Validating Data Using an ErrorProvider Control	91
Adding Error Handling to the Save Operation	93
Understanding Concurrency	94
Saving New Records in a Related Table	96
Exercise 5	98
Creating Reports with Crystal Reports	99
Using the Report Wizard	99
Understanding the Report Design and Layout	105
Displaying the Report on a Windows Form	106
Appendix A: Programming a DataSet	107
Creating a DataSet	107
Adding Columns to Tables	108
Adding Tables to DataSet	108
Adding Rows to Tables	109
Binding Controls from Code	111
Navigation with a CurrencyManager	111
Appendix B: Solutions to Exercises	114