

REVIEW LESSON

MTA Course: Windows Development Fundamentals

Lesson name: Windows Development Fundamentals 4.2A

Topic: Understand databound controls (One 50-minute class period)

File name: WinDevFund_RL_4.2A

Lesson Objective:

4.2: Understand databound controls. *This objective may include but is not limited to:* how data is bound to controls; how to display the data in the appropriate manner; forms and Windows® Presentation Foundation (WPF) binding; validating databound items.

Preparation Details

Prerequisite student experiences and knowledge

This MTA Certification Exam Review lesson is written for students who have learned about Windows application programming. Students who do not have the prerequisite knowledge and experiences cited in the objective will find additional learning opportunities using resources such as those listed in the Microsoft® resources and Web links at the end of this review lesson.

This lesson is intended to be completed after students have finished Lesson 4.1.

Instructor preparation activities

- For this lesson, students will need the database they created in Lesson 4.1. If they have not created that database, you may create it for them or have them use the Northwind sample database. Be sure to change the PowerPoint® slide for the Anticipatory Set if you do not use the database that students created in Lesson 4.1.

Resources, software, and additional files needed for this lesson:

- WinDevFund_PPT_4.2A
- Microsoft Visual Studio® 2008, or
 - Microsoft Visual Basic® 2008, Express Edition
(<http://www.microsoft.com/express/downloads/#2008-Visual-Basic>)
 - Microsoft Visual C#® 2008, Express Edition
(<http://www.microsoft.com/express/downloads/#2008-Visual-CS>)
- Access to a server running either of the following:
 - Microsoft SQL Server® 2008, Express Edition
(<http://www.microsoft.com/express/database/default.aspx>), or
 - Microsoft SQL Server 2008, Compact Edition
(<http://www.microsoft.com/sqlserver/2008/en/us/compact.aspx>)

Teaching Guide**Essential vocabulary:**

BindingNavigator—a control that provides a user interface for navigating with databound controls.

BindingSource—an intermediary between the controls on a form and the data source.

complex binding—data binding that is capable of displaying and editing multiple data elements.

data binding—the process of connecting controls to information in a data source so that it can be displayed or changed by a user.

DataGridView—a control that displays data in a customizable grid.

simple binding—data binding that is intended to display and edit a single data element.

Lesson Sequence**Activating prior knowledge/lesson staging (Anticipatory Set—5–10 minutes)**

1. *Student instruction (as indicated in the slideshow):* Create a form to display data from the student information database you created for Lesson 4.1:
 - Use *Labels* and *TextBoxes* for basic information about students, such as name (first and last), age, grade level, and gender.
 - For now, the *TextBoxes* will be blank—you will bind them to your database in today's lesson.
 - Be sure your form matches the database fields you have created.

Lesson activity (30–40 minutes)

1. Use the Microsoft PowerPoint® slideshow to review data binding. As directed in the slideshow's notes, stop and allow students to try the steps on their own applications.

Assessment/lesson reflection (5 minutes)

1. Direct each student to explain how controls are bound to data in Visual Studio, including a step-by-step list of instructions for simple binding.
2. Each student then reviews his or her steps with a partner. Together, they can identify missing steps or steps about which they are unclear.
 - Use the slideshow to help review as necessary.

Microsoft resources and Web links**MSDN Library: Windows Forms Data Binding**

(<http://msdn.microsoft.com/en-us/library/ef2xyb33.aspx>)

MSDN Library: WPF Data Binding Overview

(<http://msdn.microsoft.com/en-us/library/ms752347.aspx>)

MSDN: Windows Development for Beginners Tier 3

(<http://msdn.microsoft.com/en-us/beginner/bb308806.aspx>)

Lesson 9 covers data access and databinding

Simple Databinding in Windows Forms

(<http://windowsclient.net/learn/video.aspx?v=4189>)

Additional notes to the teacher:

- The student activity in this lesson focuses on databinding in Windows Forms. It is recommended that students also work with databinding in a WPF application, either as homework or during the next class period.