

## REVIEW LESSON

MTA Course: Web Development Fundamentals

Lesson name: Web Development Fundamentals 2.5

Topic: Bind controls to data by using data binding syntax

File name: WebDevFund\_RL\_2.5

### **Lesson Objective:**

**2.5:** Bind controls to data by using data binding syntax. *This objective may include but is not limited to:* ensure that data is updated and displayed in data-aware controls.

### **Preparation details**

#### **Prerequisite student experiences and knowledge**

This MTA Certification Exam Review lesson is written for students who have learned about Web design and Web 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.

Students should have knowledge of using Web controls to update data and how to manage database connections in a Web application.

#### **Instructor preparation activities**

For this lesson, you will need a computer with Microsoft Office 2007®, and Microsoft Visual Studio 2008® attached to a liquid crystal display (LCD) projector to display and review the attached Microsoft PowerPoint® document.

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

- WebDevFund\_PPT\_2.5
- A Windows®-based PC with installed Web development software.  
Examples include: 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>)

- Microsoft Visual Web Developer 2008, Express Edition  
(<http://www.microsoft.com/express/downloads/#2008-Visual-Web-Developer>)

### **Teaching Guide**

#### **Essential Vocabulary:**

**control**—in a graphical user interface, an object on the screen that can be manipulated by the user to perform an action.

**data binding**—the process that establishes a connection between the application user interface (UI) and business logic. If the binding has the correct settings and the data provides the proper notifications, then, when the data changes its value, the elements that are bound to the data reflect changes automatically. Data binding can also mean that if an outer representation of the data in an element changes, then the underlying data can be updated automatically to reflect the change. For example, if the user edits the value in a *TextBox* element, the underlying data value is updated automatically to reflect that change.

**data-aware control**—a control that allows the control to bind to data. Data-aware controls are distinguished by the presence of the *DataSource* property.

### **Lesson Sequence**

#### **Activating prior knowledge/lesson staging (15–20 minutes)**

##### **Warm-up Activity—“Data, Data, Data”**

1. Discuss briefly with the class the rationale for linking to data in a website. It would be useful to define the role a database plays in that scenario.
2. Instruct students (in groups of two to three) to “storyboard” a simple website that has:
  - i. At least one data-aware control
  - ii. One data source that is linked to that control (that is, an event calendar or data table) with the events stored in a database
3. Each group will briefly describe its example.

#### **Lesson activity (20 minutes)**

1. Using the WebDevFund\_PPT\_2.5 presentation, review the concepts for this lesson.

2. The activity for this lesson is continued with Lesson 2.6, “Manage Database Connections and Databases.”
  - a. Students will demonstrate how a data-aware control is created and then linked to database.
3. Discuss the key objectives of the review assignment.

**Assessment/lesson reflection (10 minutes)**

1. Ask students to identify three examples of Web services and why they are useful.
2. Wrap up and provide homework/enrichment opportunities.

**Microsoft resources and Web links**

Students who wish to explore this lesson topic further may visit the following links:

**Video lessons and references on data-binding controls**

*<http://www.asp.net/learn/videos/video-08.aspx>*

**Microsoft ASP.NET**

*<http://www.asp.net>*

**Suggested best practices:**

- It may be beneficial to display code examples using the LCD projector for each of the major concepts, particularly when the vocabulary is being reviewed.  
Randomly choose students to demonstrate the concepts to the class.