

## REVIEW LESSON

MTA Course: Web Development Fundamentals

Lesson name: Web Development Fundamentals 1.3 (One 50-minute class period)

Topic: Understand state information in Web applications

File name: WebDevFund\_RL\_1.3

### **Lesson Objective:**

**1.3:** Understand state information in Web applications. *This objective may include but is not limited to:* understand how state is stored based on application design and hardware; understand different types such as session state, view state, control state, and application state

### **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 lesson.

#### **Instructor preparation activities**

For this lesson, you will need a computer with Microsoft Office 2007® attached to a liquid crystal display (LCD) projector to display and review the attached Microsoft PowerPoint® document. You will also need Web development software such as Microsoft Expression Web or Microsoft Visual Web Developer.

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

- Office (preferably 2007)
- LCD projector
- Microsoft Visual Basic 2008®, Express Edition

- Microsoft Visual C# 2008®, Express Edition
- Microsoft Visual Web Developer 2008, Express Edition
- WebDevFund\_PPT\_1.3
- WebDevFund\_SA\_1.3

### **Teaching Guide**

#### **Essential Vocabulary:**

**application state**—A data repository available to all classes in an ASP.NET application that enables sharing of global information across multiple sessions, users, and requests within an ASP.NET application

**control state**—Persists control information that must be retained between postbacks, even if view state is disabled for the page or for a control. Control state is stored in one or more hidden fields.

**session state**—Enables you to store and retrieve values for a specific user's session as the user navigates ASP.NET pages in a Web application.

**view state**—Is used to preserve page and control values between client and server. It provides state information available within a single page. *Note:* this only provides state information for a specific ASP.NET page.

### **Lesson Sequence**

#### **Activating prior knowledge/lesson staging (10 minutes)**

1. Discuss the data types that can be captured and stored at various states and on the server, such as strings, integers, Boolean values, array objects, ArrayList objects, hash tables, and custom type converters. If students are not comfortable with any of these data types, provide them with definitions and examples of each.
2. Use this time for the PowerPoint presentation.
3. Link to the Ramp-Up site and review the article titled: "State Management" as a review for this lesson: <http://msdn.microsoft.com/en-us/rampup/dd861531.aspx>

**Lesson activity (30 minutes)**

1. Distribute Student Activity Worksheet WebDevFund\_SA\_1.3, which requires students to download an activity from the Ramp-Up site (approximately 30 minutes). Test the final product to ensure that it works as expected in a Web browser

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

1. Ask the students to reflect on the activity and provide areas that need additional explanation.
2. Wrap up and provide homework/enrichment opportunities.

**Microsoft resources and Web links**

Ramp-Up (Lesson 7):

<http://msdn.microsoft.com/en-us/rampup/dd861531.aspx/>

The official Microsoft ASP.NET site (Lesson 4):

<http://www.asp.net/get-started/>

**Additional activities (homework or enrichment):**

1. Have the students watch the video on understanding Web application state (40 minutes): <http://www.asp.net/learn/3.5-videos/video-11.aspx>
2. Tell them to review any of the other videos that address parts of the Web Developer Fundamentals.

**Suggested best practices:**

- Peer review and class presentations encourage collaboration and quality products.
- Use the prompting questions from Bloom's taxonomy such as:
  - How can you use...?
  - Why do you think...?
  - Can you list the parts...?
  - Can you make changes to solve...?
  - Can you predict the outcome if ...?
  - Can you identify the different parts...?

**(More are available if you research Bloom's Taxonomy.)**