

REVIEW LESSON

MTA Course: Web Development Fundamentals
Lesson name: Web Development Fundamentals 3.2
Topic: Handle Web application errors
File name: WebDevFund_RL_3.2

Lesson Objective:

3.2: Handle Web application errors. *This objective may include but is not limited to:*
HTTP error codes.

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 experience debugging Web applications and identifying possible errors that might occur in their programs.

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:

- 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>)
- WebDevFund_PPT_3.2

Teaching Guide**Essential vocabulary:**

exception—in .NET programming, an exception is an error that occurs at run time and is thrown (or raised). Exception handlers can catch exceptions and try to fix the problem, report it, or ignore it. If an unhandled exception occurs during the execution of a service handler, DSS automatically terminates execution of the handler, converts the exception to a fault, and sends it back to the requester.

HTTP—acronym for Hypertext Transfer Protocol, which is used to carry requests from a browser to a Web server and to transport pages from Web servers back to the requesting browser.

handler—a portion of code that processes a particular type of message. This might be a separately defined method or an anonymous delegate (inline code).

Lesson sequence**Activating prior knowledge/lesson staging (10 minutes)****Warm-up activity—“Tracing”**

1. Use this link to view code for application-level error handling:
[http://msdn.microsoft.com/en-us/library/ed577840\(v=VS.90\).aspx](http://msdn.microsoft.com/en-us/library/ed577840(v=VS.90).aspx)
2. Use this site to view complete code examples:
[http://msdn.microsoft.com/en-us/library/bb397417\(v=VS.90\).aspx](http://msdn.microsoft.com/en-us/library/bb397417(v=VS.90).aspx)
3. Give individual students the opportunity to explain to the class what is happening in each example.

Lesson activity (30 minutes)

1. Using the WebDevFund_PPT_3.2 PowerPoint presentation, review the concepts for this lesson.
 - a. Provide students with time to try some of the code samples in the “Activating prior knowledge/lesson staging” section of this review lesson. Students should write sample code snippets in Visual Basic and C# to see how the error handling process works.
2. Discuss the key objectives of the review assignment.

Assessment/lesson reflection (10 minutes)

1. Ask students to explain HTTP error handling and why it is important to include code for these types of errors.
2. Wrap up and provide homework/enrichment opportunities.

Microsoft resources and Web links

HTTP error trapping:

<http://msdn.microsoft.com/en-us/library/aa478986.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. It may also be advantageous to have students complete this activity in small groups.