

STUDENT ACTIVITY 4.2 KEY

MTA Course: Web Development Fundamentals
Lesson name: Web Development Fundamentals 4.2
Topic 4.2: Understand AJAX concepts
File name: WebDevFund_SA_4.2_Key

Lesson Objective:

4.2: Understand AJAX concepts.

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

- A Windows[®]-based PC with installed Web Development Software.
Examples include 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>)
 - Microsoft Visual Web Developer 2008, Express Edition
(<http://www.microsoft.com/express/downloads/#2008-Visual-Web-Developer>)
- Use these sites for additional information:
Video lessons and references on using AJAX:
<http://www.asp.net/learn/ajax/>
<http://www.asp.net/learn/ajax-videos/video-95.aspx>

Directions to the student:

Explore the tutorial at <http://www.asp.net/learn/Ajax/tutorial-01-cs.aspx> using Microsoft Visual Web Developer or the Express version to complete the tutorial activity. Answer the following questions.

Questions:

1. List problems with server-side processing that AJAX addresses.
Page updates require a round -trip to the server, which requires a page refresh. Round -trips do not persist any effects generated by JavaScript or other client-side technology (such as Adobe Flash). During postback,

browsers other than Windows Internet Explorer® do not support automatically restoring the scroll position. And even in Internet Explorer, there is still a flicker as the page is refreshed. Postbacks may involve a high amount of bandwidth as the `__VIEWSTATE` form field may grow, especially when dealing with controls such as the *GridView* control or repeaters. There is no unified model for accessing Web Services through JavaScript or other client-side technology.

2. List some of the benefits of using AJAX to do partial page updates.
Answers may vary, but they should include some discussion the state of your multimedia (such as Adobe Flash or Windows Media) is unchanged, bandwidth costs are reduced, and the client does not experience the flicker usually associated with a postback.
3. What is the role of the *ScriptManager* control?
It provides access to the script library (including the extensive client-side script type system), supports partial rendering, and provides extensive support for additional ASP.NET services (such as authentication and profiling, but also other Web Services). The *ScriptManager* control also provides globalization and localization support for the client scripts.