STUDENT ACTIVITY 1.6

MTA Course: Web Development Fundamentals
Lesson name: Web Development Fundamentals 1.6
Topic: Understand configuration files
File name: WebDevFund_SA_1.6

Lesson Objective:

1.6: Understand configuration files. *This objective may include but is not limited to:* Understanding the usage of Web.config and Machine.config, and the settings that can be made.

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

- 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*)
- Additional information:
  http://www.asp.net/learn/videos/video-284.aspx
  http://msdn.microsoft.com/en-us/library/1xtk877y%28VS.71%29.aspx

Directions to the student:

1. Visit the following link and answer the following questions.
   http://support.microsoft.com/kb/815179#3
   - **a.** What type of file is a Web.config file? _____
   - **b.** List two tags that are necessary for the file to function properly within an ASP.NET application. _____
   - **c.** True or False: A Machine.config file contains settings that override the Web.config file. _____
2. Open Visual Studio and create a new ASP.NET project.

3. Add configuration settings to the Web.config file. Most ASP.NET applications come with a prebuilt Web.config file that can be edited with any text editor such as Notepad. Generally, Web.config files contain comments that make editing the file self-explanatory. However, you may have to add configuration items to a Web.config file that does not already have the configuration item defined.
   To add a standard configuration item to a Web.config file, follow these steps:

   a. Open the Machine.config file in a text editor such as Notepad.
      The Machine.config file is located in the %SystemRoot%\Microsoft.NET\Framework\%VersionNumber%\CONFIG\ directory of the 2.0 version installation of the .NET framework. Versions 3.0 and 3.5 are built on 2.0 version installation and use its Machine.config file rather than having their own. Check the documentation if using a different version of .NET. In the Machine.config file, locate the configuration setting that you want to override with your application's Web.config file. Because the Machine .config file must be a well-formed XML document, the elements must be defined using an opening tag (*<element_name>)* and a closing tag (*</element_name>), unless the element is a self-closing tag.* If the element is defined as a self-closing tag, it will look similar to *<element_name attribute1="option" attribute2="option" />*. Any white space is ignored. Therefore, the element may span multiple lines. Often, elements of confi*guration files* may are preceded *by a comment to help describe the element's use and possible values. C*omments are contai*ned inside <!-- and* --> markings. The comments for the Machine.config file are usually included in a separate file named *Machine.config.comments The <trace> configuration elem*ent example that follows, is an example of a self-closing element tag, has multiple attributes, spans multiple lines, and is preceded by a comment to explain its purpose and use.

```
<!--

trace Attributes:

enabled="[true|false]" - Enable application tracing

localOnly="[true|false]" - View trace results from localhost only

pageOutput="[true|false]" - Display trace ouput on individual
pages

requestLimit="[number]" - Number of trace results available in
trace.axd

traceMode="[SortByTime|SortByCategory]" - Sorts trace result
displays based on Time or Category

-->

    <trace

enabled="false"
```

```
localOnly="true"
pageOutput="false"
requestLimit="10"
traceMode="SortByTime"
/>
```

b. Copy the whole configuration element and any associated comments to the clipboard.

4. Determine the element's nested location within the Machine.config file.
   The Machine.config file is hierarchical, and the configuration elements must be nested properly within other elements. When you copy a configuration element from the Machine.config file to the Web.config file, you must nest that configuration element in the same element that it was copied from. To determine the element of the Machine.config file that the configuration element is contained in, scroll up in the Machine.config file until you find an element that is opened, not closed. The containing element is simple to identify because higher-level elements are typically shown with less indentation.
   Most ASP.NET configuration items are contained in the <*system.web*></*system.web*>)
   Note the element that your configuration element is contained in. You must paste that element in the same element in the Web.config file. A configuration element may be nested in multiple elements. You must create all higher-level elements in the Web.config file.

5. Close the Machine.config file, and then use your text editor to open the Web.config file in the root directory of your ASP.NET application.

6. Paste the configuration element between the beginning and the end of the element that you identified in step 4.
   For example, if the configuration item is contained in the <*system.web*> element, the configuration item must be pasted immediately after the opening line of the **<***system.web***>** element and before the **</***system.web***>** closing line.

7. Modify your Web application's Web.config file to override the server's Machine.config file's configuration element which you chose in step 'b' to override.Modify the setting for that element in your Web application's Web.config file. This setting now applies to the folder that contains the Web.config file and all its subfolders.

Note: Be prepared to present your solution to the class.