Module 1

Overview of HTML and CSS

Module Overview

- Overview of HTML
- Overview of CSS
- Creating a Web Application by Using Visual Studio

Lesson 1: Overview of HTML

- The Structure of an HTML Page
- Tags, Elements, Attributes, and Content
- Displaying Text in HTML
- Displaying Images and Linking Documents in HTML
- Gathering User Input by Using Forms in HTML
- Demonstration: Creating a Simple Contact Form
- Attaching Scripts to an HTML Page

The Structure of an HTML Page

- All HTML pages have the same structure
  - DOCTYPE declaration
  - HTML section containing:
    - Header
    - Body

- Each version of HTML has its own DOCTYPE
  - The browser uses the DOCTYPE declaration to determine how to interpret the HTML markup
  - For HTML5 pages, specify a DOCTYPE of **html**

Tags, Elements, Attributes, and Content

- HTML elements define the structure and semantics of content on a web page
- Elements identify their content by surrounding it with a start and an end tag
- Elements can be nested:

```
<p>
   <strong>Elements</strong> consist of
   <strong>content</strong> bookended by a
   <em>start</em> tag and an <em>end</em> tag.
</p>
```

- Use attributes to provide additional information about the content of an element

Displaying Text in HTML

Text in HTML can be marked up:

- As headings and paragraphs

```
<h1>An Introduction to HTML</h1>
<p>In this module, we look at the history of HTML and CSS.</p>
<h2>In the Beginning</h2>
<p>WorldWideWeb was created by Sir Tim Berners-Lee at CERN. </p>
```

- With emphasis

```
To <strong>emphasize</strong> is to give extra weight to (a communication); <em>"Her gesture emphasized her words"</em>
```

- In lists

```
<ul>
  <li>Notepad</li>
  <li>Textmate</li>
  <li>Visual Studio</li>
</ul>
```

Displaying Images and Linking Documents in HTML

- Use the <img> tag to display an image
  - The src attribute specifies the URL of the image source:

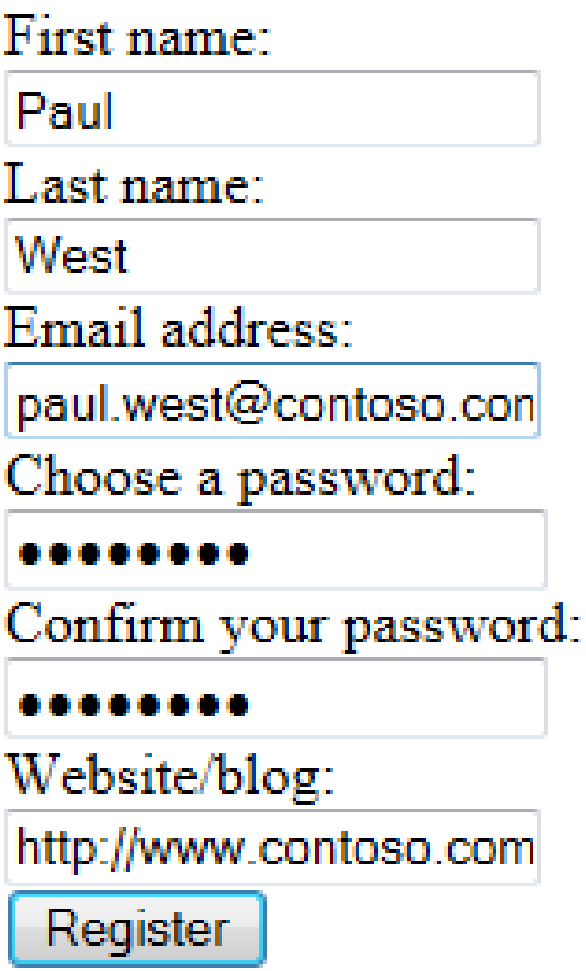
```
<img src="logo.jpg" alt="My Web site logo" height="100" width="100" />
```

- Use the <a> tag to define a link
  - The href attribute specifies the target of the link:

```
<a href="default.html" alt="Home Page">Home</a>
```

Gathering User Input by Using Forms in HTML

- The <form> element provides a mechanism for obtaining user input
  - The action attribute specifies where the data will be sent
  - The method attribute specifies how the data will be sent
  - Many different input types are available



Demonstration: Creating a Simple Contact Form

In this demonstration, you will see how to:

- Create an HTML Page
- Add Content to the Page
- Add a Form with Input Controls
- View the Page

Attaching Scripts to an HTML Page

- HTML is static, but pages can use JavaScript to add dynamic behavior
- Use the <script> element to specify the location of the JavaScript code:

```
<script type="text/javascript" src="alertme.js"></script>
```

  - The order of <script> elements is important
  - Make sure objects and functions are in scope before they are used
- Use the <noscript> element to alert users with browsers that have scripting disabled.

Lesson 2: Overview of CSS

- Overview of CSS Syntax
- How CSS Selectors Work
- How HTML Inheritance and Cascading Styles Affect Styling
- Adding Styles to An HTML Page

Overview of CSS Syntax

- All CSS rules have the same syntax:

```
selector {
  property1:value;
  property2:value;
  ..
  propertyN:value;
}
```

- Comments are enclosed in /* ... */ delimiters

```
/* Targets level 1 headings  */
h1 {
  font-size: 42px;
  color: pink;
  font-family: 'Segoe UI';
}
```

How CSS Selectors Work

- There are three basic CSS selectors
  - The element selector: h2{}
  - The class selector: .myClass {}
  - The id selector: #thisId {}

- CSS selectors can be combined to create more specific rules
- The wildcard * selector returns the set of all elements
- Use […] to refine selectors based on attribute values

How HTML Inheritance and Cascading Styles Affect Styling

- HTML inheritance and the CSS cascade mechanism govern how browsers apply style rules
- HTML inheritance determines which style properties an element inherits from its parent
- The cascade mechanism determines how style properties are applied when conflicting rules apply to the same element

Adding Styles to An HTML Page

- Use an element's style attribute to define styles specific to that element:

```
<p style="color:blue;">
some text </p>
```

- Use the <style> element in the <head> to include styles specific to a page:

```
<style type="text/css">
   p { color: blue; }
</style>
```

- Use the <link> element to reference an external style sheet:

```
<link rel="stylesheet" type="text/css" href="mystyles.css" media="screen">
```

Lesson 3: Creating a Web Application by Using Visual Studio

- Developing Web Applications by Using Visual Studio
- Demonstration: Creating a Web Site by Using Visual Studio
- Using the Internet Explorer F12 Developer Tools
- Demonstration: Exploring the Contoso Conference Application

Developing Web Applications by Using Visual Studio

- Visual Studio provides tools for:
  - Creating a web application project, and adding folders to structure the content
  - Debugging JavaScript code, examining and modifying variables, and viewing the call stack
  - Deploying a web application to a web server or to the cloud

- Visual Studio features include:
  - Full support for HTML5
  - IntelliSense for JavaScript code
  - Support for CSS3 properties and values
  - CSS color picker

Demonstration: Creating a Web Site by Using Visual Studio

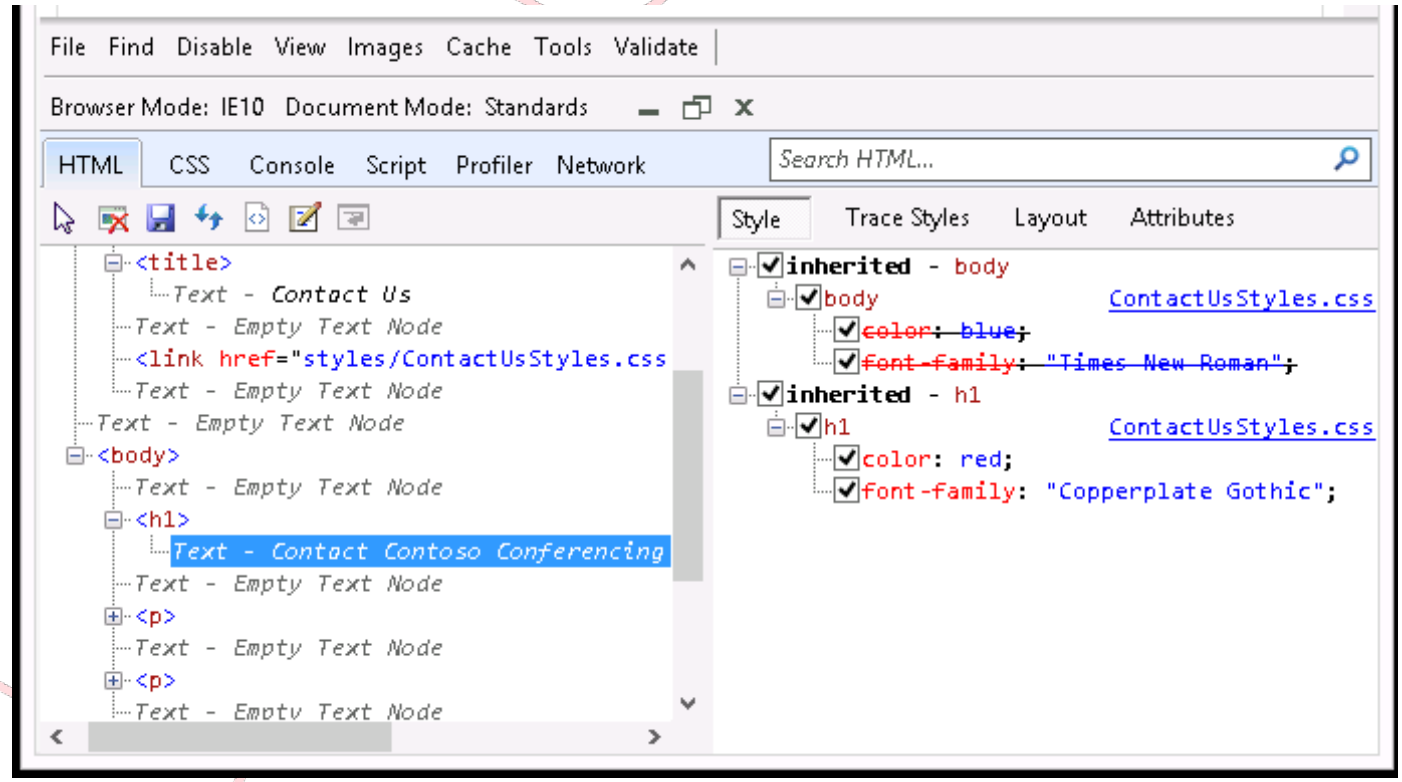
In this demonstration, you will see how to:

- Create a Web Site Project
- Add and Edit files in the Project
- Run the Web Application
- Modify the Live Application

Using the Internet Explorer F12 Developer Tools

The F12 Developer Tools enables developers to:

- Inspect and validate HTML and CSS
- Run and debug JavaScript code
- Profile page load times
- View a page as if it were being viewed in any version of Internet Explorer from v7.0 onwards



Demonstration: Exploring the Contoso Conference Application

In this demonstration, you will learn how to open the Contoso Conference application in Visual Studio, and how to run the application.

Lab: Exploring the Contoso Conference Application

- Exercise 1: Exploring the Contoso Conference Application
- Exercise 2: Examining and Modifying the Contoso Conference Application

Lab Scenario

- ContosoConf is an annual technical conference that describes the latest tools and techniques for building HTML5 web applications. The conference organizers have created a web site to support the conference, using the same technologies that the conference showcases.

- You are a developer that creates web sites by using HTML, CSS, and JavaScript, and you have been given access to the code for the web site for the latest conference. You decide to take a look at this web application to see how it works, and how the developer has used Visual Studio 2012 to create it.

Module Review and Takeaways

- Review Question(s)