

Web Design with HTML5 and CSS3 - Level

1

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Level 1

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ABOUT THIS COURSE

While using the Internet, you would have probably encountered various attractive and useful websites, and you may have formed your own opinions of their capabilities and limitations. However, merely using the Internet will not give you an understanding of how these sites are created. You may want to master the basic concepts and technologies required to efficiently function as a web designer. You may also want to gain a deeper understanding of the functioning of the Internet, markup languages, and style sheets. In this course, you will examine the basics of web technology and create functional web pages using HTML5 and CSS3.

You have surfed the Internet and now you have an interest in creating web pages. Every web designer wants to create an effective and successful website. If users find your website disoriented and difficult to navigate, they may not visit your website again. HTML5 and CSS3 are some of the most integral and evolving web technologies that enable you to structure content and present them for the web. Knowledge of these technologies will help you create web pages that are easy to read and appealing to users. Web design with HTML5 and CSS3 – Level 1 lays the foundation for mastering these two popular web publishing technologies.

Course Description

Target Student

This course is targeted at students who want to learn web design for their personal use or for business purposes.

Course Prerequisites

To take this course, students should be familiar with Windows or Mac operating systems, word processing skills, and the Internet.

How to Use This Book

As a Learning Guide

This book is divided into lessons and topics, covering a subject or a set of related subjects. In most cases, lessons are arranged in order of increasing proficiency.

The results-oriented topics include relevant and supporting information you need to master the content. Each topic has various types of activities designed to enable you to practice the guidelines and procedures as well as to solidify your understanding of the informational material presented in the course.

At the back of the book, you will find a glossary of the definitions of the terms and concepts used throughout the course. You will also find an index to assist in locating information within the instructional components of the book.

As a Review Tool

Any method of instruction is only as effective as the time and effort you are willing to invest in it. In addition, some of the information that you learn in class may not be important to you immediately, but it may become important later on. For this reason, we encourage you to spend some time reviewing the topics and activities after the course. For additional challenge when reviewing activities, try the **How You Do It** column.

As a Reference

The organization and layout of the book make it easy to use as a learning tool and as an after-class reference. You can use this book as a first source for definitions of terms, background information on given topics, and summaries of procedures.

Course Objectives

In this course, you will use HTML5 to create and design web pages.

You will:

- create a basic web page.
- structure content.
- apply styles.
- work with tables.
- navigate a website.

Course Requirements

Hardware

Classroom Computers

On each student's machine, you need the following hardware.

- 1 GHz Pentium-class processor or faster.
- Minimum 256 MB of RAM (512 MB of RAM recommended).
- 10 GB hard disk or larger (You should have at least 50 MB of free hard disk space available for installing the web browsers).
- CD-ROM drive.
- Keyboard and mouse or other pointing device.
- 1024 x 768 resolution monitor recommended.
- Network cards and cabling for local network access.
- Internet access (contact your local network administrator).
- A projection system to display the instructor's computer screen.

Software

- Internet Explorer 9.0
- Mozilla Firefox 8.0
- Google Chrome 17.0
- Notepad++

Class Setup

Microsoft Internet Explorer 9.0 Setup

1. Download Internet Explorer 9 from www.microsoft.com
2. In the **Open File- Security Warning** dialog box, click
3. In the **Windows Internet Explorer 9** dialog box, click
4. After the installation is complete, click **Restart now**.

Mozilla Firefox 8.0 Setup

1. Download the Mozilla Firefox setup file from <http://www.mozilla.org/en-US/firefox/new/>.
2. Double-click the **Mozilla Firefox.exe** file.
3. In the **Open-File Security Warning** dialog box, click **Run**.
4. In the **Mozilla Firefox Setup** dialog box, click **Next**.
5. Verify that the **Standard** option is selected and click **Next**.
6. Click **Install** to continue.

7. Deselect the **Launch Firefox now** option and click **Finish**.

Google Chrome 17.0 Setup

1. Navigate to **www.google.com/chromen**.
2. Click **Download Google Chrome**.
3. In the **Google chrome** dialog box, uncheck the **Set Google chrome as my default browser** check box and click **Accept and Install**.
4. In the **Application Run- Security Warning** dialog box, click **Run**.

NotePad++ Setup

1. Navigate to **http://notepad-plus-plus.org/**.
2. Click **Download**.
3. In the **Opening npp** dialog box, click **Save File**.
4. Double-click the **npp.Installer.exe** file.
5. In the **Installer Language** dialog box, verify that the **English** option is selected and click **OK**.
6. In the **Notepad++ Setup** dialog box, click **Next**.
7. Choose your desired destination folder and click **Next**.
8. Verify that the **Context Menu Entry, Auto-completion files, Plugins, Auto-Updater** option is selected and click **Install**.
9. Uncheck the **Run Notepad++** check box and click **Finish**.

Data Files

1. The data file executable 085736dd.exe is set up to extract the course data files to the 085736Data folder on the C drive.

List of Additional Files

Printed with each activity is a list of files students open to complete that activity. Many activities also require additional files that students do not open, but are needed to support the file(s) students are working with. These supporting files are included with the student data files on the course CD-ROM or data disk. Do not delete these files.

LESSON 1

Creating a Basic Web Page

Lesson Time

1 hour(s), 50 minutes

In this lesson, you will create a basic web page.

You will:

- Describe the basic concepts of the web.
- Create a basic web page.
- Format a web page.
- Create lists.

Introduction

HyperText Markup Language (HTML) is one of the most popular web technologies used to create and modify web pages. To create functional and attractive web pages, you need to know coding language and understand its concepts. In this lesson, you will use HTML 5.0 to create a basic web page with text and graphics.

A website should be organized, easy to use, and attractive to end users. You need to understand the basic concepts and technologies related to the Internet to design a captivating website. Your knowledge of markup languages and their elements will enable you to create web pages that function properly, as well as to appeal to the needs and sensibilities of different users.

TOPIC A

Describe the Basic Concepts of the Web

In this lesson, you will create a basic web page. Before you create a web page, it is important that you know how the Internet works and its various components. In this topic, you will describe the basic concepts of the web.

You have viewed different websites while surfing the Internet. To create a web page, your knowledge of the Internet and its related technologies is essential. This fundamental knowledge is the first step toward creating a website that is user friendly as well as technologically advanced.

The World Wide Web

The *World Wide Web* (WWW), or simply “the web,” is a part of the Internet that stores and connects an incredibly large quantity of hypertext multimedia documents called web pages. You can view and interact with the content presented on these web pages by using a *web browser*.

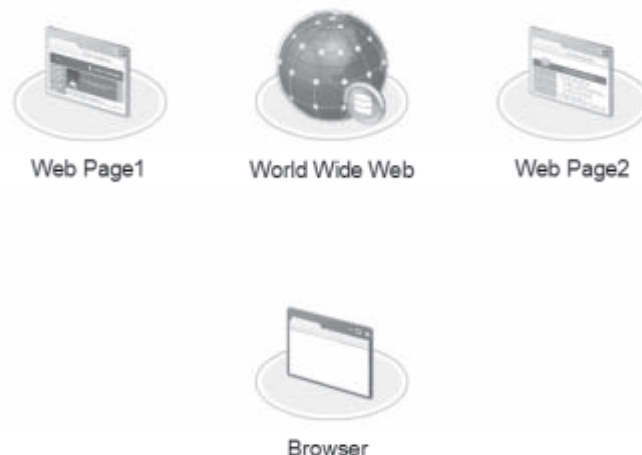


Figure 1-1: The World Wide Web.

Web Browsers

A web browser is a software program used for accessing information and resources on the web. It enables users to retrieve and view web pages on the Internet. Some of the widely used web browsers are Microsoft's Internet Explorer, Google's Chrome, Apple's Safari, Mozilla's Firefox, and Opera. Safari, Firefox, and Chrome support many features of HTML5, while other popular browsers are slower in adopting HTML5 features.

Web Servers

A web server is a remote computer on the Internet that stores, processes, and distributes web content and other resources to web clients. It is configured to run server software and is capable of listening and responding to requests from web clients. A web server stores all the individual web pages of websites and supporting components, including graphics, animations, and scripts. The server, upon request, sends web pages along with their supporting components to web clients.

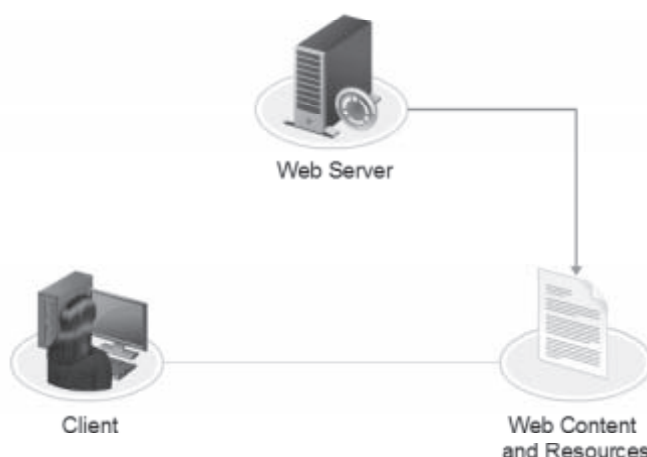


Figure 1-2: A web server.

Web Pages Retrieval

The process of retrieving web pages includes three steps:

1. When you enter a web address in a browser's Address bar, the browser makes a request to a web server. This request is called an *HTTP* request.
2. The web server receives the HTTP request from the browser, processes any scripts that may be found within the requested file, and then sends the file encoded with a markup language to the browser.
3. The browser then decodes the received file and interprets its content to display it.



Figure 1-3: The web page retrieval process.

Local Computer Storage

Local computer storage enables you to store and retrieve html pages from your computer. This allows you to test web pages before you upload them to a web server.

Markup Languages

Definition:

A *markup language* is a set of elements that allows you to render content on a browser or in print. Elements, usually consisting of open and close tags, are separated from the content by enclosing them within angular brackets. The content types that markup languages enable you to render include text, graphics, mathematical symbols, and even musical notations.

Some of the well known and widely used markup languages include HTML, XHTML, MathML, and MusicXML.

Example:

Set of symbols {

```
<body>
<p>

</p>
<a href="index.html">Home</a>
<h3>Our Community</h3>
<p>
Chermont is a large city located in the Northeast United States. It has a
population of just under 2 million, its size being comparable to cities such
as Houston. The city, positioned at a key point on a major river, is a hub
for trade in the region.
</p>
</body>
```

Figure 1-4: An example of a markup language.

Types of Markup Languages

Several markup languages are available and used for various purposes.

Markup Language	Description
Standard Generalized Markup Language (SGML)	SGML was developed in the 1960s to define the syntax of a markup language. A markup language defined by SGML is called an SGML application.
HyperText Markup Language (HTML)	HTML was invented by Tim Berners-Lee in 1989 as a publishing language of the web. The term “HyperText” is used because HTML files enable navigation from one web page to another using hyperlinks.
Extensible Markup Language (XML)	XML began in the mid 1990s as a subset of SGML and is used to define the syntax of a markup language. It is extensible in the sense that it allows developers to create and define elements.
Extensible HyperText Markup Language (XHTML)	XHTML 1.1 became a World Wide Web Consortium (W3C) recommendation on May 31, 2001. XHTML is a combination of XML and HTML and inherits the advantages of both languages.

HTML

HTML is the most commonly used markup language to create web pages consisting of text, graphics, links, animated content, and interactive features. HTML pages are composed of individual HTML elements that include text, graphics, and multimedia.

HTML was designed to deal with the structure and content of any web page, in addition to controlling the presentation of content. It is also lenient with coding errors, such as mismatched or incomplete markups. For these reasons, HTML is known to be a flexible markup language.

HTML 4.0 vs. HTML 5.0

HTML5 is the latest version of HTML and is no longer a part of SGML. Some of the differences between HTML 4.0 and HTML 5.0 are:

- Uniform error handling.
- New parsing rules.
- New tag elements such as nav, section, and aside.
- Support for new input attributes and global attributes.

Benefits of HTML5

HTML5 is a revision of HTML4 and XHTML 1.1 and is the next important step toward creating a more semantic web. It is a core web design language that web developers need to use to create dynamic web pages and is supported by all major browsers.

HTML5 provides a number of benefits including:

- Flexibility in error handling.
- Simplification of doctype.
- Usage of casual syntax.
- Validation of JavaScript.
- Availability of new elements such as header, footer, nav, and aside.
- Availability of canvas elements.
- Support for offline storage of vast quantity of data.
- Help for users to locate their positions in a map.
- And support for exchange of information from different locations.

HTML5 in Mobile Devices

HTML5 allows you to access enhanced web applications using mobile devices such as smart phones and tablets. Offline support, WebStorage, GeolocationAPI, CSS3 Selectors, and 2D animations are some of the most commonly used HTML5 features in mobile devices.

XHTML

Most browsers are lenient in rendering HTML and allow you to create documents without strictly following the syntax rules. This leniency may result in the inconsistent display of content across different browsers. XHTML, which is based on XML, is restrictive and stricter than SGML. In XHTML, you are required to follow strict syntax rules so that your documents are error free and well structured, making it a good option for creating websites that work well with different browsers and alternate devices, such as PDAs and mobile phones.

Differences Between XHTML and HTML Syntax

XHTML is based on XML and HTML. It uses XML elements to structure content and HTML elements to display content. Major syntax differences between XHTML and HTML are:

-
- All XHTML elements should be in lowercase.
- And all XHTML elements should be nested within a root element.

Elements



An *element* is a distinct object of an HTML document. Elements are of two types: empty or container elements. A container element consists of data that is transformed by that element. The content of an element may include other elements, text, graphics, and multimedia. In HTML, elements usually include three parts:

- The opening tag
- Content
- And the closing tag.

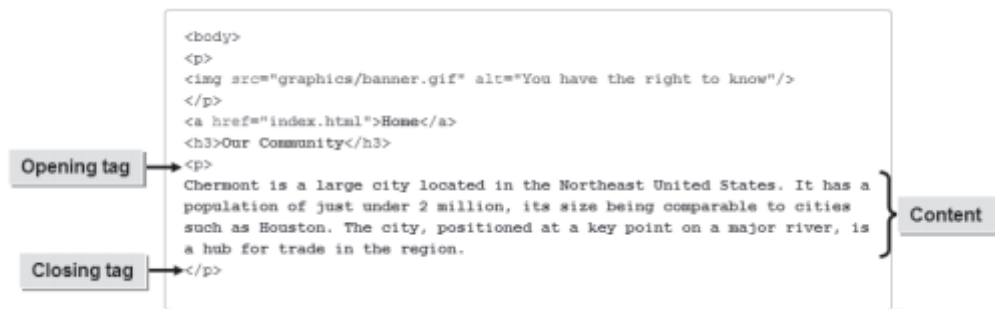


Figure 1-5: Container and empty elements.

Tags

Tags are indicators used to identify the type of a particular content. There are two types of tags.

Tag Type	Description
Container	Contains an opening tag and a closing tag. Content is enclosed within these tags. For example: <title>Welcome</title>
Empty	Contains only the closing tag. For example: <hr /> or <hr> displays a horizontal bar in the window.

Syntax for Tags

The syntax of a container tag is <tag>content</tag>.

The syntax of an empty, or void, element tag is <tag /> or <tag>.

Attributes

Definition:

An *attribute* is a part of an HTML element that modifies the characteristics of the content within that element. Attributes are always included in the opening tag of an element and use the name="value" syntax. Most HTML elements have a defined set of attributes that can be modified to suit your needs.

Example:



Figure 1-6: The syntax of an attribute.



Attributes



You may want to emphasize that the code itself uses straight quotes as shown in the example, not curly quotes that might appear in text (such as in the callout in the image).

ACTIVITY 1-1

Introducing Web Design and Development

Scenario:

In your role as a web designer for Everything for Coffee, you are required to be familiar with various web design terminologies and concepts. To refresh your knowledge, you decide to review these concepts.

What You Do

How You Do It

1. Identify the correct syntax of an HTML attribute.
 - a) name=value
 - b) name: value
 - c) name_ "value"
 - ✓ d) name="value"
2. Which markup language is used to create and design web pages?
 - a) XML
 - ✓ b) HTML
 - c) SGML
 - d) MathML
3. Which is an empty tag?
 - ✓ a) <hr/>
 - b) <head>
 - c) <title>
 - d) <body>

TOPIC B

Create a Basic Web Page

You defined the basic concepts of the web. Now that you are familiar with markup languages and their roles in creating a web page, you can begin to create a web page. In this topic, you will create a basic web page.

Imagine that you are developing your first web page. You want the web page to be well designed and provide a positive experience to users. To create an efficient and error free web page, you need to be aware of the coding standards and conventions specific to the markup language you choose. A clear understanding of the basic structure of a web page, required tags, and attributes will make web designing an easier task.

The Global Structure

The global structure is the overall structure of an HTML document. It consists of the elements required to display a web page.



Figure 1-7: The global structure of an HTML document.

Element	Description
<i>Document Type Declaration (DTD)</i>	The DTD is used to determine the elements and attributes allowed in an HTML document. HTML5 has only one doctype, which is declared as <code><!DOCTYPE HTML></code> .
Namespace	The namespace declaration informs the browser about the language used to render content.
Charset	The charset declaration specifies the characters used to encode content.
<code><html></html></code>	The opening and closing HTML tags that indicate HTML content.
<code><head></head></code>	The head section that contains information such as the title of a web page, character set, and the style sheet of a document.
<code><title></title></code>	The title of a web page.
<code><body></body></code>	The body section that consists of the elements and content to be displayed on a web page. All text, images, and multimedia elements are enclosed within this tag.

The World Wide Web Consortium (W3C)

The World Wide Web Consortium (W3C) is an international association that aims to develop and regulate standards for HTML, XML, and other Internet technologies. These standards are known as W3C recommendations. XHTML and CSS are such recommendations that seek to improve accessibility and device independence. Device independence implies the fact that web pages are rendered uniformly in all devices, including browsers, PDAs, and mobile phones.

Comments

Definition:

Comments are statements that are used to describe code or content segments in an HTML document. They are not displayed in browsers. You can use the comments tag to add reference notes to yourself or other developers regarding your plans for a section of code. These notes are useful when you have to modify or update the source code later. You can also add information such as the name of the program developer and the date of last modification to the page. Comments can also be used for labeling code segments to identify code segments. Comments are enclosed within the `<!--` and `-->` tags.

Example:

```
<!-- This page lists the services offered by Everything for Coffee -->
```

Figure 1-8: *An example of a comment.*

Images

Images have an attractive and functional role on web pages. They provide visual effect and are usually used to display logos, photos, or bullets for a list. Images are typically larger when compared to the file size of HTML files. A *web image format* is used to compress image files and to make them easily downloadable on the web.

Types of Images

The image formats that are commonly used for the web are GIF, JPEG, and PNG.

Image Format	Description
Graphic Interchange Format (GIF)	<ul style="list-style-type: none"> • Creates large file sizes, but it decompresses quickly. • Utilizes 8-bit color with a maximum of 256 colors. • The image quality doesn't degrade even if the extent of file compression is increased. • Reliable for images with large surfaces of solid color, line art, and images with a few colors. • Animated, transparent, interlaced, and noninterlaced are its variations. • Files are saved with the .gif extension.
Joint Photographic Experts Group (JPEG or JPG)	<ul style="list-style-type: none"> • Files are small, but decompression is slow. • Uses 24-bit color and has up to 16 million colors. • The quality of the image diminishes if the extent of the file compression is increased. • Efficient for photographs because pictures look more realistic. • Has two alterations: regular and progressive. • Files are saved with the .jpg extension.
Portable Network Graphic (PNG)	<ul style="list-style-type: none"> • Approved as a W3C recommendation in 1996. • Uses a bitmapped image format. • Employs lossless image compression. • Files of this type are saved with the .png extension. • Colors are displayed accurately.

The <figure> Tag

Definition:

The <figure> tag is a new tag in HTML5 that is used to represent a group of self-contained content such as diagrams, images, code, illustrations, and photos. Typically, the content of a <figure> tag should be related to the main content, but can be removed from the main content without affecting the flow or meaning of the document. This tag is supported in all major browsers.

Example:

```
<figure>

</figure>
```

Figure 1-9: Sample code for the <figure> tag.



The <figure> Tag



The `<figcaption>` Tag

Definition:

The `<figcaption>` tag is used along with the `figure` tag to specify a caption or legend for the `<figure>` tag content. This tag should be placed either before or after the content of the `<figure>` tag. The `figcaption` element is an optional element when displaying content using the `<figure>` tag. The `<figcaption>` tag is supported by all major browsers.

Example:

```
<figure>
<figcaption>A view of the Alps</figcaption>

</figure>
```

Figure 1-10: Sample code for the `<figcaption>` tag.

The `` Tag

The `` tag enables you to specify an image to be displayed on an HTML page. The specified image is linked to the HTML page. This tag has two main attributes:

- `src`, which defines the image file path.
- `alt`, which specifies the alternative text for the image.

The Alt Text Feature

The *Alt text* or alternative text feature is used to render textual information about an image when a browser is unable to display it. Alt text is declared by adding the `alt` attribute to the `` tag. It provides a brief description of the corresponding image. It is useful in situations where images are not displayed in browsers so that users can read the descriptions of the images. In HTML5, the caption of an image often serves the purpose of an alternative text.

Absolute and Relative File Paths

Some tags use attributes that require a path to a file, which will be used or accessed by that tag. For example, the `` tag requires the `src` attribute, which specifies the file path to an image that will be displayed. A file path can either be absolute or relative.

- An *absolute file path* contains the complete address of the location of a file. Example: `C:\Documents and Settings\user\graphics\image1.jpg`
- A *relative file path* consists of a specific address from the current location of the file. Example: `graphics\image1.jpg`



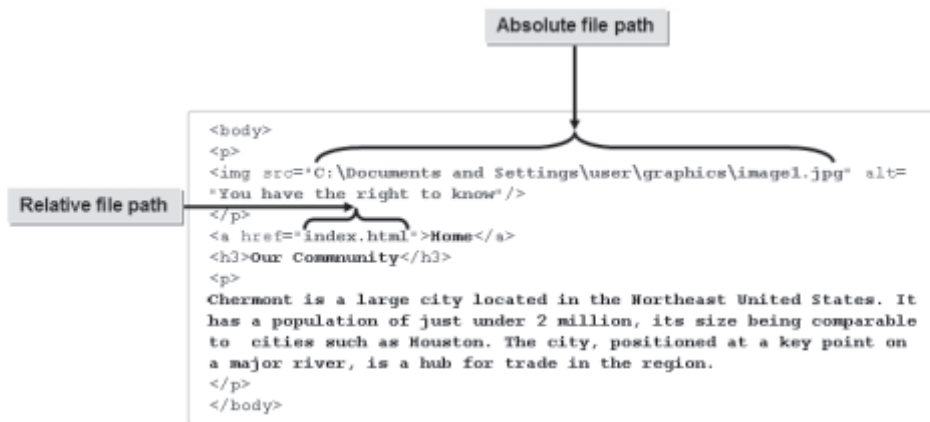


Figure 1-11: File paths.

How to Create a Basic Web Page

Procedure Reference: Create a Basic Web Page with Text and Images

To create a basic web page with text and images:

1. In a text editor, create a new file and specify the DTD by entering `<!DOCTYPE HTML>` in the first line.
2. Declare the namespace by typing `<html lang="language">`, where *language* is any language of your choice.
3. Define the `<head>` `</head>` tags.
4. Within the `<head>` `</head>` tags, define the `<title>` `</title>` tags.
5. Within the `<title>` `</title>` tags, add the title of your web page.
6. Define the body of the web page using the `<body>` `</body>` tags.
7. Add content to the web page within the body tags.
 - Type the necessary text to add text.
 - Insert an image.
 - a. Click the desired location within the text.
 - b. Add the `` tag.
 - c. Specify the location of the image using the `src` attribute.
 - d. Define the alternative text using the `alt` attribute.
8. Save the web page with the `.html` file extension and view it in a browser.

Procedure Reference: Create a Figure with a Caption

To create a figure with a caption:

1. Determine the location where you want to insert a figure.
2. Define the `<figure>` `</figure>` tags.
3. Within the `<figure>` `</figure>` tags, insert an image using the `` tag.
4. After the `<figure>` tag, define the `<figcaption>` `</figcaption>` tags.

5. Within the `<figcaption>` `</figcaption>` tags, specify a caption for the figure.

ACTIVITY 1-2

Creating a Basic Page Structure

Data Files:

- C:\085736Data\Creating a Basic Web Page\graphics\logo.jpg
- C:\085736Data\Creating a Basic Web Page\graphics\model.jpg
- C:\085736Data\Creating a Basic Web Page\Introduction.txt

Scenario:

You are creating a website for Everything for Coffee. You want to feature various products of the company in this website. You intend to start by creating a home page with introductory text supported with a photo and the company logo.

What You Do	How You Do It
1. Declare the DTD for the web page.	<div>a. To launch the Notepad++ application, choose Start→All Programs→Notepad++→Notepad++.</div> <div>b. If necessary, click Close to close the Read Me text file.</div> <div>c. To maximize the Notepad++ window, click Maximize.</div> <div>d. To declare the DTD, type <!DOCTYPE HTML></div> <div><i>See Code Sample 1.</i></div>

Code Sample 1

<!DOCTYPE HTML>


2. Define HTML content for the web page.	<div>a. To specify the beginning of the HTML content, insert a new line and type <html></div> <div>b. To specify the end of the HTML content, insert a new line and type </html></div>
--	--

3. Define the head section for the web page.
 - a. To specify the head section, click after the opening `<html>` tag and insert a new line.
 - b. To start the head section, type `<head>`
 - c. To specify a character set for the web page, insert a new line and type `<meta http-equiv="content-type" content="text/html; charset=utf-8"/>`
See Code Sample 2.
 - d. Insert a new line and type `<title>`
 - e. To set the title, type **Everything for Coffee**
 - f. To close the title tag, type `</title>`
 - g. To close the head section, insert a new line and type `</head>`

Code Sample 2

```
<head>  
<meta http-equiv="content-type" content="text/html; charset=utf-8"/>
```

LESSON 1

4. Enter the content of the web page in the body section.
 - a. To specify the body section, insert a new line and type **<body>**
 - b. Navigate to the C:\085736Data\Creating a Basic Web Page folder and open the Introduction.txt file.
 - c. To select the entire text, in the Notepad application, choose **Edit→Select All**.
 - d. To copy the text, choose **Edit→Copy**.
 - e. Switch to the Notepad++ application.
 - f. To paste the copied text, on the toolbar, click **Paste**. 
 - g. To wrap the text, **View→Wrap**.
 - h. To close the body section, insert a new line and type **</body>**

5. Add the company logo at the top of the web page.
 - a. Click after the opening **<body>** tag and insert two new lines.
 - b. To insert the company logo, click line 8 and type ****
 - c. To specify alternative text for the image, click after the image location, insert a space, and type **alt="Everything for Coffee"**

See Code Sample 3.

Code Sample 3

```
<body>

```

6. Add an image with a caption to the web page.
 - a. Within the `<body>` element, click after the text "Cappucino, Mocha, Latte, and Frappe" and insert a new line.
 - b. To define a figure, type `<figure>`
 - c. To specify an image and alternative text for the figure, insert a new line and type


```

```
 - d. To specify the caption, insert a new line and type `<figcaption>Brighten your day with an exquisite cup of coffee</figcaption>`

See Code Sample 4.
 - e. To close the figure element, insert a new line and type `</figure>`

Code Sample 4

```

<figcaption>Brighten your day with an exquisite cup of coffee</figcaption>
</body>
```

7. Add a comment to the web page code.
 - a. Click after the `<body>` tag and insert a new line.
 - b. To insert a comment, type `<!-- Official Logo of Everything for Coffee -->`

See Code Sample 5.


Code Sample 5

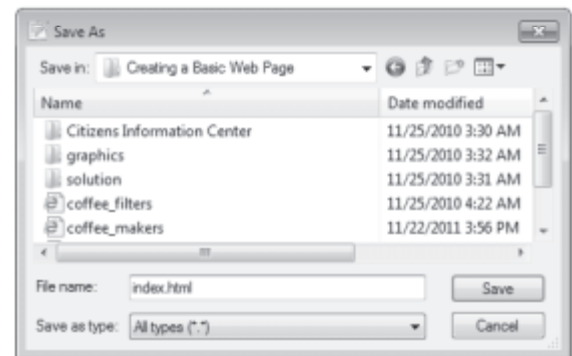
```
<body>
<!-- Official Logo of Everything for Coffee -->

```

LESSON 1

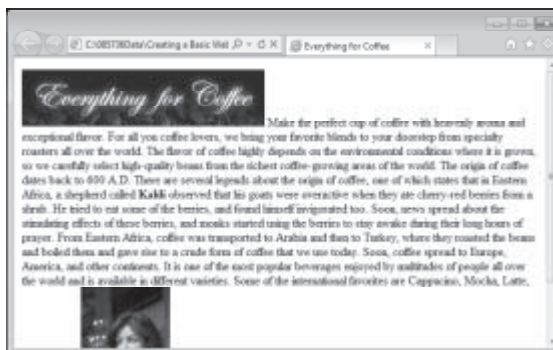
8. Save the file.

- a. On the toolbar, click **Save**. 
- b. In the **Save As** dialog box, navigate to the C:\085736Data\Creating a Basic Web Page folder.
- c. In the **File name** text box, select the text "new 1" and delete it.
- d. In the **File name** text box, type *index.html*
- e. In the **Save as type** drop-down list, verify that the **All types** option is selected and click **Save**.



- f. If necessary, to wrap the text, click **View→Wrap** twice.
-

9. View the file in Internet Explorer.
 - a. To view the file in Internet Explorer, choose **Run**→**launch** in IE.
 - b. If necessary, in the **Windows Internet Explorer 9** dialog box, click **Ask me later**.
 - c. Observe that the web page is displayed with the title, text, and images you specified and click **Close**.



- d. To minimize the Notepad++ application, click **Minimize**.
 - e. To close the Notepad++ application, click **Close**.
 - f. To close Windows Explorer, click **Close**.
-

TOPIC C

Format a Web Page

You created a basic web page consisting of text and graphics. You may now want to present the content of this web page in a more appealing and readable style. In this topic, you will format a web page.

Suppose you are developing a web page that displays the products and services offered by your company. A plain web page with just text and graphics may not capture and retain the attention of users. To make the web page more engaging, you need to present content in an attractive style and pattern, as well as make the key items more noticeable. The formatting elements of HTML5 will enable you to enhance the display of contents and make a web page more captivating for users.

Fonts

Fonts represent the typeface used by a browser to display text. In HTML and CSS, there are two font family names.

Font Family Name	Description
Font family	A group of related fonts that may include different font styles, sizes, and weight.
Generic family	A set of similar looking fonts such as sans-serif and serif.

The `` tag

Previous versions of HTML used the `` tag, but this tag is no longer supported in HTML5. To define the font and set its properties for HTML5 web pages, you need to use CSS.

Emphasis



Emphasis

Definition:

The `` and `` elements allow you to emphasize specific text on a web page. By default, the `` element renders text in italics while the `` element displays text in bold, though these can be changed in the style sheet that the web page uses. These elements are supported by all major browsers.

Example:

```
<p>
<em>Everything for Coffee</em>
<strong>Citizens Information Center</strong>
</p>
```

Everything for Coffee
Citizens Information Center

Figure 1-12: *Text with emphasis.*

** and **

While the `` and `` tags do change the formatting of tagged text, it is not recommended that you use either tag if you ultimately want text in italics or boldface. Since HTML5 is intended to have content and formatting be totally separate, instead use a `` tag along with CSS style to make something italicized or bold. `` and `` tags should only be used when the goal is to show emphasis.

Line Breaks

Definition:

The `
` tag allows you to break a line of text, just where you want it to, and start a new line within a paragraph. This tag does not split or create a new paragraph, therefore does not impact the text formatting applied to the content within the `<p>` element. A `
` tag is an empty element and is usually enclosed inside a `<p>` tag or other block-level tags. This tag is useful for displaying content, such as poems and addresses, that needs to be split across multiple lines for better readability.



In HTML 5, the trailing forward slash is not required, so simply using `
` is sufficient. You may choose to include it for readability or to keep the tags compliant with XML.

Example:

```
<p>
The origin of coffee dates back to<br/>600.A.D.
</p>
```

The origin of coffee dates back to
600 A.D.

Figure 1-13: *An example of a line break.*



Line Breaks

Word Breaks

Definition:

The `<wbr>` element is used to specify where a break can be inserted in a line of text. It defines the location where the browser can break the text so that a long and continuous text is not split at an undesired location. This is very useful when you have to display a long piece of text that does not include any spaces. This tag is optional to the browser and a break may not be inserted if the browser considers it unnecessary. This tag is supported in Firefox, Safari, and Chrome.

Example:

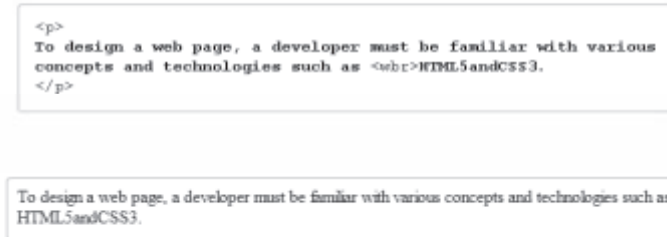


Figure 1-14: Text displayed using the `<wbr>` tag.

Character Entities

Definition:

Character entities are symbols that enable you to display various characters, which are not available on the keyboard. You can also present reserved characters such as `<` and `>` by using either their character entity name or their numeric code. The syntax of a character entity is `&entity_name;` or `&#entity_number;`. Most browsers do not support all entity names. However, numeric entities are supported by most browsers.

Example:

Example of a numeric entity: `<`; will display `<`.

Example of an entity name: `<`; will display `<`.

The `<blockquote>` Tag

Definition:

The `<blockquote>` tag is used to set apart a block of text from its surrounding content. It is normally used to display long citations and quotes. The text within this element indents itself both on the left and the right side of a web page. All major browsers support this tag.

Example:

```
<p>History of Coffee</p>
<blockquote cite="www.everythingfor coffee.com/index.html">
The origin of coffee dates back to 600A.D.
</blockquote>
```

History of Coffee

The origin of coffee dates back to 600A.D.

Figure 1-15: An example of the `<blockquote>` tag.

The `<p>` Tag

Definition:

The `<p>` tag is used to specify a paragraph element. When text is defined as a paragraph, browsers will automatically add margin space before and after it. You can modify the margin properties using CSS. This tag is supported in all browsers.

Example:

```
<p>
Make the perfect cup of coffee with heavenly aroma and exceptional
flavor. ⇒
For all you coffee lovers, we bring your favorite blends to your
doorstep ⇒
from specialty roasters all over the world. The flavor of coffee
highly ⇒
depends on the environmental conditions where it is grown, so we
carefully ⇒
select high-quality beans from the richest coffee-growing areas of
the world.
</p>
```

Figure 1-16: Sample code for the `<p>` tag.

The `<pre>` Tag

Definition:

The `<pre>` tag is used to display preformatted text. This text appears on the web page exactly as you type it in a text editor. This type of text presentation is mainly used to preserve spacing between words and line breaks in multiple lines of text. The text within this tag is usually rendered in a fixed-width font. All major browsers support this tag.

Example:

```
<pre>
Make the perfect cup of coffee
with heavenly aroma
and exceptional flavor.
</pre>
```

Figure 1-17: Sample code for the `<pre>` tag.

How to Format a Web Page

Procedure Reference: Display Text in a Paragraph

To display text in a paragraph:

1. Open the desired HTML file using a text editor.
2. Determine the text to be displayed in a paragraph.
3. To start a paragraph, click at the beginning of the text and enter the `<p>` tag.
4. To end the paragraph, click at the end of the text and enter the `</p>` tag.
5. Save the file.
6. If necessary, view the file in a browser.

Procedure Reference: Format Text in Bold and Italics

To format text in bold and italics:

1. Open the desired HTML file using a text editor.
2. Display the text in bold.
 - a. Determine the text to be displayed in bold.
 - b. Before the text, enter the `` tag.
 - c. After the text, enter the `` tag.
3. Display the text in italics.
 - a. Determine the text to be displayed in italics.
 - b. Before the text, enter the `` tag.
 - c. After the text, enter the `` tag.
4. Save the file.
5. If necessary, view the file in a browser.

Procedure Reference: Insert a Character Entity

To insert a character entity:

1. Open the desired HTML file using a text editor.
2. Determine the location to insert a character entity.
3. Insert the character entity.
 - Enter `&` followed by the character entity name or;
 - Enter `&` followed by the ASCII number of the character entity.
4. Save the file.



Let students know that they are using structural tags here to indicate emphasis, and simply accepting the default formats that result. Formatting using CSS will be covered later in the course.

5. If necessary, view the file in a browser.

ACTIVITY 1-3

Formatting a Web Page

Before You Begin:

The index.html file is open.

Scenario:

You have created a web page with text and images. You want to format the text and change the display style of your web page.

What You Do

How You Do It

1. Display text in paragraphs.
 - a. In line 9, click after the image tag and insert a new line.
 - b. To define the beginning of a paragraph, type `<p>`
 - c. To specify the closing tag for the paragraph, at the end of the paragraph, click and type `</p>`
 - d. Similarly, specify the opening and closing tags for the next paragraph.

See Code Sample 1.

Code Sample 1

`<p>`

The origin of coffee dates back to 600 A.D. There are several legends ⇒
 about the origin of coffee, one of which states that in Eastern Africa, ⇒
 a shepherd called Kaldi observed that his goats were overactive when ⇒
 they ate cherry-red berries from a shrub. He tried to eat some of the ⇒
 berries, and found himself invigorated too. Soon, news spread about ⇒
 the stimulating effects of these berries, and monks started using ⇒
 the berries to stay awake during their long hours of prayer. From ⇒
 Eastern Africa, coffee was transported to Arabia and then to Turkey, ⇒
 where they roasted the beans and boiled them and gave rise to a ⇒
 crude form of coffee that we use today. Soon, coffee spread to ⇒
 Europe, America, and other continents. It is one of the most ⇒
 popular beverages enjoyed by multitudes of people all over the ⇒
 world and is available in different varieties. Some of the ⇒
 international favorites are Cappuccino, Mocha, Latte, and Frappe.

`</p>`

LESSON 1

2. Display text in bold.
 - a. In the second paragraph, click before the text "Kaldi" and type ****
 - b. Click after the text "Kaldi" and type ****

3. Insert a character entity.
 - a. In the last line of the paragraph, click after the second p in the text "Frappe" and delete e.
 - b. To insert a character entity, type **´**

4. View the file to verify changes.
 - a. Save the file.
 - b. View the web page in Internet Explorer.
 - c. Observe the change for text on the web page and close Internet Explorer.



- d. To close the index.html file, click **Close**.

TOPIC D

Create Lists

You formatted text and graphics on your web page. You may want to present specific content on the web page in a concise format so that users can easily read and understand the important points quickly. In this topic, you will create lists to organize content.

Users may find it monotonous and boring if a lot of content is presented on a web page. Because the attention span of users can be short, they may skip reading the content and move on to other tasks. In such cases, using lists to organize content in a concise and coherent style will help you retain audience attention as well as enable you to convey the key points quickly.

Lists

Lists are typically used to present information that can be grouped under a particular category or heading. They enable you to create a well-structured document that is easy to read and maintain. HTML5 allows you to create three types of lists:

- Unordered list
- Ordered list
- And description list.

Ordered Lists

Definition:

A numbered list or an *ordered list* is used to list items that are to be presented in sequential order. You can choose the type of numbering system such as Arabic numerals, Roman numerals, or English alphabet. The ordered list items are defined within the `` `` tags, and each item in the list is represented within the `` `` tags.

Example:

```
<ol>
<li>Heat water in a kettle.</li>
<li>Add required amount of instant coffee and sugar.</li>
<li>Add milk or cream and stir well.</li>
</ol>
```

1. Heat water in a kettle.
2. Add required amount of instant coffee and sugar.
3. Add milk or cream and stir well.

Figure 1-18: An ordered list.



Ordered Lists



Unordered Lists

Definition:

A bulleted list or an *unordered list* is used to list items that do not have to be in any particular order. Each list item begins with a bullet. Bullets are available in various shapes and you can also customize them. If required, you can also use an image as a bullet. The unordered list items are defined within the `` `` tags, and each item in the list is contained within the `` `` tags.

Example:

```
<ul>
<li>Royal Robustica Blend</li>
<li>Royal French Roast</li>
<li>New Orleans Blend</li>
</ul>
```

- Royal Robustica Blend
- Royal French Roast
- New Orleans Blend

Figure 1-19: An unordered list.

Navigation Lists

A navigation list is a set of linked elements on a web page. Navigation lists enable users to browse different sections of a website. You can use a standard unordered list to create a navigation bar. You can render a navigation list as a horizontal or vertical navigation bar.

Description Lists

Definition:

A *description list* is useful when you want to add more information to describe list items. It consists of a series of terms and their corresponding definitions. Description lists are represented with the `<dl>` `</dl>` tags. Inside the `<dl>` tags, `<dt>` `</dt>` tags indicate a name or a term, and each name or term is associated with a description or definition that is enclosed within `<dd>` `</dd>` tags.



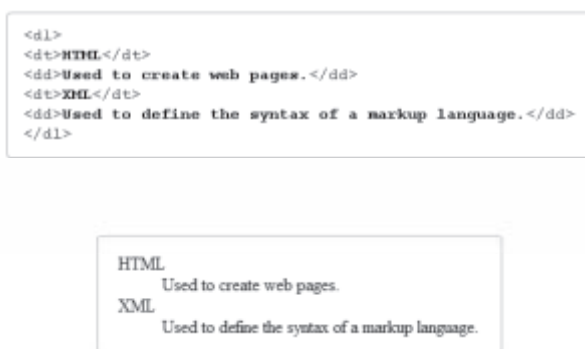
Example:

Figure 1-20: A description list.

How to Create Lists

Procedure Reference: Create Lists

To create lists:

1. Open the desired HTML file using a text editor.
2. At the desired position in the file, enter the opening tag for the list.
 - Enter `` for an unordered list or;
 - Enter `` for an ordered list.
3. Add list items.
 - a. Enter the opening tag `` for the list item.
 - b. Enter the text for the list item.
 - c. Enter the closing tag `` for the list item.
4. If necessary, add additional list items.
5. Enter appropriate closing tags to close the list.
 - Enter `` for an unordered list or;
 - Enter `` for an ordered list.
6. Save the file.
7. If necessary, view the file in a browser.

Procedure Reference: Create a Description List

To create a description list:

1. Open the desired HTML file using a text editor.
2. At the desired location, enter the `<dl>` tag.
3. Enter a definition term.
 - a. Enter the `<dt>` tag.
 - b. Specify the term to be defined.
 - c. Enter the `</dt>` tag.

4. Enter a description.
 - a. Enter the `<dd>` tag.
 - b. Type the description.
 - c. Enter the `</dd>` tag.
5. If necessary, add additional definition terms and descriptions.
6. To close the description list, enter the `</dl>` tag.
7. Save the file.
8. If necessary, view the file in a browser.

ACTIVITY 1-4

Creating Unordered Lists

Data Files:

- C:\085736Data\Creating a Basic Web Page\coffee_filters.html

Scenario:

You plan to create a web page to display the different coffee filters available from Everything for Coffee. Your client wants to display the product features in an organized and appealing manner.

What You Do	How You Do It
1. Open the coffee_filters.html file in Notepad++.	<ol style="list-style-type: none">a. On the toolbar, click Open.b. In the Open dialog box, navigate to the C:\085736Data\Creating a Basic Web Page folder and open the coffee_filters.html file.

2. Define an unordered list.
 - a. In line 15, click before the text “A good replacement for paper filters” and type ``

See Code Sample 1.
 - b. To define the first list item, insert a new line and type ``
 - c. At the end of the line, select the `
` tag and delete it.
 - d. To close the list item, type ``
 - e. Similarly, enter the opening and closing tags for the rest of the list items.

See Code Sample 2.
 - f. To close the unordered list, insert a new line and type ``

Code Sample 1

```
<ul>A good replacement for paper filters
```

Code Sample 2

```
<ul>  
<li>A good replacement for paper filters</li>  
<li>Permanent filter<br/></li>  
<li>Dishwasher-safe<br/></li>  
<li>Fine mesh for a splendid coffee flavor<br/></li>  
</ul>  
</body>
```

3. Save and view the web page in a browser.
- a. Save the file.

b. View the web page in Internet Explorer.

c. Observe that the content is presented as an unordered list and then click **Close**.



- d. To close the coffee_filters.html file, click **Close**.

ACTIVITY 1-5

Creating a Description List

Data Files:

- C:\085736Data\Creating a Basic Web Page\coffee_makers.html

Scenario:

You are in the process of creating a web page to display various types of coffee makers provided by Everything for Coffee. You intend to provide a small description of each type of product.

What You Do	How You Do It
1. Open the coffee_makers.html file in Notepad++.	<div>a. On the toolbar, click Open.</div> <div>b. In the Open dialog box, navigate to the C:\085736Data\Creating a Basic Web Page folder and open the coffee_makers.html file.</div>

2. Create a description list.
 - a. To open a description list, click line 14 and type `<dl>`

See Code Sample 1.
 - b. To define the first definition term, in line 15, click before the text "Percolators" and type `<dt>`
 - c. To close the definition term, click at the end of the text "Percolators" and type `</dt>`
 - d. To define the description, in line 16, click before the start of the text and type `<dd>`
 - e. To close the description, click at the end of the text "best of both worlds" and type `</dd>`
 - f. Similarly, define the terms and definitions for the rest of the list items.

See Code Sample 2.
 - g. To close the description list, insert a new line and type `</dl>`

Code Sample 1

```
<p><strong>Different types of Coffee Makers</strong></p>
<dl>
Percolators
```

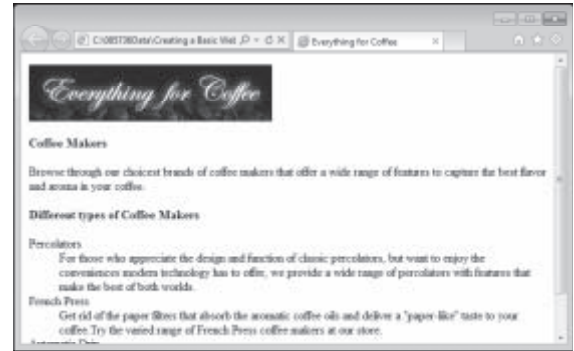
Code Sample 2

```
<dt>French Press</dt>
<dd>Get rid of the paper filters that absorb the aromatic coffee oils and
deliver a "paper-like" taste to your coffee. Try the varied range of French
Press coffee makers at our store.</dd>

<dt>Automatic Drip</dt>
<dd>Take a look at our collection of Automatic Drip coffee makers. Our
collection includes =>
brands with varying capacities, fast-brewing ability, sophisticated and =>
contemporary designs, and programmable features.
</dd>
```

3. Save and view the web page in a browser.
 - a. Save the file.
 - b. View the web page in Internet Explorer.

- c. Observe the description list displayed and then close the browser.



- d. Close the coffee_makers.html file.

Lesson 1 Follow-up

In this lesson, you described the basic concept of the web. You also created a web page and formatted its content. With this knowledge and practice, you can create web pages that are attractive and engaging to end users.

1. **What types of images will you use on your web pages? Why?**

Answers will vary, but may include the GIF format when displaying logos and graphic elements, which use fewer number of colors from the palette; the JPEG format when displaying photographs or best quality images with higher resolution and number of colors; and the PNG format when displaying good quality with a smaller file size.

2. **Which HTML elements will you use for organizing content on a web page?**

Answers will vary, but may include the paragraph element to divide text into paragraphs with a margin space between paragraphs; the line break element to enter a single line break within a paragraph; and lists, both ordered and unordered, to organize related data in a coherent and concise manner.

LESSON 2

Structuring Content

Lesson Time

40 minutes

In this lesson, you will structure content.

You will:

- Create headers and footers.
- Categorize text.

Introduction

You created a web page with text and graphics. You now intend to organize the web page in such a way that each section is distinct from the other, making your content organized and readable. In this lesson, you will structure content using HTML5 elements.

When creating websites, it is important that the content of web pages are appropriate and can be easily read and understood by users. A cluttered or disordered web page may distract users and even discourage potential users from accessing a website. HTML5 provides you with various elements that help you in structuring a web page by organizing content in a readable format to attract more visitors.

TOPIC A

Create Headers and Footers

You formatted text to appear as a list. It is important that you arrange your web page contents in such a way that each section is distinguishable from the other. In this topic, you will create headers and footers.

When presenting information in a website, you must take care to properly organize content to ensure readability. A well-designed website should have a clear and legible structure so that users can easily find the information they need. This can be accomplished by applying various HTML5 tags that allow you to organize content and highlight relevant text.

The <header> Tag



The <header> Tag

Definition:

The <header> tag in HTML5 is used to provide introductory information within the <body> tag, such as headings, version numbers, and navigation elements, about a section or web page. Sometimes, this tag may also include a table of contents or logo. A web page can have more than one header. In such cases, you can use the ID attribute for identification of the header information. All major browsers support the <header> tag.

Example:

```
<header id="page_header">
<h1>Welcome to Everything for Coffee</h1>
<p>The best coffee you can get.</p>
</header>
```

Figure 2-1: Sample code for the <header> tag.

The <footer> Tag

Definition:

The <footer> tag is used to provide information such as names of authors, copyrights, and privacy policies related to the content of a web page. Each section of a web page can have a separate footer, in addition to the main footer of the entire web page. The <footer> tag may also include links to other pages. All major browsers support the <footer> tag.

Example:

```
<footer>
<p>Everything for Coffee respects your privacy and is committed
to protecting your personal information provided to the site. We
use the information that we collect about you to fulfill your
product and service purchases and to create a more personalized
online experience. We do not share the information we collect
with any other organization.</p>
</footer>
```

Figure 2-2: Sample code for the <footer> tag.

Headings

Definition:

A *heading* is a line of text that indicates the nature of information in a paragraph. HTML allows you to define six levels of headings using the <h1> to <h6> tags. The <h1> tag is used to denote the most important heading while the <h6> tag is used to denote the least important heading. Web browsers render more important headings using a larger font size and less important headings using a smaller font size.

Example:



Figure 2-3: A heading indicating the information provided below it.



The <footer> Tag



Headings

The <hgroup> Tag

Definition:

The <hgroup> tag enables you to indicate the heading of a section or web page. Using the <hgroup> tag, headers can be grouped together. The headers in HTML include <h1> through <h6>. Most of the browsers support the <hgroup> tag.

Example:

```
<hgroup>
<h1>Welcome to Everything for Coffee</h1>
<h4>Your one stop shop for all information on coffee</h4>
</hgroup>
```

Figure 2-4: Sample code for the <hgroup> tag.

Horizontal Rules



Definition:

A *horizontal rule* is a long line or bar that is used to visually divide different sections of a web page. The empty <hr/> tag is used to create a horizontal rule. The attributes of this tag, which can be specified in HTML4, are deprecated in HTML5. Therefore, you must use CSS to define a style for this tag. All major browsers support the <hr/> tag.

Example:

```
<h3>Coffee Filters</h3>
<p>Our store offers you a wide variety of coffee filters, which are professionally designed to provide freshness and purity.</p>
<hr/>
<h3>Coffee Makers</h3>
<p>Browse through our choicest brands of coffee makers that offer a wide range of features to capture the best flavor and aroma in your coffee.</p>
```

Figure 2-5: A sample code showing a horizontal rule dividing a page into sections.

The <mark> Tag

Definition:

The <mark> tag allows you to mark or highlight certain text to make it distinct on a web page. Using this tag, you can highlight specific portions of content that may be relevant to users. Most of the popular browsers support this tag.

Example:

```
<p>Some of the popular coffee varieties are <mark>Cappucino</mark>
and⇒
<mark>Mocha</mark>.
```

Figure 2-6: Sample code to display the use of the <mark> tag.

The <time> Tag

Definition:

The <time> tag is used to display the date and time on a web page. This tag uses the <datetime> attribute that denotes a specified date or time. Currently, none of the major browsers support this tag.

Example:

```
<h3>Everything for Coffee</h3>
<p>You can contact us between <time>6:00</time> AM and
<time>6:00</time> PM pacific time Monday - Friday.</p>
<h3>Everything for Coffee</h3>
<p>The website will be shut for maintenance
<time datetime="01-15-2012">next month</time>.</p>
```

Figure 2-7: Sample codes describing the <time> tag.

The <meter> Tag

Definition:

The <meter> tag is used to define a scalable representation of a measurement within a given range. It is used for visualizing only a scalar measurement value and not for showing the progress of a process or task. This tag can be used only when you know the maximum value in the scale. This tag is currently supported by Opera and Chrome browsers.

Example:

```
<meter value="20" min="0" max="100">20 out of 100</meter>

<meter value="0.5">50%</meter>
```


Figure 2-8: Sample code describing the <meter> tag.



The <time> Tag



The <meter> Tag

 In earlier HTML versions, metering was displayed using nested `<div>` tags.

Attributes of the `<meter>` Tag

The `<meter>` tag provides attributes that assist in presenting a scalable representation of a measurement in a given range.

Attribute	Description
form	States that the meter element belongs to multiple forms.
high	Defines the range where gauge has a high value.
low	Defines the range where gauge has a low value.
max	Denotes a gauge's upper limit.
min	Denotes a gauge's lower limit.
optimum	Denotes the optimal value of a gauge. Higher values are determined to be better if the optimum value is higher than the "high" attribute. Similarly, lower values are determined to be better if the optimum value is lower than the "low" attribute.
value	Defines the measured value of the gauge.



The `<progress>` Tag

The `<progress>` Tag

Definition:

You can illustrate the progress of a process or task using the `<progress>` tag. This tag is used for showing only the progress of a task and cannot be used to represent a value in a scale. The `<progress>` tag is currently supported by Firefox, Chrome, and Opera browsers.

Example:

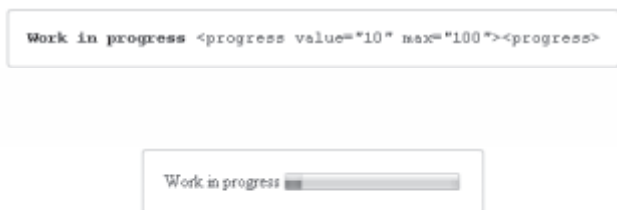



Figure 2-9: Sample code for the `<progress>` tag.

 Using JavaScript, the `<progress>` tag can be used to display the progress of a process as it is advancing.

Attributes of the `<progress>` Tag

The `<progress>` tag consists of attributes that help you represent a task's progress.

Attribute	Description
max	Defines the maximum work required by a task.
value	Defines the work that is completed in a task.

How to Create Headers and Footers

Procedure Reference: Create a Header and Footer

To create a header and footer:

1. In a text editor, open the required HTML file.
2. Specify a header.
 - a. Click at the beginning of the HTML file inside the `<body>` tag and enter the `<header>` tag.
 - b. Enter the content for the header.
 - c. Enter the `</header>` tag.
3. Specify a footer.
 - a. In the HTML file, click at the desired location within the `<body>` where you want to insert a footer.
 - b. Enter the `<footer>` tag.
 - c. Enter the content for the footer.
 - d. At the end of the text, enter the `</footer>` tag.

Procedure Reference: Insert a Horizontal Rule

To insert a horizontal rule:

1. In a text editor, open the required HTML file.
2. In the HTML file, click at the location where you want to insert a horizontal rule.
3. Enter the `<hr/>` tag.

Procedure Reference: Create Headings

To create headings for paragraphs:

1. In a text editor, open the required HTML file.
2. Click before the paragraph text and enter an opening heading tag.
3. Enter the heading for the paragraph.
4. At the end of the heading, enter a closing heading tag.

Procedure Reference: Highlight Text on a Page

To highlight text on a page:

1. In a text editor, open the required HTML file.
2. Determine the text to be highlighted.

3. Before the start of the text, enter the `<mark>` tag.
4. At the end of the text, enter the `</mark>` tag.

ACTIVITY 2-1

Creating Headers and Footers

Data Files:

- C:\085736Data\Structuring Content\index.html

Scenario:

You have created a home page with text and images for Everything for Coffee. You now want to structure the content presented on the home page, so that the content is not only easy to read, but also the various sections of the web page are easily distinguishable.

What You Do

How You Do It

1. Create a header for the web page.

- a. In the Notepad++ window, click **Open**, which is the second button from the left on the toolbar.
- b. In the **Open** dialog box, navigate to the C:\085736Data\Structuring Content folder and open the index.html file.
- c. To specify a header for the web page, after the `<body>` tag, in the blank line, click and type `<header>`

See Code Sample 1.

- d. Insert a new line and type **Home**
 - e. Similarly, enter the text: **Coffee Filters, Coffee Makers, Gourmet Beans, and Customer Service Center** in subsequent lines.
- See Code Sample 2.*
- f. To close the header text, in the next line, enter the `</header>` tag.

Code Sample 1

```
<title>Everything for Coffee</title>
</head>
<body>
<header>
```

Code Sample 2

```
</head>
<body>
<header>
Home
Coffee Filters
Coffee Makers
Gourmet Beans
Customer Service Center
```

LESSON 2

2. Specify a footer for the web page.

a. Before the `</body>` tag, in the blank line, click and type `<footer>`

See Code Sample 3.

b. Insert a new line and type `<p align=center>This website represents a ⇒ fictitious organization and is used for training purposes.</p>`

c. Insert a new line and enter the `</footer>` tag.

Code Sample 3

```
<footer>
</body>
</html>
```

3. Insert horizontal rules in the web page.

a. Click after the `</header>` tag.

b. Insert a new line and type `<hr/>`

See Code Sample 4.

c. Click before the `</body>` tag.

d. Insert a new line and type `<hr/>`

Code Sample 4

```
</header>
<hr/>
```

4. Create headings for the paragraphs.
 - a. In line 20, click after the `<p>` tag.
 - b. Insert a new line and type `<h3>`⇒
Welcome to Everything for Coffee
`</h3>`
 - See Code Sample 5.*
 - c. Similarly, in line 24, click after the `<p>` tag, insert a new line and type `<h3>`
History of Coffee`</h3>`

Code Sample 5

```
<p>
<h3>Welcome to Everything for Coffee</h3>
Make the perfect cup of coffee with heavenly aroma and exceptional flavor.
For all you coffee lovers, we bring your favorite blends to your doorstep
from specialty roasters all over the world. The flavor of coffee highly
depends on the environmental conditions where it is grown, so we
carefully select high-quality beans from the richest coffee-growing
areas of the world.
```

5. Highlight specific text on the web page.
 - a. In the "History of Coffee" paragraph, click before the text "600 A.D." and type `<mark>`
 - b. At the end of the text "600 A.D." type `</mark>`
6. Save and view the web page.
 - a. To save the changes, click **Save**.
 - b. To view the changes, choose **Run→launch in Firefox**.
 - c. Observe the changes on the web page and then close the browser.



TOPIC B

Categorize Text

You created headers and footers to organize content in an orderly format. It is possible to organize and arrange text in an unconventional but effective manner by spacing out a few elements across a web page to set them apart from other text. In this topic, you will categorize text.

Imagine that you are creating a web page with information for a company and the services it offers. How nice it would be if you could make certain important information stand out from the rest of the content or provide additional information relevant to the content? HTML5 enables you to categorize and arrange text by applying specific tags.

The <aside> Tag



The <aside> Tag

Definition:

The <aside> tag is used to specify content that is relevant to the main article or to the rest of the page. This information may be presented as a sidebar on a web page. The <aside> tag can also be used to display standalone information, related links, or even questionnaires. This tag is supported by all major browsers. The <aside> tag uses a style sheet to set aside content.



Style sheets will be covered in detail in the next lesson.

Example:

```
<aside style="font-size:larger;font-style:bold;color:red;
float:right;width:150px;">
Compare the capacities, prices, and features of the different
brands to get the best deal!
</aside>
<p>Browse through our choicest brands of coffee makers that
offer a wide range of features to capture the best flavor and
aroma in your coffee. Ranging from classic percolators to
modern automatic drip coffee makers, different types of coffee
makers are available at various price ranges.</p>
```

Browse through our choicest brands of coffee makers that offer a wide range of features to capture the best flavor and aroma in your coffee. Ranging from classic percolators to modern automatic drip coffee makers, different types of coffee makers are available at various price ranges.	Compare the capacities, prices, and features of the different brands to get the best deal!
---	--

Figure 2-10: Sample code describing the <aside> tag.

The <article> Tag

Definition:

The <article> tag is used to denote content that is independent and can be presented as a separate web page or document. Forum posts, newspaper articles, independent items of content, blog entries, and user comments are some examples of articles. You can use the <section> tag along with the <article> tag to divide articles into multiple sections. This tag is supported by all major browsers.

Example:

```
<article>
<h2>Welcome to Everything for Coffee</h2>
<p>Browse through Everything for Coffee to explore the choicest
brands of coffee makers that offer a wide range of features to
capture the best flavor and aroma in your coffee. Ranging from
classic percolators to modern automatic drip coffee makers,
different types of coffee makers are available at various
price ranges.</p>
<p>For all coffee lovers, we bring your favorite blends to your
doorstep from specialty roasters all over the world. The flavor
of coffee highly depends on the environmental conditions where
it is grown, so we carefully select high-quality beans from the
richest coffee-growing areas of the world.</p>
</article>
```

Figure 2-11: Sample code for the <article> tag.

The <section> Tag

Definition:

The <section> tag is used to group related content on a web page or document. This tag is usually used to define specific sections such as headers, articles, and chapters. All major browsers support this tag.

Example:

```
<header>
<h2>Welcome to Everything for Coffee</h2>
</header>
<section>
<h3>About Us</h3>
<p>For all you coffee lovers, we bring your favorite blends to
your doorstep from specialty roasters all over the world.</p>
<h3>Services</h3>
<p>The flavor of coffee highly depends on the environmental
conditions where it is grown, so we carefully select high-
quality beans from the richest coffee-growing areas of the
world.</p>
</section>
```

Figure 2-12: Sample code for the <section> tag.



The <article> Tag



The <section> Tag



The <details> Tag

The <details> Tag

Definition:

The <details> tag is used to define additional details or controls on a web page. You can choose to either display or hide these details as required by using the open attribute. Currently, only Chrome supports the <details> tag.

Example:

```
<details open="open">
<p>All pages and graphics in this website are the property of
Everything⇒
for Coffee.</p>
</details>
```

Figure 2-13: Sample code for the <details> tag.



The <summary> Tag

The <summary> Tag

Definition:

The <summary> tag allows you to define a header or caption to be used along with the <details> tag. It displays a visible text that users can click to view the details. Remember that the <summary> tag must be the first child element of the <details> tag. The <summary> tag is currently supported only by Chrome.

Example:

```
<details>
<summary>Everything for Coffee</summary>
<p>Your online resource to find out everything you wanted to
know about coffee.</p>
</details>
```

▼ Everything for Coffee

Your online resource to find out everything you wanted to know about coffee.

Figure 2-14: Sample code for the <summary> tag.

How to Categorize Text

Procedure Reference: Categorize Text

To categorize text on a web page:

1. In a text editor, open the desired HTML file.
2. Click at the beginning of the text you want to set aside and enter the <aside> tag.
3. Within the <aside> tag, declare the required attributes.

4. At the end of the `<aside>` tag, enter the text to be displayed.
5. Click at the end of the text and enter the `</aside>` tag.

Procedure Reference: Display or Hide a Paragraph

To display or hide a paragraph:

1. In a text editor, open the desired HTML file.
2. Click at the beginning of the text you want to display or hide and enter the `<details>` tag.
3. Within the `<details>` tag, provide a heading by entering the `<summary>` tag.
4. Click at the end of the text and enter the `</details>` tag.

ACTIVITY 2-2

Categorizing Text

Before You Begin:

The index.html file is open.

Scenario:

You notice that the text on the web page you created appears cluttered and is not easily readable. You decide to format the text for better readability.

What You Do	How You Do It
1. Specify the content to be displayed on a side bar.	<ol style="list-style-type: none"> a. In the "Welcome to Everything for Coffee" paragraph, click at the start of the text "For all you coffee lovers" and type <code><aside></code> b. Within the <code><aside></code> tag, click before the closing brace, insert a space and type <code>style=</code> <code>"font-size:large;font-style:bold;color:blue;float:right;width:150px;"</code> c. After the closing brace of the <code><aside></code> tag, type <i>The flavor of coffee highly depends on the environmental conditions where it is grown</i> d. At the end of the text, click and type <code></aside></code>

LESSON 2

2. Display additional details.
 - a. In the “History of Coffee” paragraph, in line 23, click after the `<p>` tag and enter the `<details><summary>` tags.
 - b. After the `<h3>History of Coffee</h3>` tag, click and enter the `</summary>` tag.
 - c. At the end of the paragraph, click and enter the `</details>` tag.

3. Save and view the web page in the Chrome browser.
 - a. To save the changes, click **Save**.
 - b. To view the changes in the Chrome web browser, navigate to the `C:\085736Data\Structuring\%20Content\Solutions\index.html` folder, right-click `index.html` and choose **Open with, Chrome**.
 - c. Observe the changes on the web page and then click the arrow above the “History of Coffee” text.
 - d. View the details of the “History of Coffee” text and then close the browser.



- e. Close the `index.html` file.

Lesson 2 Follow-up

In this lesson, you learned to structure content on a web page. By structuring content, you can create professional looking web pages, thereby attracting more visitors.

1. Which HTML5 elements will you use to organize content on a web page?

Answers will vary, but may include using the header tag to specify introductory information; using the footer tag to display information about authors or copyrights; using the hgroup tag to denote a section's heading; and using a horizontal rule to visually divide sections of a web page.

2. Which style will you use to categorize text on a web page? Why?

Answers will vary, but may include using the aside tag to highlight important information or provide relevant description of the content; using the section tag to define specific content sections on a web page; and using the details and summary tags to display additional information if required by users.

LESSON 3

Applying Styles Using CSS

Lesson Time*1 hour(s), 40 minutes*

In this lesson, you will apply styles.

You will:

- Enhance text.
- Format lists.
- Modify the page background.
- Apply background properties to images.

Introduction

You structured content on a web page to make it more readable. It is important that text and images on your web pages be formatted properly and consistently so that your website appears professional and appealing. In this lesson, you will apply styles using CSS.

Most websites incorporate a unique appearance and consistent style across their web pages so that visitors can locate the required information quickly. CSS allows you to enhance your website by customizing and formatting text and images, making your website more engaging and visually effective.

TOPIC A

Enhance Text

You categorized text on a web page. You can format text and graphics on your web page to convey the importance of the content to users in addition to adding value to the text to suit your design requirements. In this topic, you will enhance text.

Text often forms a major part of any web page, so choosing an appropriate text size and style is very important. While a browser's default formatting styles are generally relevant to their functions on a page, most often they may be inappropriate to your design approach. CSS allows you to incorporate effectively styled text, so that you can improve the look and feel to text on your web page to make it visually appealing.

Styles



A *style* is a formatting rule that is used to modify the appearance and position of an element on a web page. Styles define the font, color, and layout of various web page elements. You can apply styles to a specific web page element either using the element's attributes or to the entire web page using style sheets.

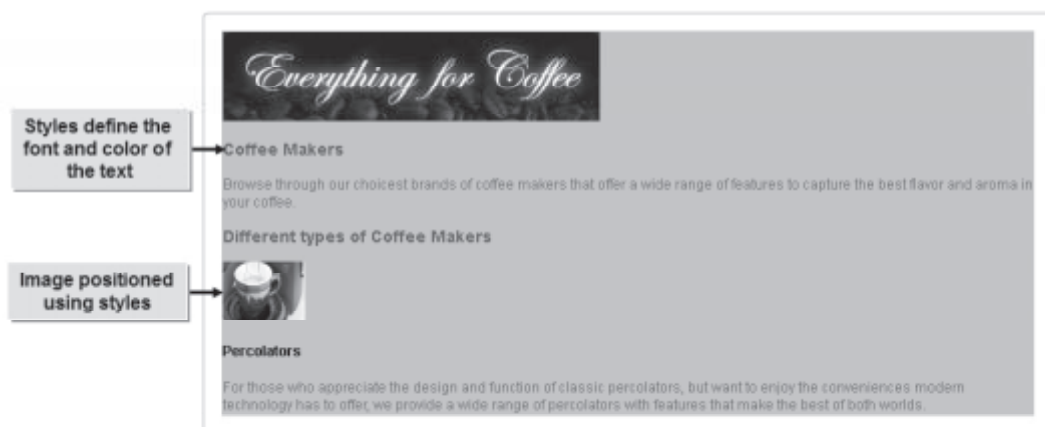


Figure 3-1: Different styles applied to the elements of a web page.

Formatting in HTML

In HTML, you can apply styles to various HTML elements by using attributes that are coded within HTML tags. Most HTML tags have attributes that are specific to them. These attributes control the appearance of content within the HTML tag on the web page.

Cascading Style Sheets

A *Cascading Style Sheet* (CSS) is a set of rules that define the appearance of content on a web page. By using CSS, you can modify a web page's appearance such as formatting and layout of page elements. The main purpose of a CSS is to separate the web page content from its presentation style.

Types of CSS

There are three types of CSS.

CSS Type	Description
Inline style sheet	Written directly in specific tags of web pages. It affects only the tag to which it is applied.
Embedded style sheet	Embedded in a web page's head section. It affects only the tags on the web page in which it is embedded. It is also known as an internal style sheet.
External style sheet	Written in a separate file with a .css extension and attached to different web pages. It affects any web page to which it is attached.

CSS Selectors

While creating a CSS, you need to declare a set of rules consisting of selectors and declarations. A *selector* denotes a structure that acts as a condition to determine which elements on a web page will be affected by the defined style. Every rule defined in a CSS must begin with a CSS selector. A selector can be any valid HTML element, such as the body, p, or h3.

Grouping Selectors

You can group multiple CSS selectors into a single rule if you want to apply the same style to multiple elements. By grouping multiple selectors, you can avoid redundant statements and make your style sheets concise.

Suppose you require two elements to share the same style characteristics. You can declare each style separately, as shown.

```
td { color: orange; }  
p { color: orange; }
```

Instead, to make the code look concise and easy to maintain, you can group all selectors into a single rule by separating each selector with a comma, as shown.

```
td, p { color: orange; }
```

Properties

Definition:

In CSS, a *declaration* helps you to define a style for a specific selector. A declaration consists of a *property*, or a series of properties, with each property having an associated value. Properties are predefined behaviors that define an action performed on an element.

Example:



Figure 3-2: A declaration with a property and value.

Grouping Properties

A rule can have multiple properties. There is no limit to the number of properties you can declare. For example, if you want all paragraph text to be displayed in blue on a gray background, you can group the properties together within a rule by separating each property with a semicolon (;), as shown.

```
p { color: blue; background-color: gray; }
```

Classes

A *class* defines a set of attributes that can be applied to an HTML element to define its category or type. Classes enable you to format HTML elements using CSS. You can specify a class for an HTML tag by adding the `class="classname"` attribute to its opening tag.

An Example of a Class

Imagine that you want to present a particular paragraph, which is a legal disclaimer, using specific formatting. You define the required format in the class “disclaimer” and then add it to the opening tag of the relevant element. In this case, you will add it to the opening tag of the `<p>` tag.

```
<p class="disclaimer">While we take care to ensure the accuracy and ⇒  
quality of this website, we cannot guarantee the accuracy of the ⇒  
information presented herein.</p>
```

Class Selectors

A *class selector* is a type of CSS selector that helps you apply CSS styles to a specific HTML element based on its class. Defined in the opening tag of the respective HTML element, the class selector applies the style to the content of the element it is applied to. It is supported on all major browsers.



Figure 3-3: An example of a class selector.

ID Selectors

An *ID selector* is a type of CSS selector that enables you to apply unique styles to individual page elements based on its identifier (ID). To use this selector, you need to define individual page elements in the HTML file with a unique ID. However, unlike classes, styles declared with an ID selector must be unique to a specific element on a web page. An ID selector must begin with a letter and can contain a combination of letters and numbers. It may optionally include a hyphen, but cannot contain symbols such as the underscore.



Figure 3-4: An example of an ID selector.

Font Properties

Font properties allow you to specify a font style for a specific element. Browsers usually use a default font and font size to render textual content. By setting font properties, you can override the browser default font and font size to display text on a web page the way you intend.

CSS Selectors for Font Properties

CSS provides various selectors to set font properties.

Font Selector	Used To
font-family	Declare a font face for text.
font-style	Create or disable italic text.
font-variant	Create or disable small caps.
font-weight	Make text bold in varying degrees, depending on the font in use.
font-size	Declare a specific font size using a variety of keywords and units of measurement.
font	Declare all font properties at once.

Embed Fonts

When a web page is rendered in a browser, the text on the web page is displayed using the fonts installed on the user's machine. In CSS3, you can embed a font in a web page so that text is displayed in the same font, overriding the fonts installed on the user's computer. You can embed a font in your web page by using the `@font-face` rule.

Uses of the `@font-face` Rule

By using the `@font-face` rule, you can select a font that matches what you require for a page instead of restricting it to a common set of fonts available on a user's computer. You can use font descriptors to define the location of a font resource, which can be either local or external, in addition to the style characteristics of an individual font face. You can also use multiple `@font-face` rules to create font families having a variety of font faces. CSS font matching rules allow you to choose and download only those font faces required to display a given text.

All major browsers support the `@font-face` rule. Internet Explorer supports fonts only with the type `.eot`. Firefox, Safari, Opera, and Chrome support both `.ttf` and `.otf` type fonts.

The general form of a `@font-face` rule is: `@font-face { font-description },` where “<font-description>” has the following form.

```
descriptor: value;
descriptor: value;
[...]
descriptor: value;
```

Text Properties

CSS provides a number of text properties to help you enhance the readability and appearance of content.

Text Property	Description
<code>text-align</code>	Specifies the horizontal alignment of text in an element. It allows you to align text to left, center, right, or justify. It also allows you to inherit text by specifying that the property's value be inherited from the parent element. This means that the property shares the same values as its parent. This property is supported in all major browsers. However, the “inherit” value is supported only in Internet Explorer 8 and later versions.
<code>text-decoration</code>	Denotes any decoration applied to text such as underline, overline, blink, and line-through effects. In addition, you can inherit text by specifying that the property's value be inherited from the parent element. All major browsers support this property. However, “inherit” is supported only in Internet Explorer 8 and later versions and the “blink” value is not supported in Internet Explorer, Chrome, and Safari.
<code>text-indent</code>	Specifies the indentation of the first line in a paragraph. You can also specify that a negative value will use a hanging indent for the first line. The indentation can be set in terms of length, percentage, or as an inherited value. All major browsers support this property. However, “inherit” is supported only in Internet Explorer 8 and later versions.

Text Property	Description
<code>text-justify</code>	Indicates the method of text justification to use when the <code>text-align</code> property is set to “justify”. It denotes the alignment and spacing of characters in the justified text. Currently, only Internet Explorer supports this property.
<code>text-outline</code>	Specifies an outline for a piece of text. Attributes such as thickness, blur, or color of the outline can be set. Currently, none of the major browsers support this property.
<code>text-overflow</code>	Denotes what should be done when text overflows the containing element. You can specify actions such as clipping the overflowing text, rendering an ellipsis, or returning the overflowing text. All major browsers support this property.
<code>text-transform</code>	Controls the casing of text as uppercase, lowercase, or initial caps. This property is useful when enforcing a site’s style guide with regard to text casing. All major browsers support this property. However, the “inherit” value of this property is supported only in Internet Explorer 8 and later versions.
<code>text-wrap</code>	Specifies text wrap rules for text on a web page. Currently, none of the major browsers support this property.

Text Effects

Text effects are used to display text using different combinations of font, color, and shadow.

Text Effect Property	Description
<code>text-shadow</code>	Applies a shadow to the given text by specifying the horizontal shadow, vertical shadow, blur distance, and shadow color effects. Except for Internet Explorer, all major browsers support this property. In the following example, text is displayed with a shadow per the parameters provided. <h1></h1> <pre>{ text-shadow: 5px 2px 10px #FF00FF; } <h1>Welcome to Everything for Coffee.com.</pre>
<code>word-wrap</code>	Forces text to wrap at the end of a line. If a word begins at the end of a line, then it may be split across multiple lines. The property is supported by all major browsers. In the following example, text is wrapped within the box. <h4></h4> <pre>{ border:1px solid #000000; width:3em; word-wrap:break-word; } <body> <h4 class="wrap"> Welcome to Everything for⇒ Coffee.com </body></pre>

Margin Properties

A *margin* defines the space between the edges of an element and its surrounding content. Supported by all major browsers, the `margin` property helps you set the margin values to be applied to specific elements. Note that you can also provide negative values when defining the margin for this property.

Margin Property	Sets
<code>margin-top</code>	The top margin of an element.
<code>margin-right</code>	The right margin of the element.
<code>margin-bottom</code>	The bottom margin of the element.
<code>margin-left</code>	The left margin of the element.

Margin Values

The `margin` property accepts values in the following format for setting the margin.

Value	Description
<code>margin:5px 10px 15px 20px;</code>	<ul style="list-style-type: none"> • Top margin is 5px • Right margin is 10px • Bottom margin is 15px • Left margin is 20px
<code>margin:5px 10px 20px;</code>	<ul style="list-style-type: none"> • Top margin is 5px • Right margin is 10px • Bottom margin is 20px
<code>margin:15px 20px;</code>	<ul style="list-style-type: none"> • Top margin is 15px • Right margin is 20px
<code>margin:10px;</code>	<ul style="list-style-type: none"> • All four margins are 10px

Padding Properties

Padding refers to the space between an element's content and its borders. Similar to margins, you can set padding on all four sides of an element's content. Note that this property does not accept negative values. All major browsers support this property.

Padding Property	Sets
<code>padding-top</code>	An element's top padding.
<code>padding-right</code>	The right padding between the element's content and its borders.
<code>padding-bottom</code>	The bottom padding of an element.
<code>padding-left</code>	An element's left padding.

Padding Values

The `padding` property accepts values in the following format for setting the padding space.

Value	Description
<code>padding:5px 10px 15px 20px;</code>	<ul style="list-style-type: none"> • Top padding is 5px • Right padding is 10px • Bottom padding is 15px • Left padding is 20px
<code>padding:5px 10px 20px;</code>	<ul style="list-style-type: none"> • Top padding is 5px • Right padding is 10px • Bottom padding is 20px
<code>padding:15px 20px;</code>	<ul style="list-style-type: none"> • Top padding is 15px • Right padding is 20px
<code>padding:10px;</code>	<ul style="list-style-type: none"> • All four paddings are 10px

How to Enhance Text

Procedure Reference: Change Font Styles

To change font styles:

1. In a text editor, open the required HTML file.
2. Declare a style.
 - a. Click after the opening `<head>` tag and enter the `<style>` tag.
 - b. Enter the style declaration statements by specifying a selector.
 - c. Enter the `</style>` tag.
3. Apply the style.
 - a. In the desired HTML tag, specify the class for which the style is to be applied.
 - b. At the end of the text, close the class name tag.

Procedure Reference: Change Text Properties

To change text properties:

1. In a text editor, open the required HTML file.
2. Click before the `</style>` tag.
3. Create a class using a unique selector ID to align text.
4. Within the `<body>` `</body>` tags, click at the desired location and declare the class for the content for which the style is to be applied.
5. At the end, close the class name tag.

Procedure Reference: Insert Margins

To insert a margin:

1. In a text editor, open the required HTML file.
2. In the `<style>` tag, click in the required class.
3. In the class declaration, specify the required margin.
4. In the class declaration, specify the required padding.

ACTIVITY 3-1

Enhancing Text

Data Files:

- C:\085736Data\Applying Styles Using CSS\coffee_makers.html

Scenario:

You have structured and organized the content on your website. Your manager asks you to format the text and graphics on the web page so that important content is highlighted and the website looks interesting to users.

What You Do	How You Do It
1. Change the font styles for text on the web page.	<ol style="list-style-type: none"> a. In the Notepad++ window, click Open. b. In the Open dialog box, navigate to the C:\085736Data\Applying Styles Using CSS folder and open the coffee_makers.html file. c. Inside the <code><head></code> tag, click just before the <code></head></code> tag. d. To declare the <code><style></code> tag, insert a new line and type <code><style type=></code> <code>"text/css"></code> e. In the next line, click and type <code>div.s1</code> f. Insert a space and type <code>{</code> <code>font-family:</code> <code>Arial, Verdana, sans-serif;=></code> <code>font-size:12px; }</code> g. Insert a new line and type <code></style></code>

2. Apply a style to the web page content.
 - a. After the `</style>` tag, insert a new line and type `<div class="s1">`
 - b. Scroll down to the blank line before the `</body>` tag and then click and type `</div>`
-
3. Change text properties.
 - a. Scroll up to line 8 and click after the closing brace.
 - b. Insert a new line and type `div.s2`
 - c. Insert a space and type `{ text-align=justify; }`
 - d. In line 26, click at the end of the `<h3>Coffee Makers</h3>` tag and type `<div class="s2">`
 - e. After the end of the sentence "Browse through," click and type `</div>`
 - f. Similarly, after texts `<h4>Percolators</h4>`, `<h4>French Press</h4>`, `<h4>Automatic Drip</h4>`, `<h4>Espresso</h4>`, `<h4>Grind and Brew</h4>`, and `<h4>K-Cup</h4>`, type `<div class="s2">` and then at the end of each paragraph, type `</div>`

See Code Sample 1.

Code Sample 1

```
<h4>Percolators</h4>
<div class="s2">For those who
appreciate the design and function of classic
percolators, but want to enjoy the conveniences
modern technology has to offer, we provide a wide
range of percolators with features that make the
best of both worlds.</div>
```

LESSON 3

4. Align text on the web page.

a. Scroll up to line 9 and before the closing brace of the `div.s2` class definition, click and insert a new line.

b. To define the margins on all sides, type **`margin:15px;`**

See Code Sample 2.

c. To define the padding for all sides, insert a new line and type **`padding:10px;`**

Code Sample 2

```
div.s2 { text-align:justify;  
margin:15px; }  
</style>
```

5. Save and view the web page.

a. To save the HTML document, click **Save**.

b. To view the changes in the web browser, choose **Run→launch in Firefox**.

c. Observe the changes on the web page and then close the browser.



d. Close the `coffee_makers.html` file.

TOPIC B

Format Lists

In the previous topic, you enhanced text. While presenting text as a list, you can change its appearance so that it stands out from the rest of the text on the web page. In this topic, you will format lists.

Usually, users who visit a website, scan its web pages quickly to gather important information. Text lists on a web page that look plain and uninteresting may not gain user attention and thereby fail to convey the intended information. By formatting lists, you can emphasize key points of the content in an engaging manner.

List Properties

List properties are specifically set to format lists. You can set all list properties in a single declaration by using the `list-style` property. For values that you have not set, the default value of that property will be used. All major browsers support list properties.

List Property	Description
<code>list-style-type</code>	Specifies the type of a list-item marker.
<code>list-style-image</code>	Replaces a list-item marker with a specified image. Remember to always specify the <code>list-style-type</code> property in addition, because this is used in case there is no image.
<code>list-style-position</code>	Specifies whether the list-item markers appear inside or outside the content flow.

How to Format Lists

Procedure Reference: Modify Bullets in a List

To modify bullets in a list:

1. In a text editor, open the desired HTML file.
2. Click within the `<style>` tag and declare a class.
3. Within the class, specify an image to be used as bullets.
4. Click at the desired location and enter the class for the content for which the style is to be applied.
5. At the end of the text, close the class name tag.

ACTIVITY 3-2

Formatting Lists

Data Files:

- C:\085736Data\Applying Styles Using CSS\coffee_filters.html

Scenario:

Your manager reviews the website and suggests that the appearance of the lists on a web page be modified to make it more aesthetic. In addition, he suggests that the content on the web page can also be spaced out for better readability.

What You Do	How You Do It
1. Change list bullets to images.	<ol style="list-style-type: none"> In the Notepad++ window, click Open. In the Open dialog box, navigate to the C:\085736Data\Applying Styles Using CSS folder and open the coffee_filters.html file. Scroll down to line 22 and in the blank line before the <code></style></code> tag, click and type <code>ul.s3</code> Insert a space and type <code>{</code> <code>list-style-image:⇒</code> <code>url("graphics/icn_cup.gif");</code> <code>list-style-position:inside; }</code> In line 45, in the opening <code></code> tag, click after the text <code><ul</code>, insert a space, and type <code>class="s3"</code> Similarly, in line 52, in the opening <code></code> tag, click after <code><ul</code>, insert a space, and type <code>class="s3"</code>
2. Save and view the web page.	<ol style="list-style-type: none"> To save the HTML document, click Save. To view the changes in the web browser, choose Run→launch in IE. Observe the changes to the bullets on the web page and then close the browser. Close the coffee_filters.html file.

TOPIC C

Modify the Page Background

In the previous topic, you formatted lists. Formatting a web page also involves adding colors and images that help enhance a web page's visual appearance. In this topic, you will modify page backgrounds.

Colorful and vibrant web pages attract visitors and lend a lot of appeal to websites. You can use images or text with attractive visual effects as the background to make the web pages more colorful and appealing to visitors.

Color Methods

Color methods are tools using which you can specify the colors for your web page. CSS provides various methods in which to specify colors.

Color Method	Description
Hexadecimal colors	<ul style="list-style-type: none"> Specified using #RRGGBB, where RR (red), GG (green), and BB (blue) are hexadecimal integers denoting a color value. Hexadecimal values must be between 000000 and FFFFFFFF. Supported in all major browsers.
RGB colors	<ul style="list-style-type: none"> Specified using RGB (red, green, blue). Each parameter denotes the intensity of color and denoted as an integer between 0 and 255 or a percentage value from 0% to 100%. Supported in all major browsers.
RGBA colors	<ul style="list-style-type: none"> Are an extension of the RGB color values with an alpha channel denoting the object's opacity. Specified as RGBA (red, green, blue, alpha). The Alpha parameter is a number between 0.0 (fully transparent) and 1.0 (fully opaque). Supported in Internet Explorer 9+, Firefox 3+, Opera 10+, and in all versions of Chrome and Safari.
HSL colors	<ul style="list-style-type: none"> Refer to hue, saturation, and lightness and denote a cylindrical-coordinate representation of colors. Specified as HSL (hue, saturation, lightness). Hue refers to a degree on the color wheel from 0 to 360, where 0 or 360 denotes red, 120 denotes green, and 240 denotes blue. Saturation refers to a percentage value, where 0% is a shade of gray and 100% is the full color. Lightness is a percentage, where 0% is black and 100% is white. Supported in Internet Explorer 9+, Firefox, Opera 10+, and in all versions of Chrome and Safari.

Color Method	Description
HSLA colors	<ul style="list-style-type: none"> • Are an extension of HSL colors, but with an alpha channel that denotes the opacity of the object. • Specified as HSLA (hue, saturation, lightness, alpha), with the Alpha parameter defining the opacity. • The Alpha parameter is a number between 0.0 (fully transparent) and 1.0 (fully opaque). • Supported in Internet Explorer 9+, Firefox 3+, Opera 10+, and in all versions of Chrome and Safari.
Predefined/cross browser color names	<ul style="list-style-type: none"> • HTML and CSS color specifications define 147 color names, 17 standard colors plus 130 additional colors, that are supported by all browsers. • 17 standard colors include aqua, black, blue, fuchsia, gray, grey, green, lime, maroon, navy, olive, purple, red, silver, teal, white, and yellow. • Additional colors include beige, brown, gold, indigo, orange, pink, and violet.



Background Colors

Background Colors

Definition:

The background of an element covers its total size, which includes padding and the border, but not the margin. The `background-color` property allows you to set a background color for an element. When you apply a background color to a block-level element, the background color by default fills the element's entire containment area. All major browsers support the `background-color` property.

Example:

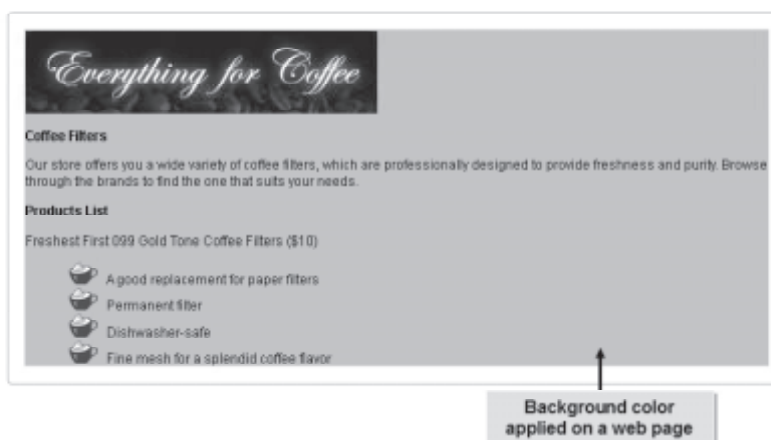


Figure 3-5: The background colors as seen on a web page.

The Containment Area

The containment area is defined by the width of the browser window, any margins that might be present, the width of the element's parent element, or the width of the element itself.



The Opacity Property

Definition:

The `opacity` property helps you to set an element's opacity level. You can specify this property either by using an opacity value or by inheriting the opacity value from its parent element. An opacity value of 1 displays a fully opaque element, whereas an opacity value of 0 infers that the element is fully transparent. All major browsers support the `opacity` property.

Example:



Figure 3-6: The opacity property applied to text on a web page.



Internet Explorer 8 and earlier versions support an alternative to the `opacity` property called the `filter` property.

How to Modify the Page Background

Procedure Reference: Modify the Background Color

To modify the background color:

1. In a text editor, open the desired HTML file.
2. In the `<style>` tag, click in the required class.
3. Declare a class with the background color.
4. Click at the desired location and specify the class.
5. At the end of the text, close the class tag.

Procedure Reference: Specify Opacity

To specify opacity:

1. In a text editor, open the desired HTML file.
2. In the `<style>` tag, click in the required class.
3. Specify the desired opacity value.

ACTIVITY 3-3

Modifying the Page Background

Data Files:

- C:\085736Data\Applying Styles Using CSS\coffee_makers.html

Scenario:

Now that you have formatted the lists on web pages, you notice that additional enhancements can be made to specific pages in the website. You decide to modify the background of your web page to make it look more aesthetic.

What You Do

How You Do It

1. Insert a background color for the web page.

- a. In the Notepad++ application, open the coffee_makers.html file.
- b. In line 11, click after `padding:10px; }`
- c. Insert a new line and type **`body { background-color:#d2b48c; }`**

See Code Sample 1.

Code Sample 1

```
margin:15px;
padding:10px; }
body { background-color:#d2b48c; }
</style>
```

2. Specify the opacity of text on the web page.

- a. In line 12, click before the closing brace of the `div.s2` class definition and insert a new line.
- b. To specify the opacity as 50%, type **`opacity:0.5;`**

3. Save and view the web page.

- a. To save the HTML document, click **Save**.
- b. To view the changes in the web browser, choose **Run→launch in Firefox**.



Figure 3-7: An image used as a background for a web page.

Background Image Properties

CSS provides a number of background image properties that help to control the appearance and display of background images. All major browsers support this property.

Background Image Property

Specifies

background-attachment

If the background image is fixed or scrollable within the web page.
Example: In the following code, the background image stays fixed.

```
<style type="text/css">
body {
background-image:url('logo.gif');
background-attachment:fixed;
background-repeat:no-repeat; }
</style>
```

background-position

The starting position of a background image.
Example: In the following code, the background image is displayed at the center of the page.

```
<style type="text/css">
body {
background-image:url('logo.gif');
background-attachment:fixed;
background-position:center;
background-repeat:no-repeat; }
</style>
</head>
<body>
<p>Welcome to Everything for Coffee.com</p>
</body>
```

Background Image Property	Specifies
background-size	<p>The size of background images by length or percentage. You can also scale the image using the “cover” and “contain” values.</p> <p>Example: In the following code, the output displays the image per the size given.</p> <pre><style type="text/css"> body { background:url("img_flwr.gif"); background-size:80px 60px; background-repeat:no-repeat; padding-top:40px; } </style></pre>
background-origin	<p>The element to which the background-position property should be relative to. Remember that this property has no effect if the background-attachment property for the background image is “fixed.”</p> <p>The property accepts one of three values: padding-box, border-box, or content-box.</p> <p>Example: In this code, the specified image is displayed relative to the border-box.</p> <pre><style type="text/css"> d { border:1px solid black; padding:20px; background-image:url('flower.gif'); background-position:left; background-repeat:no-repeat; background-origin:border-box; }</pre>
background-clip	<p>The painting area of the background. The property accepts either of the three values: border-box, padding-box, or content-box.</p> <p>Example: In the following piece of code, the text “Welcome to Everything for Coffee.com.” is displayed relative to the padding-box.</p> <pre><style type="text/css"> d { width:250px; height:30px; padding:20px; background-color:aqua; background-clip:padding-box; border:1px solid #000000; } </style> </head> <body> <d>Welcome to Everything for Coffee.com.</d> </body></pre> <p>Safari supports the alternative “-webkit-background-clip property.”</p>

How to Apply Background Properties to Images

Procedure Reference: Modify Background Properties

To modify background properties:

1. In a text editor, open the desired HTML file.

2. In the `<style>` tag, click in the required class.
3. Declare a new class with the required background properties.
4. Apply background properties.
 - a. Click at the desired location and specify a class.
 - b. Close the class tag.

Procedure Reference: Set the Background Origin

To set the background origin:

1. In a text editor, open the desired HTML file.
2. In the `<style>` tag, create a new class to specify the background origin property.
3. Set the desired background origin property.
4. Apply the background origin properties.
 - a. Click at the desired location and specify the class.
 - b. Close the class tag.

ACTIVITY 3-4

Applying Background Properties to Images

Data Files:

- C:\085736Data\Applying Styles Using CSS\splash.html

Scenario:

Your manager asks you to mock up a quick splash page that visitors will see before entering the main content of the web site. Without knowing what the written content eventually will be, you decide that a simple layout with the company logo in the background will be easiest to work with.

What You Do	How You Do It
1. Modify the background properties on the web page.	<ol style="list-style-type: none"> In the Notepad++ window, click Open. In the Open dialog box, navigate to the C:\085736Data\Applying Styles Using CSS folder and open the splash.html file. To declare the body style and image URL, click in line 9 and type body {background-image:url('graphics/logo.jpg');} and press Enter. To fix the image location, type background-position:center; and press Enter. To specify that the background image does not repeat, type background-repeat:no-repeat; and press Enter. To change the background color to be the same as the rest of the web site, type background-color:#d2b48c; and press Enter.
2. Save and view the web page.	<ol style="list-style-type: none"> To save the HTML document, click Save. To view the page in the web browser, choose Run→launch in Firefox. Observe that the company logo appears in the center of the web page and then close the browser. Close the splash.html file.

Lesson 3 Follow-up

In this lesson, you applied styles using CSS. Enhancing the appearance of text and images on your website gives it a unique look and feel and helps you in conveying the intended information in an effective manner.

1. **What styles will you apply in your website to improve its visual appeal?**

Answers will vary, but may include applying different font styles to help you control your text design, applying text properties to enhance the readability of content, and using text effects to display text in different visual effects.

2. **Which CSS selector do you think you'll use most often?**

Answers will vary, but may include using class selectors to apply CSS styles to specific classes of HTML elements and using ID selectors to apply unique styles to individual page elements with a specific ID.

LESSON 4

Working with Tables

Lesson Time*45 minutes*

In this lesson, you will work with tables.

You will:

- Create a table.
- Modify a table structure.
- Format a table using CSS.

Introduction

You used CSS to apply styles to web pages. Different types of data require different forms of presentation. For example, statistical data is best presented in the form of tables. In this lesson, you will work with tables.

Imagine you are hired by an inter-state bus operator. You are required to include bus schedules and timings in its website. Presenting the pickup timing and location of buses using plain text is not user friendly and may even confuse some users. In such cases, you can make use of tables to present information so that users can refer to it easily. Knowledge of HTML's table elements will enable you to present large amounts of data in a tabular format.

TOPIC A

Create a Table

You applied background properties to images. Displaying statistical data in a tabular format is an effective method to organize and present data effectively. In this topic, you will create a table.

Imagine that you want to display the population, area, and temperature of various cities in a section of your web page. If you present this data in the form of plain text or a bulleted list, it could affect the clarity of information. The same data, if presented as a table, can effectively convey the information and relationship among the data items.



Tables

Definition:

A *table* is a data structure that is used to organize related content in rows and columns. The first row and first column in a table denotes the header information for the respective row and column. Displaying information in a table makes it easy to read and interpret complex data.

Example:

City	Temp (in Celsius)	Temp (in Farenheit)
New York	17	62.6
Washington D.C.	15	59
San Francisco	10	50

Figure 4-1: A sample table.

Table Structure Elements

HTML provides you with various tags that enable you to structure a table.

Tag	Defines
<code><table></code> <code></table></code>	The start and end of table content.
<code><tr></code> <code></tr></code>	The start and end of a table row.
<code><td></code> <code></td></code>	A table cell in a table row.
<code><th></code> <code></th></code>	The start and end of the header cells in a table.
<code><thead></code> <code></thead></code>	A set of headers in a table. This tag must have one or more <code><tr></code> elements inside.
<code><tbody></code> <code></tbody></code>	The body content in a table. This tag must have at least one <code><tr></code> element inside.
<code><tfoot></code> <code></tfoot></code>	A set of footers in a table. This tag must have at least one <code><tr></code> element inside.

The <caption> Tag

Definition:

The `<caption>` tag is used to specify a title for a table. It is placed after the opening `<table>` tag and before the definition of rows and columns. You can define only one caption for a table. All major browsers support this tag.

Example:

```
<table>
<caption>Today's Temperature</caption>
<tr>
<th>City</th>
<th>Temperature(in Celsius)</th>
</tr>
<tr>
<td>New York</td>
<td>17</td>
</tr>
<tr>
<td>Washington D.C.</td>
<td>15</td>
</tr>
</table>
```



Figure 4-2: A table with a caption.

 The `<caption>` Tag

The <colgroup> Tag

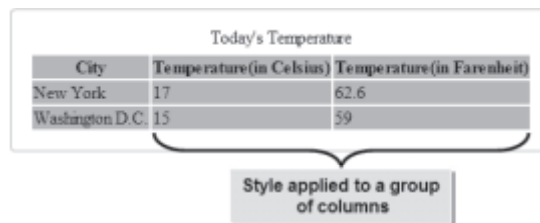
The <colgroup> tag defines a style for the columns in a table. It enables you to apply defined style properties for a specific column or all columns within a table. This tag is a child of the <table> tag and usually appears after the <caption> element. All major browsers support this tag.

The <col> Tag

Definition:

The <col> tag is used to define column properties. It specifies the properties of each column defined within a <colgroup> element. This tag allows you to apply a specific style to a column instead of applying it individually to each cell. All major browsers support this tag.

Example:



City	Temperature(in Celsius)	Temperature(in Farenheit)
New York	17	62.6
Washington D.C.	15	59

Style applied to a group of columns

Figure 4-3: A sample table formatted with the <col> tag.

How to Create a Table

Procedure Reference: Create a Table

To create a table:

1. Open the desired .html file using a text editor.
2. At the desired location, enter <table>.
3. Specify a caption.
 - a. Enter the <caption> tag.
 - b. Type the caption.
 - c. Enter the </caption> tag.
4. Create a header row.
 - a. Enter the <tr> tag.
 - b. Enter the <th> tag.
 - c. Specify the cell content.
 - d. Enter the </th> tag.
 - e. Enter additional header cells as needed.
 - f. Enter the </tr> tag.
5. Create a row.

- a. Enter the `<tr>` tag.
- b. Enter the `<td>` tag.
- c. Type the content.
- d. Enter the `</td>` tag.
- e. Enter additional cells as needed.
- f. Enter the `</tr>` tag.
6. If necessary, create additional rows.
7. Close the table definition by entering the `</table>` tag.
8. Save the file.
9. If necessary, view the file in a browser.

Procedure Reference: Define Styles for a Column Using the `<col>` Tag

To define styles for a column using the `<col>` tag:

1. Open the desired .html file using a text editor.
2. After the `</caption>` tag, enter the `<colgroup>` tag.
3. Enter the `<col>` tag.
4. Specify the desired style properties using the `style` attribute and close the `<col>` tag.
5. Enter the `</colgroup>` tag.

ACTIVITY 4-1

Creating a Table

Data Files:

- C:\085736Data\Working with Tables\gourmet_beans.html

Scenario:

Everything for Coffee supplies different types of coffee beans. Your manager wants the details of each type of coffee beans and its price to be displayed to users. You decide to present this information as a table so that the end users can easily read and understand the content.

What You Do

How You Do It

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Open the gourmet_beans.html file. | <ol style="list-style-type: none"> a. On the toolbar, click Open. b. In the Open dialog box, navigate to the C:\085736Data\Working with Tables folder and open the gourmet_beans.html file. |
|--|---|
-

LESSON 4

2. Create a header row.

- a. In line 17, after the `</p>` tag, insert a new line and type `<table>`

See Code Sample 1.

- b. Insert two new lines and type `</table>`

- c. To create the first row, click line 19 and type `<tr>`

See Code Sample 2.

- d. To define the header for the first column, insert a new line and type `<th>`

- e. To specify the header text, type **Beans**

- f. To close the header, type `</th>`

- g. Similarly, enter the header for the rest of the columns.

See Code Sample 3.

- h. To close the header row, insert a new line and type `</tr>`

Code Sample 1

```
</p>
<table>
```

Code Sample 2

```
<table>
<tr>
</table>
```

Code Sample 3

```
<table>
<tr>
<th>Beans</th>
<th>Roast</th>
<th>Grind</th>
<th>Price</th>
<th>Price</th>
</table>
```

3. Create the table structure.

- To define a row, insert a new line and type `<tr>`
- To define a cell, insert a new line and type `<td>`
- To specify the content for the cell, type **Royal Robustica Blend**
- To close the cell, type `</td>`
- Similarly, enter the rest of the row items.

See Code Sample 4.

- To close the row, insert a new line and type `</tr>`
- Similarly, create other rows and enter the specified content.
 - Royal French Roast, Dark, Whole Bean/Ground, 1 lb: \$6.75, 1 lb: €5
 - New Orleans Blend, Medium/Dark, Whole Bean/Ground, 1 lb: \$6.75, 1 lb: €5

See Code Sample 5.

Code Sample 4

```
<td>Royal Robustica Blend</td>
<td>Medium/Dark</td>
<td>Whole Bean</td>
<td>(1 lb: $6)</td>
<td>(1 lb: &euro;4.5)</td>
```

Code Sample 5

```
<tr>
<td>Royal French Roast</td>
<td>Dark</td>
<td>Whole Bean/Ground</td>
<td>(1 lb: $6.75)</td>
<td>(1 lb: &euro;5)</td>
</tr>
<tr>
<td>New Orleans Blend</td>
<td>Medium/Dark</td>
<td>Whole Bean/Ground</td>
<td>(1 lb: $6.75)</td>
<td>(1 lb: &euro;5)</td>
</tr>
```

LESSON 4

4. Define a title for the table.
 - a. In line 18, click after the opening `<table>` tag.
 - b. To specify a caption, insert a new line and type `<caption>Product Lists</caption>`

See Code Sample 6.

Code Sample 6

```
<table>
<caption>Product Lists</caption>
```

5. Save and view the web page in a browser.
 - a. Save the file.
 - b. View the web page in Internet Explorer.
 - c. Observe that the content is presented as a table and then close the web page.



TOPIC B

Modify a Table Structure

You created a table. To avoid redundancy in the content, you may want to change the way data is presented in the table. In this topic, you will modify the table structure.

Suppose you have a table with a large amount of identical data in adjacent cells. Rather than presenting the same data in each cell, you can modify the table structure to indicate that the same data applies to multiple cells. HTML5 provides you with table structuring elements that enable you to effectively present data.

Column Spanning

Definition:

Column spanning is the process of combining two or more contiguous table cells in the same row to form a single large cell. It is achieved using the `colspan` attribute of the `<td>` or `<th>` element. You can specify the number of columns for the cell to span. The syntax for using the `colspan` attribute is `<td colspan="value">` or `<th colspan="value">`.

Example:

```
<table border="1">
<caption>Today's Temperature</caption>
<tr>
<th>City</th>
<th colspan="2">Temperature</th>
</tr>
<tr>
<td>New York</td>
<td>17C</td>
<td>62.6F</td>
</tr>
<tr>
<td>Washington D.C.</td>
<td>15C</td>
<td>59F</td>
</tr>
</table>
```

City	Temperature	
New York	17 C	62.6 F
Washington D.C.	15 C	59 F

Figure 4-4: A table with a cell spanning across two columns.



Column Spanning

Row Spanning

Definition:

Row spanning refers to the process of spanning contiguous cells in the same column across two or more rows. This is achieved using the `rowspan` attribute of the `<td>` or `<th>` element. You can specify the number of rows for the cell to span. The syntax for using the `rowspan` attribute is `<td rowspan="value">` or `<th rowspan="value">`.

Example:

```
<table>
<tr>
<td rowspan="3">Gourmet Beans</td>
<td>Royal Robustica Blend</td>
</tr>
<tr>
<td>Royal French Roast</td>
</tr>
<tr>
<td>New Orleans Blend</td>
</tr>
</table>
```

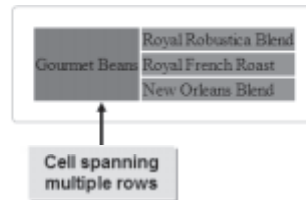


Figure 4-5: A table with a cell spanning across two rows.

How to Modify a Table Structure

Procedure Reference: Span Cells

To span cells:

1. Open the desired .html file using a text editor.
2. Determine the rows or columns that you would like to extend.
3. For the desired cell, in the opening `<td>` or `<th>` tag, enter the `span` attribute.
 - Add `rowspan="value"` to span rows.
 - Add `colspan="value"` to span columns.
4. Delete code for the cells that will be replaced by the extended cell.
5. Save the file.
6. If necessary, view the file in a browser.

ACTIVITY 4-2

Modifying a Table Structure

Before You Begin:

The gourmet_beans.html file is open.

Scenario:

The table you created includes some redundant data. You want to modify the structure of the table so that the content is presented clearly. You decide to have a common header for two columns that use the same header text.

What You Do	How You Do It
1. Span a cell across two columns.	<p>a. In line 24, in the <code><th></code> tag, click after <code><th></code> and insert a space.</p> <p>b. To span the cell across two columns, type <code>colspan="2"</code></p> <p><i>See Code Sample 1.</i></p> <p>c. In line 25, click before <code><th></code> and select the text <code><th>Price</th></code> and delete it.</p> <p><i>See Code Sample 2.</i></p>

Code Sample 1

```
<th colspan="2">
```

Code Sample 2

```
<th>Price</th>
```

- | | |
|---|--|
| 2. Save and view the web page in a browser. | <p>a. Save the file.</p> <p>b. View the file in Internet Explorer.</p> |
|---|--|

- c. Observe that the header cell containing the text “Price” spans across two columns and then close the browser.



TOPIC C

Format a Table Using CSS

You modified the structure of a table. To improve the readability and aesthetic appeal of a table, you may want to customize how the table is displayed on a web page. In this topic, you will format a table using CSS.

HTML tables play a vital role in enabling you to display large amounts of important data. Imagine that you want to create a table that lists all products offered by your company along with their prices. You want the table to be lucid and easy to understand. The CSS formatting options allow you to make content easy to read and understand.

CSS Elements for Tables

CSS provides various properties to improve the appearance of a table on a web page.

Property	Description
border	Specifies the color and weight of a table border.
border-collapse	Specifies whether table and cell borders should be collapsed to display a single border.
width and height	Specify the height and width of a table. This property can be set as a percentage or by specifying the actual number of pixels.
text-align	Sets the horizontal alignment of content, such as left, right, or center, within each cell of a table.
vertical-align	Sets the vertical alignment of content, such as top, bottom, or middle, within each cell of a table.

Property	Description
padding	Specifies the space between content and border of cells within a table.
color	Sets the text color of the header row in a table.
background-color	Sets the background color of the header row in a table.

How to Format a Table Using CSS

Procedure Reference: Format a Table

To format a table:

1. Determine the styles you want to apply to a given table.
2. Specify the style properties for the table in the style sheet.
 - a. Type **table{**
 - b. Specify the style properties.
 - c. Type **}**
3. Enter the style properties for table cells.
 - a. Type **td{**
 - b. Specify the style properties.
 - c. Type **}**
4. Enter the style properties for the table header.
 - a. Type **th{**
 - b. Specify the style properties.
 - c. Type **}**
5. Enter the style properties for the table caption.
 - a. Type **caption{**
 - b. Specify the style properties.
 - c. Type **}**
6. Save the file.
7. If necessary, view the file in a browser.

ACTIVITY 4-3

Formatting a Table Using CSS

Before You Begin:

The `gourmet_beans.html` file is open.

Scenario:

You have created a basic table with data. You now want to format the table so that it would look more distinct and readable.

What You Do	How You Do It
1. Format the text in the table.	<p>a. Scroll up and in line 9, click after <code>}</code>.</p> <p>b. To specify the style properties for the table, insert a new line and type <code>table{</code></p> <p>c. To specify the font family, insert a new line and type <code>font-family:arial,verdana,sans-serif;</code> <i>See Code Sample 1.</i></p> <p>d. To specify the font size, insert a new line and type <code>font-size:12px;</code> <i>See Code Sample 2.</i></p> <p>e. To specify the table border and close the style declaration, insert a new line and type <code>border:solid 1px;}</code> <i>See Code Sample 3.</i></p>

Code Sample 1

```
table{
font-family:arial,verdana,sans-serif;
```

Code Sample 2

```
font-family:arial,verdana,sans-serif;
font-size:12px;
```

Code Sample 3

```
font-size:12px;
border:solid 1px;}
```

2. Apply formatting to the cells of the table body.
 - a. At the end of line 13, insert a new line and type **td{**
 - b. To specify the font color, insert a new line and type **color:#800000;**
 - c. To specify border for cells, insert a new line and type **border:solid 1px;**
 - d. To specify padding on all sides and to close the style declaration, insert a new line and type **padding:1px;}**

3. Change the background and font color of the header cells.
 - a. To specify the style properties for header cells, insert a new line and type **th{**
 - b. To specify the background color, insert a new line and type **background-color:#cdba96;**
 - c. To specify the font color and to close the style declaration, insert a new line and type **color:#800000;}**

4. Format the table title.
 - a. To specify the style properties for the table title, insert a new line and type **caption{**
 - b. To align text, insert a new line and type **text-align:left;**
 - c. To display the caption in bold and close to the style declaration, insert a new line and type **font-weight:bold;}**

5. Save and view the web page in a browser.
 - a. Save the file.
 - b. View the web page in Internet Explorer.

- c. Observe that the content is presented as a formatted table and then close the browser.



- d. Close the gourmet_beans.html file.

Lesson 4 Follow-up

In this lesson, you created and modified tables. You also formatted tables using various CSS style properties. This knowledge will enable you to display data in an organized and visually appealing manner.

1. **What elements will you customize to present data in a table on your web page?**

Answers will vary, but may include defining table cells using the <td> tag; providing a title for the table using the <caption> tag; and spanning a cell across multiple columns using the colspan attribute and rows using the rowspan attribute.

2. **Which style properties will you use to format a table?**

Answers will vary, but may include using border to specify border color and thickness for a table, using width and height to specify table dimensions, and using color to specify the text color of the header row.

LESSON 5

Navigating a Website

Lesson Time

50 minutes

In this lesson, you will navigate a website.

You will:

- Navigate a website.
- Create image and email links.
- Format links.

Introduction

You created multiple web pages using text, images, and tables. You now want to enable visitors to navigate these web pages intuitively. In this lesson, you will navigate a website.

Web pages in a website must be linked so that users can navigate through the information presented within the website. Linking related information can help you design neatly ordered and concise web pages. Links will also help visitors navigate the website with ease and locate the information they need easily. In addition, you can ensure that there are no inaccessible web pages on your website.

TOPIC A

Create Links

You formatted a table using CSS. You may want to enable navigation across various web pages so that visitors to your website can access all content easily. In this topic, you will create navigation links.

One of the easiest ways to navigate a website is to click links. Links provide clear visual clues and guide users through the content presented in a website. Providing intuitive navigation options enables you to retain user interest in the website and helps them to quickly find the information they need.

The <nav> Tag

Definition:

The <nav> tag helps you to define a section of navigation links to important documents or sections in a website. However, screen readers may skip these links when they render content the first time. All major browsers support this tag.

Example:

```
<nav>
<a href="coffee_filters.html">Coffee Filters</a>
<a href="coffee_makers.html">Coffee Makers</a>
<a href="gourmet_beans.html">Gourmet Beans</a>
</nav>
```

Figure 5-1: Sample code to illustrate the <nav> tag.

Hypertext Links

A *hypertext link* is a type of link that is represented by words or by a string of text. Clicking this link takes you to a different web page. By default, hypertext links are displayed in blue with an underline. Hypertext links are declared within the anchor tag <a> using its href attribute, which specifies the destination of the link.

The <nav> Tag

Hypertext Links



Figure 5-2: An example of a hypertext link.

Hyperlinks

The terms “hyperlink” and “hypertext link” are unique. A hypertext link is represented by using words or strings only, while the term “hyperlink” is a general reference to any link that enables navigation from one web page to another. A hyperlink can be an image, a hotspot, or text that when clicked takes you to a different destination.

Bookmark Links

A *bookmark link* is a type of link, which when clicked, takes you to a specific location within the same web page. A bookmark link is also called an on-page link or a named anchor. You can declare a bookmark by defining the target location using the `name` attribute of the `<a>` tag. Then, you can specify the bookmark link by providing the bookmark as the value for the `href` attribute of the `<a>` tag. Because the `name` attribute of the `<a>` tag is deprecated in HTML5, you can use the `id` attribute.



Figure 5-3: An example of a bookmark link.

The Target Attribute

The target attribute, specified with the `<a>` tag, determines the target browser window in which the linked content will be displayed.

Target Value	Description
<code>_blank</code>	Displays the linked content in a new instance of the browser.
<code>_parent</code>	Opens the linked content in the immediate parent frameset.
<code>_self</code>	Opens a linked document in the same frameset.

Target Value	Description
_top	Opens a linked document in the topmost frame, which covers the complete window of the browser.

How to Navigate a Website

Procedure Reference: Create a Navigation List

To create a navigation list:

1. In a text editor, open the desired HTML file.
2. Click at the beginning of the text where you want to add a navigation list and enter the `<nav>` tag.
3. Add hypertext links to the text.
4. At the end, enter the `</nav>` tag.

Procedure Reference: Create a Hypertext Link

To create a hypertext link:

1. In a text editor, open the desired HTML file.
2. Click before the text where you want to add a hypertext link and enter the `<a>` tag.
3. Within the opening `<a>` tag, define the `href` attribute by entering the destination web page or file to display.
4. If desired, specify the target frame in which the linked document is to be opened.
5. At the end of the text, enter the `` tag.

ACTIVITY 5-1

Navigating a Website

Data Files:

- C:\085736Data\Navigating a Website\customer_service.html

Scenario:

The web pages that you need for your website are complete and ready. One last check on the website functionality tells you that there is no provision for the user to navigate these pages. You decide to insert links to connect the web pages.

LESSON 5

What You Do

1. Define a set of navigation links.

How You Do It

- a. In the Notepad++ window, click **Open**.
- b. In the **Open** dialog box, navigate to the C:\085736Data\Navigating a Website folder and open the customer_service.html file.
- c. In line 8, click at the end of the `<header class="s1">` tag.
- d. Insert a new line and type `<nav>`
- e. In line 10, click before `Home` and type ``
- f. Click after `Home` and type ``
- g. Similarly, enter the text and links for other pages ``
`"coffee_filters.html">Coffee`
`Filters |, `
`"coffee_makers.html">Coffee`
`Makers |, `
`"gourmet_beans.html">Gourmet`
`Beans |, and `
`"customer_service.html">`
`Customer Service Center` in subsequent lines.

See Code Sample 1.
- h. To close the navigation list, in the next line, enter the `</nav>` tag.

Code Sample 1

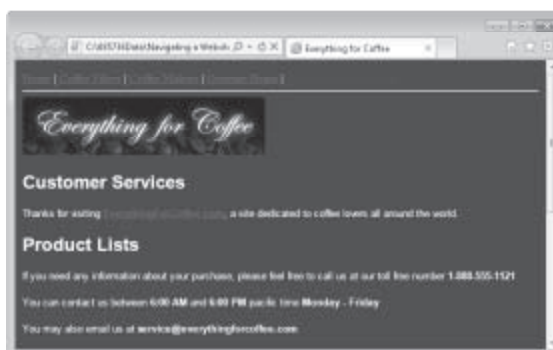
```
<header class="s1">
<nav>
<a href="index.html">Home</a> |
<a href="coffee_filters.html">Coffee Filters</a> |
<a href="coffee_makers.html">Coffee Makers</a> |
<a href="gourmet_beans.html">Gourmet Beans</a> |
<a href="customer_service.html">Customer Service Center</a>
</header>
```

2. Create a hypertext link on the web page.
 - a. Scroll down to the "Thanks for visiting" paragraph, click before the `` tag and type ``.
- See Code Sample 2.*
- b. Click after the end of the `` tag and type ``

Code Sample 2

```
<h2>Customer Services</h2>
Thanks for visiting <a href="http://www.everythingforcoffee.com">
<strong>EverythingForCoffee.com</strong>, a site dedicated to coffee
lovers all around the world.
<br>
```

3. Save and view the file.
 - a. To save the changes, click **Save**.
 - b. To preview the changes in a web browser, choose **Run**→**launch in IE**.
 - c. Observe the changes on the web page and then close the browser.



TOPIC B

Create Image and Email Links

In the previous topic, you created hypertext links. In addition to text, you can also create links using other elements on a web page. In this topic, you will create image and email links.

Hypertext links are a commonly used navigation method on most web pages. By using a graphic as a link, instead of text, you can offer the same functionality, but with an increased aesthetic appeal. In addition, you can elicit users' comments and feedback in the website by using the email links feature.

Image Links

An *image link* is a type of link that is added to an image on a web page. Clicking the image takes the user to a different web page. By default, images that have a link are displayed with a border to indicate the link. Image links are created by enclosing an `` tag inside an anchor tag. The target for the link is defined using the `href` attribute of the `<a>` tag.

Image Links

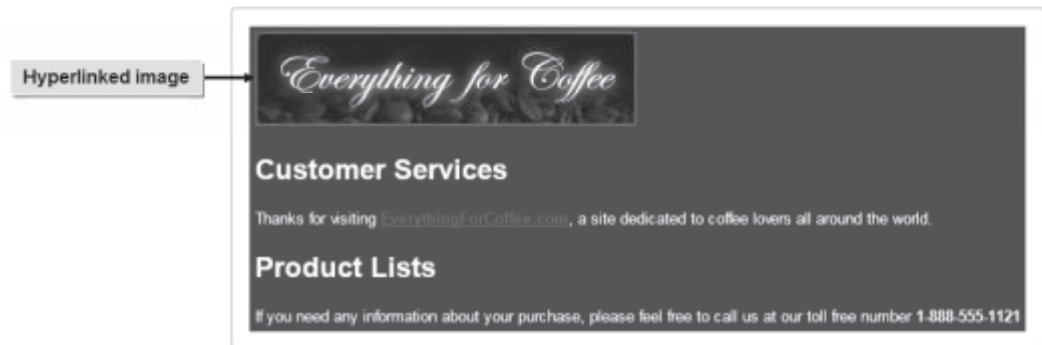


Figure 5-4: An example of an image link.

Image Border Colors

You can modify the appearance and color of image borders using CSS. For this, you must define a CSS style and include the style in your HTML `` tag.

Dotted Background

Images with a link appear with a default border around them. You can format the image border by specifying a CSS style. Some commonly used styles include the *dotted background*, which is a series of round dots that appear around the image. The style for the image border is set using the `border-style` property, which is supported by all major browsers.

Dotted Background

```

<style type='text/css'>
a.dotted {
    border-style:dotted;
}
</style>
<body>
<a class='dotted' href='coffee_filters.html'>
<img src='logo.jpg' alt='Coffee Cup'>
</a>
</body>

```



Figure 5-5: An example of an image with dotted borders.

Border Images

You can define an image to be used as a border by specifying the `border-image` property. The design area of the border can be specified using the `border-image-source` property, which helps you slice, scale, and stretch the image so that it fits the border image area. Some major browsers may not yet support the `border-image` property. Different browsers use different alternatives to this property. For instance, Firefox uses the `-moz-border-image` property, Opera uses the `-o-border-image` property, and Safari and Chrome both use the `-webkit-border-image` property.

```

div
{
    border-image:url(circle.png) 30 30 round;
    border-image-source:url(circle.png);
    -moz-border-image:url(circle.png) 30 30 round;
    -webkit-border-image:url(circle.png) 30 30 round;
    -o-border-image:url(circle.png) 30 30 round;
}

```

Figure 5-6: An example of the `border-image` property.

Email Links

An *email link* is a kind of link that is represented by an email address. Clicking this link creates a new email, by using the user's email program, to predefined recipients with a specific subject. This feature helps users to correspond or provide feedback quickly through email. You can create an email link by specifying the `href` attribute using the value `mailto:` followed by the recipients' email addresses. You can also specify a default subject by terminating the email address using a question mark, adding the value `Subject=`, and entering the subject text.

 If the user's default email program, such as Outlook Express, is not already open, then the default program is launched and then the new email is created with predefined recipients and subject.



Border Images



Email Links

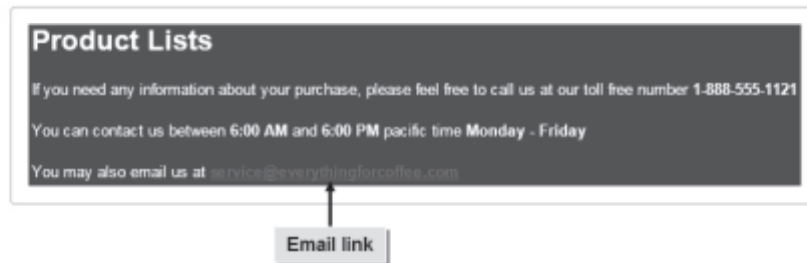


Figure 5-7: *An example of an email link.*

Email Clients

To use the email feature, you need an email client or a web-based email program that supports sending and receiving email. Different browsers may specify different default email programs. For example, Outlook Express is the default email program for Internet Explorer and Mozilla Mail is the default email client for Firefox.

How to Create Image and Email Links

Procedure Reference: Create an Image Link

To create an image link:

1. In a text editor, open the required HTML file.
2. Determine the image to be converted to a link.
3. Before the `` tag, enter the `<a>` tag with the destination file name for the `href` attribute.
4. After the image, enter the `` tag.

Procedure Reference: Create an Email Link

To create an email link:

1. In a text editor, open the required HTML file.
2. Determine the text to be converted to an email link.
3. Click before the desired text and enter the `<a>` tag.
4. In the `href` attribute, specify the email link and enter a default subject..
5. After the text, enter the `` tag.

ACTIVITY 5-2

Creating Image and Email Links

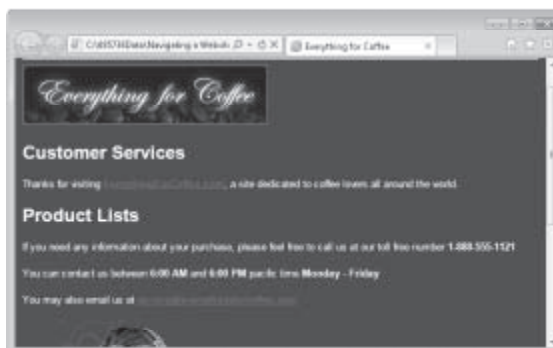
Before You Begin:

The customer_service.html file is open.

Scenario:

Your client, after looking at the web pages, suggests that the images on a web page be turned into links. The client also asks to provide an email on the web page so that visitors to the website can send their feedback and comments.

What You Do	How You Do It
1. Convert the logo to a link.	<ol style="list-style-type: none"> In line 54, in the blank line, click and type <code></code> In line 55, at the end of the <code></code> tag, click and type <code></code>
2. Add an email link.	<ol style="list-style-type: none"> Scroll down to line 73, click before the <code></code> tag, and type <code></code> At the end of the <code></code> tag, click <code></code>
3. Save and view the file.	<ol style="list-style-type: none"> To save the HTML document, click Save. To view the changes in a web browser, choose Run→launch in IE. Observe the changes on the web page and then close the browser.



TOPIC C

Format Links Using CSS

In the previous topic, you created image and email links. You can customize links in your website to match the colors you use in the website. In this topic, you will format links using CSS.

Quite often, visitors to a website use different links in the website to explore other web pages. By default, a standard color coding is used for all links. Customizing links by changing the color scheme to suit the website presentation style and background can not only bring in a pleasing and aesthetic look to links, but also enable easy identification of links on the page.

Default Hypertext Link Colors

Hypertext links on a web page are usually displayed using default colors on any browser.

- An unvisited link is displayed in blue and underlined.
- A visited link appears in purple and underlined.
- And, an active link, or the link that is clicked, is displayed in red with an underline.

You can customize the color and appearance of a link displayed on a web page using CSS.

Link Styles

CSS provides several selectors to customize the style of a link on a web page.

CSS Selector	Defines
<code>a:link</code>	The appearance of a normal unvisited link.
<code>a:visited</code>	The style of an already visited link.
<code>a:hover</code>	The display of a link when the mouse pointer is hovered over a link.
<code>a:active</code>	The appearance of a link when it is being clicked.

Rules for Setting Link Styles

When setting the style for several link states, you need to follow a specific order.

- Define the style for `a:link` and `a:visited` before setting the style for `a:hover`.
- Define the style for `a:hover` before you set the style for `a:active`.

The text-decoration Property

The `text-decoration` property allows you to define the effect that is applied to hypertext links on a web page. You can set the line, color, and style of the underline or even remove the underline for hypertext links displayed on a web page.

How to Format Links

Procedure Reference: Format Links

To format a link:

1. In a text editor, open the required HTML file.
2. Click within the `</style>` tag.
3. Enter the link states to differentiate between links.

ACTIVITY 5-3

Formatting Links

Before You Begin:

The `customer service.html` file is open.

Scenario:

The web pages you created are ready. Upon checking the functionality of the website, you notice that the links on the web page are not clearly visible. You decide to enhance the appearance of the links.

1. Format the links on the web page.
 - a. In line 52, in the blank line, click and type `a:link {⇒
background-color:brown;
color:white; }`
 - b. Similarly, type `a:hover {
background-color:#d2b48c;
color:white; }, a:active {
background-color:#f4a460;
color:white; }, and a:visited {
background-color:black;
color:white; }` in subsequent lines.

See Code Sample 1.

Code Sample 1

```
a:link { background-color:brown; color:white; }
a:hover { background-color:#d2b48c; color:white; }
a:active { background-color:#f4a460; color:white; }
a:visited { background-color:black; color:white; }
</style>
```

LESSON 5

2. View the updated links.
 - a. To save the HTML document, click **Save**.
 - b. To view the changes in a web browser, choose **Run→launch in Firefox**.
 - c. Observe the changes in format of links and then close the browser.



- d. Close the customer_service.html file.
 - e. Close the Notepad++ application.
-

Lesson 5 Follow-up

In this lesson, you created links to navigate a website. By linking web pages, you can ensure that web pages in a website are concise and visitors are able to navigate and find the required information easily.

1. **How do you think using links will help you build a better website?**

Answers will vary, but may include using links will help you categorize relevant content to separate pages and enable you to chunk content into sequential blocks.

2. **What types of links will you prefer to use in your website? Why?**

Answers will vary, but may include using hypertext links to enable you to provide a text link; using an image as a link to provide an aesthetic appeal to the website; and using an email as a link to enable to elicit feedback from visitors using the website.

Follow-up

In this course, you created web pages consisting of text, graphics, and tables. You formatted content on web pages to present it in an appealing and readable manner. You also added links to web pages so that users can navigate from one page to the other.

What's Next?

Web Design with HTML5 and CSS3 - Level 2 is the next course in this series.

FOLLOW-UP

LESSON LABS

Due to classroom setup constraints, some labs cannot be keyed in sequence immediately following their associated lesson. Your instructor will tell you whether your labs can be practiced immediately following the lesson or whether they require separate setup from the main lesson content. Lesson-level lab setup information is listed in the front of this manual in the course setup section.

LESSON 1 LAB 1

Creating a Basic Web Page

Activity Time:

20 minutes

Data Files:

- C:\085736Data\Creating a Basic Web Page\Citizens Information Center\Introduction.txt
- C:\085736Data\Creating a Basic Web Page\Citizens Information Center\graphics\logo.jpg

Scenario:

The Chermont community center has decided to create a website that will contain information on Chermont and also the latest updates on its news and events. Being a resident of Chermont, you volunteer to create the website using HTML5. You plan to create a basic web page with text and an image.

-
1. Create a file in Notepad++.
 2. In the file, declare the doctype as HTML.
 3. Define the opening and closing HTML for the web page.
 4. In the head section, define the character set as UTF-8 and the title as "Citizens Information Center."
-

5. In the body section, display the logo of the Citizens Information Center to appear at the top of the web page.
6. Copy the first two paragraphs from the Introduction.txt file and present them as paragraphs on the web page.
7. Copy the last paragraph from the Introduction.txt file and present it as a bulleted list on the web page.
8. Save the file in the folder C:\085736Data\Creating a Basic Web Page\Citizens Information Center as *index.html*.
9. View the file using a browser.

LESSON 2 LAB 1

Structuring Content

Activity Time:

20 minutes

Data Files:

- C:\085736Data\Structuring Content\Citizens Information Center\newsroom.html

Scenario:

The Chermont community center receives a lot of news items that you feel can be included in its website. You decide to add a web page in which important events and happenings, gathered from these news articles, are presented to visitors.

1. In the Notepad++ application, navigate to the C:\085736Data\Structuring Content\Citizens Information Center folder and open the newsroom.html file.
2. After the opening `<body>` tag , insert the `<header>` `</header>` tags.
3. Within the `<header>` `</header>` tags, enter the header text: "Home | Information Center | Newsroom | Contact Us."
4. At the end of the web page but before the `</body>` tag, insert a footer to read "This is a fictitious organization and this website is used only for training purposes."
5. Highlight the text "Happy birthday" in the last paragraph.

6. Display the text “Youngsters showed keen interest in honing their individual talents” on the side bar in large, blue font.
7. Save the file.
8. View the file in a web browser.

LESSON 3 LAB 1

Applying Styles Using CSS

Activity Time:

20 minutes

Data Files:

- C:\085736Data\Applying Styles Using CSS\Citizens Information Center\info_center.html

Scenario:

The Chermont community center decides to include information on the various services it offers in addition to listing the service providers associated with the center. You decide to include a new web page with these details.

1. In the Notepad++ application, navigate to the C:\085736Data\Applying Styles Using CSS\Citizens Information Center folder and open the info_center.html. file.
2. After the closing `</title>` tag and before the closing `</head>` tag, insert the `<style>` tag.
3. Declare the font properties for the web page.
 - Font: Arial, Verdana, sans-serif
 - Font size: 13px
4. Set text properties for the page to justify text.
5. Specify a margin of 2px for text on the page.
6. Specify a padding of 25px for text on the page.
7. Add a background color for the web page using RGB values 209, 181, and 146.
8. Specify the opacity value as 0.75 for the headings on the page.

9. Define a 2px border and 5px padding for the first paragraph.
10. View the web page using the Chrome browser.

LESSON 4 LAB 1

Working with Tables

Activity Time:

15 minutes

Data Files:

- C:\085736Data\Working with Tables\Citizens Information Center\information_center.html

Scenario:

You have decided to display the average seasonal temperature of Chermont on your web page. You want to display it in a table to make the content look organized and easy to read.

Season	Seasonal Temperature	
	Temp (in Fahrenheit)	Temp (in Celsius)
Avg. Winter Temp	40.0 F	5.0–3.8 C
Avg. Summer Temp	75.4 F	24.1 C

1. In the Notepad++ application, navigate to the C:\085736Data\Working with Tables\Citizens Information Center folder and open the information_center.html file.
2. Below the first paragraph, insert the `<table>` tag to create a table structure.
3. Add a header row to the table.
4. Add the text **Climate in Chermont** as the caption to the table.
5. Enter data for the table using the table given in the scenario.
6. Span the text `Seasonal Temperatures` cell across three columns.
7. Modify the size of the table to the following values.
 - height: 140px
 - width: 400px

8. Apply the following format to the table.
 - border: solid 1px;
 - font-family: Arial, Verdana, sans-serif
 - font-size: 12px
 - margin-left: 15px
 - text-align: center

 9. Apply the following format to the text in the table's body.
 - border: solid 1px;
 - padding: 0.5px
 - color: #008B8B

 10. Format text in the table header row to the following values.
 - border: solid 1px;
 - padding: 1px
 - background-color: #A9A9A9
 - color: #008B8B

 11. Format the table caption to the following properties.
 - font-weight: bold
 - font-size: 13px
 - color: #008B8B
 - text-align: center

 12. Save the file and view it in a browser.
-
-

LESSON 5 LAB 1

Navigating a Website

Activity Time:

15 minutes

Data Files:

- C:\085736Data\Navigating a Website\Citizens Information Center\contact_us.html

Scenario:

Now that the Chermont community center website is ready, it receives a lot of news items that you feel can be included in the website. You decide to gather these news articles and create a web page in which important events and happenings can be presented to visitors.

-
1. In the Notepad++ application, navigate to the C:\085736Data\Navigating a Website\Citizens Information Center folder and open the contact_us.html file.
-
2. Define a section of navigation links, at the end of the `<header>` tag.
-
3. Insert hypertext links to the web pages in the navigation section.
 - Home: index.html
 - Information Center: info_center.html
 - Newsroom: newsroom.html
 - Contact Us: contact_us.html
-
4. Create an email link to James Reynolds (james_r@citizensinfo.org) after the text "email."
-
5. Customize the hypertext links on the web page.
 - Unvisited link: gold
 - Visited link: white
 - Hover: aqua
 - Active link: black
-
-

GLOSSARY

<article> tag

A tag used to denote independent content that can be presented as a separate web page or document.

<aside> tag

A tag used to specify content that is relevant to the main article or to the rest of the page.

**
 tag**

A tag that allows you to break a line of text and start a new line.

<details> tag

A tag that helps you define additional details or controls on a web page.

<figcaption>

A tag used to specify a caption for a figure.

<hgroup> tag

A tag used to indicate the heading of a section or document.

<mark> tag

A tag that is used to mark or highlight certain text to make it distinct on a web page.

<meter> tag

A tag that defines a scalable representation of a measurement within a given range.

<nav> tag

A tag that helps you define a section of navigation links to important documents or sections in a website.

<progress> tag

A tag that is used to illustrate the progress of a process or task and cannot be used to represent a value in a scale.

<section> tag

A tag that helps you group related content on a web page or document.

<summary> tag

A tag used to define a header or caption to be used along with it.

<time> tag

A tag that displays the date and time on a web page.

absolute file path

A path that consists of the complete address of the location of a file.

Alt text

An alternative text used to convey textual information about an image when the browser is unable to display it.

attribute

An HTML element that modifies the characteristics of that element.

background images

Graphics that are placed behind the content of a web page to enhance its visual appeal.

background-color

A property that allows you to set a background color for an element.

bookmark link

A type of link that takes you to a specific location within the same web page. It is also called an on-page link or a named anchor.

class selector

A type of CSS selector that helps you apply CSS styles to a specific HTML element based on its class.

class

A set of attributes that you can apply to an element to define its category or type for formatting it with CSS.

color methods

Tools that you use to specify the colors of a web page.

comments

Statements that are used to describe code segments in an HTML document.

CSS

(Cascading Style Sheet) A set of rules that define the appearance of a web page.

declaration

A statement that assists in applying a style to a selector.

description list

A type of list used to add more information to describe the list items.

dotted background

A series of round dots appearing around an element.

DTD

(Document Type Declaration) A type of element that determines the elements and attributes to be allowed in an HTML document.

element

An individual object of an HTML document.

email link

A kind of link, represented by an email address, that opens the user's default email program to compose a message.

heading

A line of text to indicate the nature of information provided in a paragraph.

horizontal rule

A long line or bar used to divide sections of a web page.

HTML

(HyperText Markup Language) A markup language used to create and link web pages.

HTTP

(HyperText Transfer Protocol) A set of standards that enables clients to connect and interact with web servers.

hypertext link

A type of link represented by a word or string of text, which when clicked, displays a different web page.

ID selector

A type of CSS selector used to apply unique styles to individual page elements.

image link

A type of link representing an image that takes you to a different web page.

margin

The space between the edges of an element and its surrounding content.

markup language

A set of symbols written along with the content to render the content.

opacity

A property that helps you set an element's opacity level.

ordered list

A type of list used to list items that are to be presented in sequential order.

padding

The space provided between an element's content and its borders.

property

A predefined term used to define the action taken on an element.

relative file path

A path that consists of a specific address including the current location of the file and the file name only.

selector

A structure acting as a condition to select HTML elements that will be affected.

SGML

(Standard Generalized Markup Language) A markup language that defines the syntax of a markup language.

style

A formatting rule that helps you modify the appearance and position of an element on a web page.

table

A data structure used to organize content in rows and columns.

unordered list

A type of list used to list items that do not have to be in any particular order.

web browser

A software application that allows you to access and view the content of web pages.

web image format

A format that is used to compress image files into smaller file sizes so that they can be easily downloaded on the web.

WWW

(World Wide Web) A subset of the Internet that stores and connects related documents through the use of hypertext links, rather than a hierarchical filing system.

XHTML

(Extensible HyperText Markup Language) A markup language used to create web pages and is a combination of HTML and XML.

XML

(Extensible Markup Language) A markup language that defines the syntax of a markup language.

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