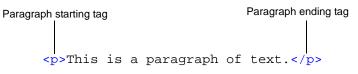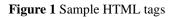# Introduction to HTML and CSS

Before you learn about Cascading Style Sheets (CSS), you should have a basic understanding of HTML, the programming language used to create web pages.

The structure and appearance of a web page is controlled by its underlying code. The programming language used to write this code for web pages is *Hypertext Markup Language*, or *HTML*.

If you view the code for most web pages, you will see line after line of ordinary text, surrounded by short commands called HTML *tags*. These tags are placed in brackets at the beginning and end of blocks of text and tell a web browser how to display or interact with information between the tags. Tags are enclosed by angle brackets (<>) and usually come in pairs with a start (or opening) and end (or closing) tag. The example shows two HTML tags that tell a web browser where a paragraph of text begins and ends (**Figure 1**). The HTML tags themselves are not displayed in the browser.

Paragraph starting tag   Paragraph ending tag

`<p>`This is a paragraph of text.`</p>`

Figure 1 Sample HTML tags

When you create a web page by using Dreamweaver in Design view, the HTML code is created automatically. These are common tags you will see when working in Dreamweaver:

- `<html></html>` describes the web page
- `<head></head>` describes the header of the web page
- `<body></body>` describes visible page content
- `<h1></h1>` displays a heading, ranging in size from 1 (biggest) to 6 (smallest)
- `<p></p>` formats text as a paragraph
- `<strong></strong>` bolds text
- `<em></em>` emphasizes text, displays as italics
- `<br>` creates a line break
- `<a href="http://www.example.com"></a>` creates a link to a web page

Note: Dreamweaver uses code coloring to help you identify general categories of tags and code elements in Code view.

Although HTML includes tags for displaying text, images, tables, and other page elements, it has limited precision in page layout and formatting—a frustration for many designers.

Cascading Style Sheets (CSS) is a collection of formatting rules that control the appearance of content (such as HTML tags) in a web page. Using CSS styles to format a page separates content from presentation. The content of your page—the HTML code and tags—resides in the HTML file, and the CSS rules defining the presentation of the code reside in another file (an external style sheet) or in another part of the HTML document (usually the head section). Separating content from presentation mean you can more easily maintain the appearance of your site from a central location, because you don't need to update every property on every page whenever you want to make a change. Separating content from presentation also results in simpler and cleaner HTML code, which provides shorter browser loading times and simplifies navigation for people with accessibility issues (for example, those using screen readers).

If you have worked with styles in other programs, such as a word processor, you are already familiar with the basic function of CSS. In CSS, a style is simply a rule describing how to format content on a web page. A CSS (style sheet) is a collection of these rules.

About CSS rules

A CSS formatting rule consists of two parts: the selector and the declaration (or in most cases, a block of declarations). The *selector* is a term (such as p, h1, a class name, or an id) that identifies the formatted element. The *declaration* block defines the style properties. In the following example, h1 (a heading tag) is the selector, and everything that falls between the braces ({ and }) is the declaration block (defining the properties of the h1 heading):

```
h1 {
font-family: Georgia, "Times New Roman", Times, serif;
font-size: 18px;
text-transform: uppercase;
color: #090;
}
```

An individual declaration consists of two parts: the *property* (such as font-family) and *value* (such as Georgia). In the previous CSS rule, a particular style has been created for h1 tags; the text for all h1 tags linked to this style will be 18 pixels in size, Georgia font, and uppercase, and [color 090].

The style (which comes from a rule, or a collection of rules) resides in a place separate from the actual text it's formatting—usually in an external style sheet or in the head section of an HTML document. Thus, one rule for h1 tags can apply to many tags at once (and in the case of external style sheets, the rule can apply to many tags at once on many different pages) (**Figure 2**). In this way, CSS provides extremely easy update capability. When you update a CSS rule in one place, the formatting of all the elements that use the defined style is automatically updated to the new style.
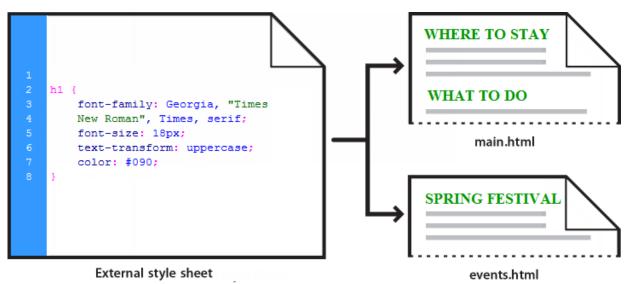

Figure 2 Updating a CSS rule in one place updates all elements

There are three main types of CSS:

Class style: Similar to the styles you use in word processing and page layout programs. For example, you may want to format all body text in 10-point, Arial, dark green type. You can create a class style with these attributes and then apply this style to all body text in your website. Class names must begin with a period and can contain any combination of letters and numbers (for example, .myhead1).

HTML tag style: Applies global formatting to individual HTML tags rather than to individual selections. Suppose you want to modify the Heading 1 paragraph style to appear always in purple text. Instead of creating a class style and applying it to every heading in the document, you can create an HTML tag style with these attributes and apply it to the Heading 1 `<h1>` tag. In effect, you are redefining the HTML tag.

ID style: A unique identifier (ID) for a style applied to headers, banners, menus, and other elements present in only one location in the document. Used once within a document or page. IDs must begin with a pound (#) sign and can contain any combination of letters and numbers (for example, #myID1).

CSS rules can reside in the following locations:

External CSS style sheets are collections of CSS rules stored in a separate, external CSS (.css) file (not an HTML file). You link this file to one or more pages in a website with a link or an @import rule in the head section of a document. For more information about how to work with external CSS files, see the *How to work with external Cascading Style Sheets* document

Internal (or embedded) CSS style sheets are collections of CSS rules included in a `style` tag in the head section of an HTML document.

Inline styles places the CSS style attribute inside the relevant tag throughout an HTML document. (Using Inline styles is not recommended because it mixes content with presentation. If this method is used, you should do so sparingly.)

Evolution of HTML and CSS

HTML and CSS are web standards that are constantly evolving.

HTML5 is the fifth iteration of HTML and adds tags to support multimedia elements and dynamic graphics in modern web browsers and across various devices. CSS3 defines a new set of modular rules for how HTML content is presented in web browsers.

In Dreamweaver, you can create and edit HTML5-based web pages. Dreamweaver provides code hints for HTML5 elements and CSS3 styles when you build pages in the Code View window. Starter layouts are also available for building HTML5 pages from scratch.

You should observe the following best practices when authoring HTML5 pages:

- Use `<!doctype html>` to tell browsers the web page is formatted with HTML5.

- Use `<meta charset="utf-8">` to tell browsers which character-set is in use in the document.

- Use the semantic markup tags `<article>`, `<section>`, `<header>`, `<nav>`, and others to bring a higher level of structural meaning to HTML5 documents.

- Design and test content across a range of browsers and devices that support HTML5 capabilities.

Review these HTML5 and CSS3 resources from the W3C:

- W3C HTML5 specifications: http://dev.w3.org/html5/spec/single-page.html

- HTML5 differences from HTML4: www.w3.org/TR/html5-diff/

- W3C CSS home page: www.w3.org/Style/CSS/