Cascading Style Sheets

An Introduction

CALIFORNIA STATE UNIVERSITY, SACRAMENTO

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WORKSHOP DESCRIPTION

Overview

Improve your Web editing skills by learning the basics of Cascading Style Sheets (CSS). This workshop introduces you to the fundamentals of creating and editing style sheets. Topics include: what is a style sheet, style sheet syntax, different kinds of style sheets, using styles in Dreamweaver and resources for further exploration.

Prerequisites

Individuals taking this workshop should have basic computer skills, knowledge of the Web, basic Web browser skills, and the ability to effectively work in the Windows or Macintosh OS environment. Familiarity with HTML and Dreamweaver are highly recommended.

Objectives

Participants attending this workshop will:

- Attain a beginning understanding of style sheets.
- Learn how to create different types of styles.
- Locate resources for further exploration.

INTRODUCTION

Cascading Style Sheets (CSS) enable you to precisely control the formatting of elements on your Web pages. HTML was designed to control the structure of your Web pages, such as headings, images, links, paragraphs and tables. Style sheets were designed to control the formatting of these elements in far greater detail than the HTML commands allow. Styles are the rules that define how the elements appear in a Web page, such as font and color.

Why Use CSS?

The World Wide Web Consortium (W3C), the international organization responsible for defining Web standards, plans to phase out (deprecate) the <font> tag in future versions of HTML, in favor of CSS. Future browser versions may not support the <font> tag, which forces us to use CSS. So, it is wise to learn and implement CSS in your Web pages now.

In addition, style sheets give you more choices in formatting, such as line spacing, paragraph indentation, borders and content placement. Creating styles that are used repeatedly in a Web page take less typing than the equivalent formatting with <font> tags, thus saving you kilobytes of disk space – which means your Web pages display faster.

How Do They Cascade?

When you use multiple styles they have a cascading effect on one another: the first style defined for an element is loaded by the browser; if another style affects the same element, the new definition will override the first only if its attributes are the same, otherwise the new definition will be added to the first definition, thus creating a combined style for the element.

For example, consider a style that defines the text color for a paragraph (<p>) as black. Later you define another style that affects the <p> tag with a border of one pixel. The resulting style for the <p> tag now includes both a black text color and a border around the paragraph one-pixel thick. Thus, these styles cascade onto one another and are combined into a single style.

Browsers that support CSS have a built-in cascading order of importance (from most to least):

1. User-defined styles – Some browsers allow for users to define their own styles. For example, a color-blind user may specify specific colors for hyperlinks and always use that in the browser to override styles on each Web page.
2. Inline styles
3. Embedded styles
4. Linked styles
5. Imported styles
6. Default browser styles

For more information, visit Creating Accessible CSS at WebAIM (http://www.webaim.org/techniques/css/).

INTERNAL AND EXTERNAL STYLE SHEETS

You can create styles either within the HTML of your Web page or within an external style sheet that is linked to your Web page. Internal styles come in two types: inline and embedded. External style sheets are either linked or imported.

Inline

Inline styles are attached directly to a specific element in a Web page. They are defined in the starting HTML tag of the element and apply exclusively to the specific element. Using inline styles is not recommended. The following is an example:

```
<p style="text-indent: 10px">my paragraph text</p>
```

Embedded

Embedded styles are normally defined in the <head> section of a Web page within the <style> tag. Each style applies to a specific element within the entire HTML document, unless overridden by an inline style. The following is an example:

```
<style type="text/css">
<!--
body {
        background: #FFFFFF;
        font-family: Verdana, Geneva, Arial, helvetica, sans-serif;
        font-size: 80%;
}
-->
</style>
```

Linked

External style sheets are separate files (with a .css extension) that are linked to a Web page. They are attached (linked) to a Web page by use of the <link> tag inside the <head> section. Entire Web sites can utilize a single external style sheet containing many different style definitions, thereby controlling the formatting of specific elements on every page in the site. The following is an XHTML example:

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

Imported

Imported style sheets are separate files (with a .css extension) that are combined with another style sheet linked to a Web page. These are mostly used to hide styles from older browsers, such as Netscape 4. The @import notation will import this type of external style sheet. The following is an XHTML example:

```
<link rel="stylesheet" type="text/css" href="myoldstyles.css" />
<style type="text/css">
<!--
@import url(mynewstyles.css);
-->
</style>
```

SYNTAX FOR STYLES

External style sheets and embedded styles are comprised of rules for formatting elements of a Web page. Each rule consists of two main parts: a *selector* (such as 'h1') and a *declaration* (such as 'color: blue'). Selectors tell the browser which elements to format, and the declarations, consisting of properties and values, tell the browser how to display the elements. In the following example, *h1* is the selector, *color* is the property and *blue* is the value.

```
h1 {
        color: blue;
}
```

The left brace begins the list of properties and values, while the right brace ends the declaration and the rule for that style. Multiple property and value sets can be placed within the braces, with a semi-colon separating each set. The spacing after the left brace and the semi-colon is optional.

DIFFERENT KINDS OF SELECTORS

HTML Tag

The HTML tag selector is the most common use of styles to redefine the formatting of a tag for every occurrence on a Web page. In the following example the heading 1 tag (<h1>) has a font size 165% of the normal font size for the page, and a top margin of 0 pixels.

```
h1 {
        font-size: 165%;
        margin-top: 0px;
}
```

Class

Class selectors are used when you want to apply a style to multiple parts of a page or to only part of an element. Classes always start with a period followed by the class name. The class attribute is added to an HTML tag. Following is an example of two class styles and how they can be used to format different elements within a Web page.

```
.darkgreen { background-color: #00573D;}
.lightgreen { background-color: #C6D6CE;}

<h1 class="darkgreen">First Heading</h1>
<p class="lightgreen">The text in this paragraph has a light green background
        color.</p>
<p>Here we have another paragraph, but only <span class="lightgreen">some
        text</span> has a light green background color.</p>
```

ID

The id selector applies to only ONE element on a Web page. You may not use the same id more than once in any Web page. When defined, the id selector always starts with a pound-sign (#), followed by the selector's name. The id attribute is assigned to an HTML tag, often the tag, to create an area of the document that contains several elements grouped together. Following is an example of the id selector definition and its use.

```
#footer {
        color: #00573D;
        font-size: 10px;
        text-align: center;
}

<div id="footer"><p>My Department name</p>
<p>California State University, Sacramento | 6000 J Street | Sacramento, CA 95819 |
        (916) 278-6011</p></div>
```

Pseudo-Classes

Pseudo-classes are classes that define tag states. Most commonly, these are used to make link styles change when the mouse pointer hovers over a hyperlink, or to make a visited link look different from an unvisited link. Following is an example.

```
a:link {
        text-decoration: underline;
        font-weight: normal;
        color: #003300;
}

a:visited {
        text-decoration: underline;
        font-weight: normal;
        color: #999999;
}
```

There are four types of pseudo-classes with the <a> tag:

1. a:link – the default state for a hyperlink
2. a:active – when a hyperlink is clicked
3. a:visited – if the linked site is in the browser's history cache
4. a:hover – while the mouse pointer hovers over the hyperlink

USING STYLES IN DREAMWEAVER

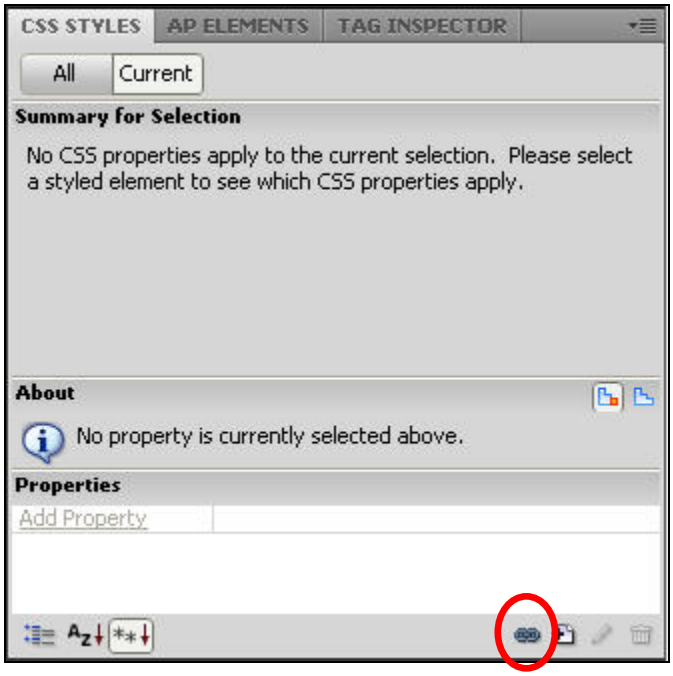
Dreamweaver has a variety of ways to work with Cascading Style Sheets, and each Dreamweaver version is a little different.

Creating a New Style Sheet

step 1. From the **File** menu select **New**.
step 2. In the left column select **Blank Page**.
step 3. From the **Page Type** column select **CSS**. A new style sheet opens in the Document window.
step 4. From the **File** menu select **Save** and give your new CSS file a name and save it in an appropriate location on your computer.

Attaching a New Style Sheet to a Web Page

step 1. Open your Web page in the Document window in Dreamweaver.
step 2. In the **Properties** panel click the **CSS** button to expand the **CSS** panel on the right.
step 3. At the bottom of the **CSS** panel click the **Attach Style Sheet** button – it looks like a chain link.



step 4. Click the **Browse** button and select the name of the new CSS file you just created.
step 5. Click **OK** to choose the style sheet file.
step 6. Click **OK** in the Attach External Style Sheet window.
step 7. Save your Web page document that is now linked to the CSS file. You can now proceed to create new styles and apply them to content in your Web page using the following sections.

Creating a New Style

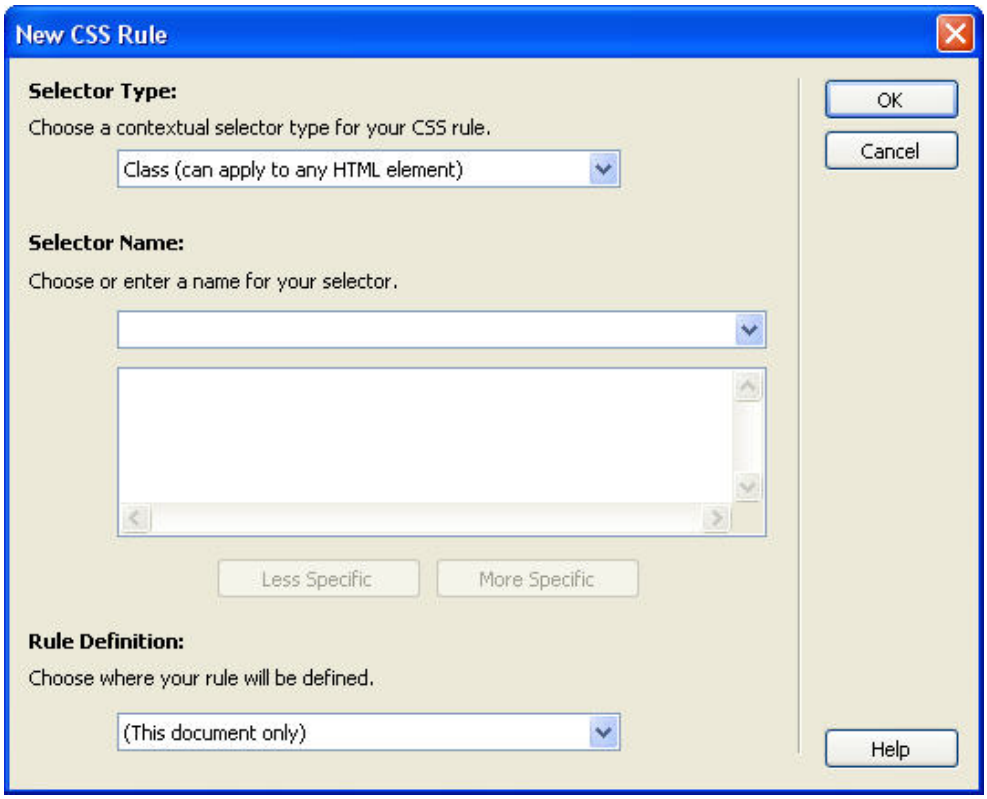
step 1. Click the **CSS** button on the **Properties** panel.

step 2. After you highlight the text or element(s) in your document where you want to apply a new style, you have two options for creating a new style.

i. At the bottom of the **CSS** panel, click the **New CSS Rule** button .

ii. In the **Targeted Rule** field select **New CSS Rule** and then click the **Edit Rule** button.

The New CSS Rule window appears. This window allows you to create a new rule (style – a group of properties) that can be applied to different selections on your webpage, or only to the text or elements you just selected.

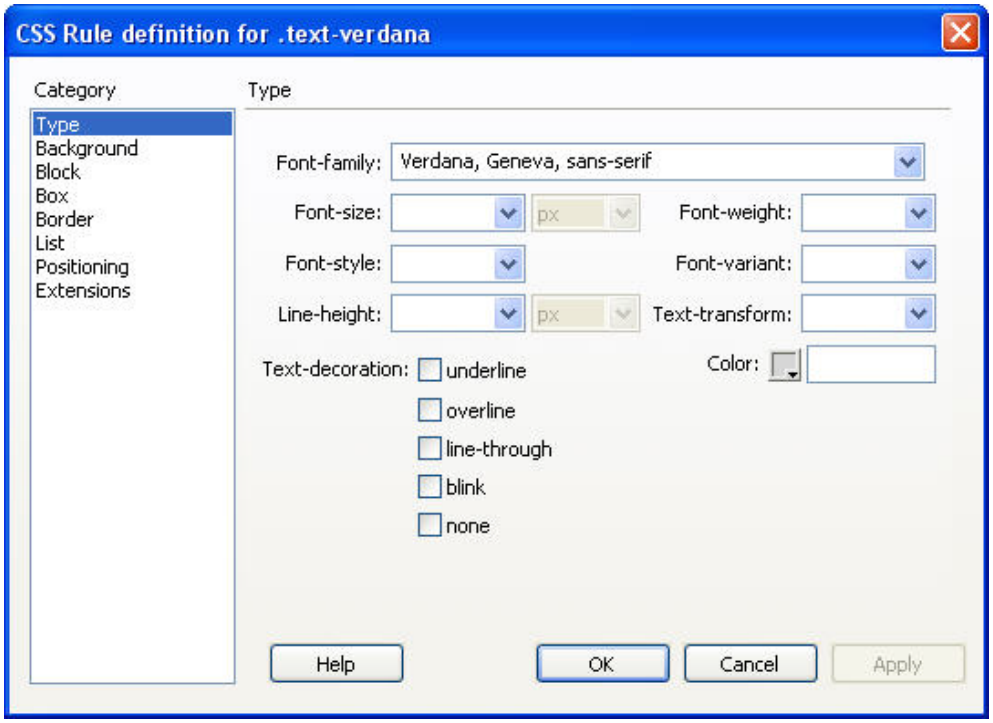


step 3. From the **Selector Type** drop-down menu be sure that **Class** is chosen.

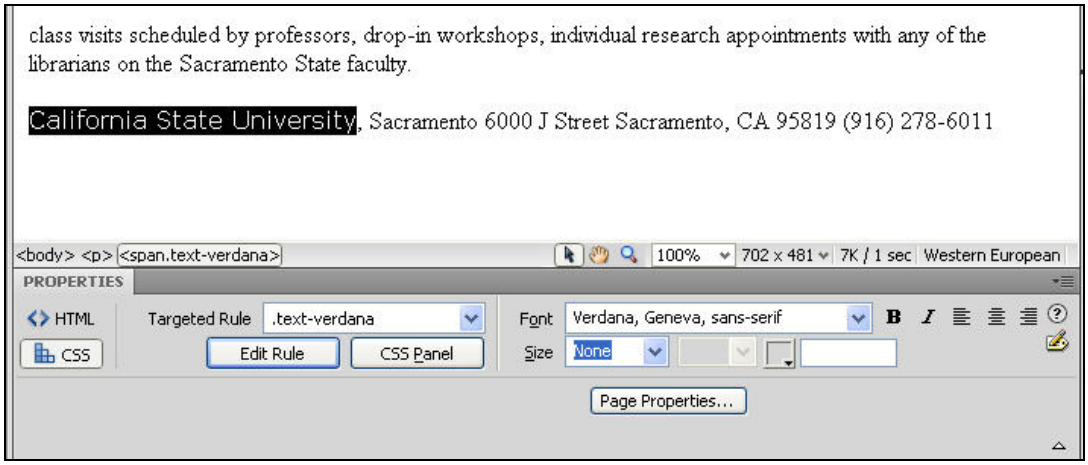
step 4. Type a name for your selector (style) in the box beneath **Selector Name**. Do not use spaces or any special characters, only lowercase letters and numbers. You can use a dash between words, such as *text-green*, to make it more readable.

step 5. Under **Rule Definition**, select **(This document only)** to create a new CSS rule within this webpage. If you have many webpages and want to share a group of styles between them, you can select **(New style sheet file)** or **select the name of your attached style sheet**.

step 6. Click **OK**. The **CSS Rule definition** window appears. Here you can edit the properties of your new style.



step 7. When you complete your changes, click **OK**. The window closes and displays your highlighted text in the Design View area with your style applied to it. The name of your rule appears in the **Targeted Rule** drop-down list while the text is selected.



step 8. To further change the way your new style appears, click inside the text area associated with the rule (or highlight it), then click the **Edit Rule** button in the **CSS** portion of the **Properties** panel.

step 9. In the **CSS Rule definition** window for your selected style, make the necessary changes to the properties.

step 10. When you complete your changes, click **OK**.

Apply an Existing Style to an Element

step 1. Click and drag the mouse pointer over the text or element(s) you want to modify.

step 2. You now have two ways to choose an existing style to apply to your highlighted text:

a. From the **HTML** area of the **Properties** panel, select an option from the drop-down arrow next to **Class**. This area lists only styles that are also classes – rules that start with a period.

b. From the **CSS** area of the **Properties** panel, select a rule from the **Targeted Rule** drop-down list. That style (rule) is now applied to your selected text.

step 3. If you want to create a new style (rule), from the **CSS** area of the **Properties** panel select **<New CSS Rule>** from the list, and then click **Edit Rule**.

Edit an Existing Style

step 1. Click inside the text area associated with the rule (or highlight it), then click the **Edit Rule** button in the **CSS** portion of the **Properties** panel.

step 2. In the **CSS Rule definition** window for your selected style, make the necessary changes to the properties.

step 3. When you complete your changes, click **OK**.

EXERCISE 1 Adding and Updating New Styles

1. From the Files panel open the file **sample-page.htm** in Dreamweaver. Be sure you have the file linked to an external style sheet, if not, create a new external style sheet and attach it to this file.
2. Create new styles for heading 1 and heading 2, changing the font, text color. Change additional style settings if you wish.
3. Create a new style for the text "Multiple elements on a Web page" in the second bullet. Give the new style a background color.
4. Save your changes to the file.
5. Preview your updated document in Microsoft Internet Explorer or Firefox.

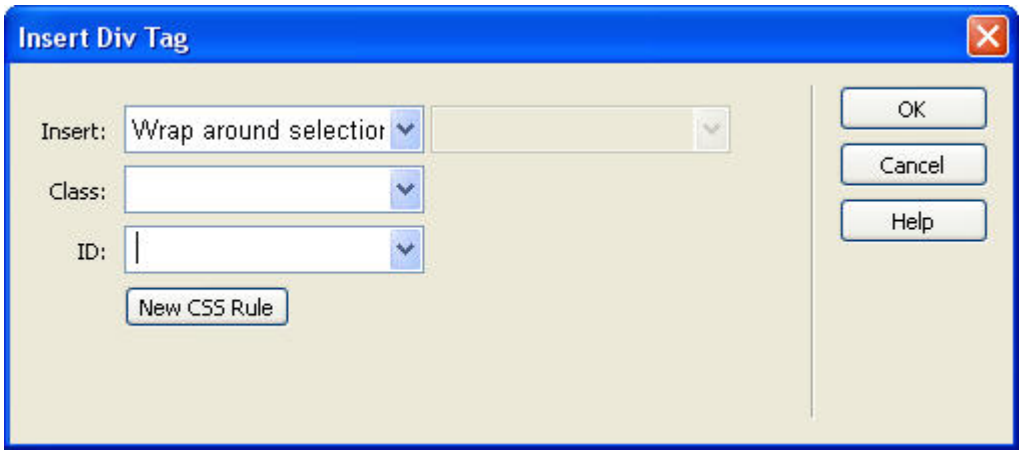
Creating a New Division

Styles can also be applied to a block of elements, such as a paragraph together with its associated header. In this case, you can treat these separate elements as one group – a division. After you create a division around the elements you can apply a style to it. Follow these steps to create a division and apply a style to it.

step 1. Select the elements in the **Document** window that you want to group together, such as highlighting a group of words or paragraph.

step 2. In the **Insert** panel, click the **Insert Div Tag** button .

step 3. From the **Insert Div Tag** window, select a class from the **Class** drop-down list or to create a new style, click the **New CSS Style** button at the bottom. If needed, follow the steps in the previous section *Creating a New Style*.



step 4. Click **OK** in the Insert Div Tag window to assign your new division to a style. A dotted line appears around your new division in the Document window. This only appears in Dreamweaver and does not display in the browser.

- An advantage of using styles is that when you make a change to an attribute of the style, all of the elements that use that style are formatted automatically.
- Multiple elements on a Web page can use the same style, adding consistency and professionalism to your designs - all without repeating the same HTML tags to define a particular font, color or size.

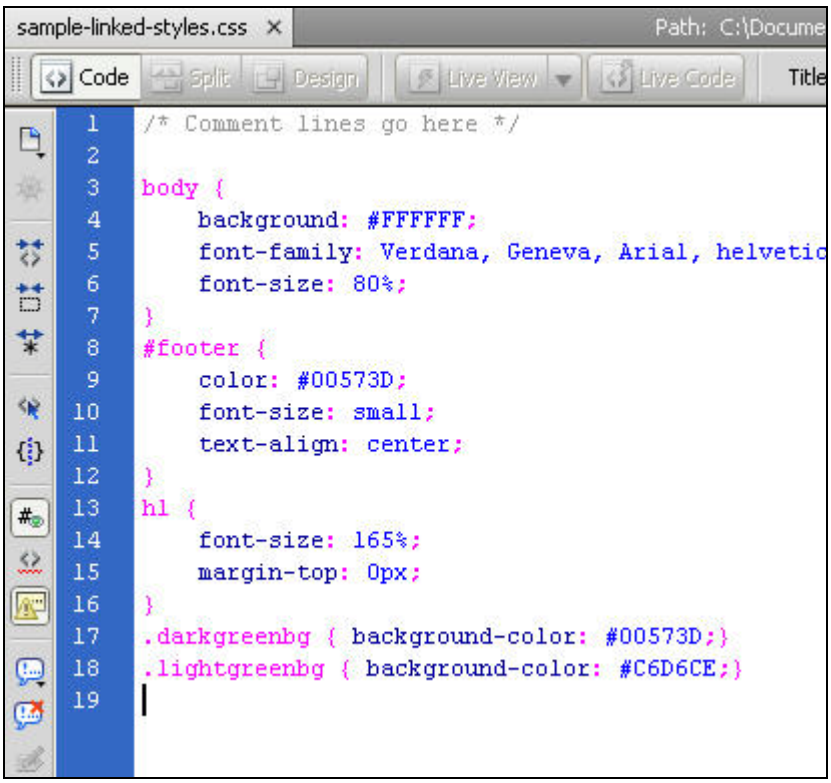
EXERCISE 2 Creating New Divisions and Styles

1. From the Files panel open the file **sample-page.htm** in Dreamweaver.
2. Create new division around the Cascading Style Sheets section, including the header, paragraph text and associated list.
3. Create a new style for your division. Give the new style a background color, a border, and a width of 80%. If you can, center your new division.
4. Save your changes to the file.
5. Preview your updated document in Microsoft Internet Explorer or Firefox.

Document Window – Code View

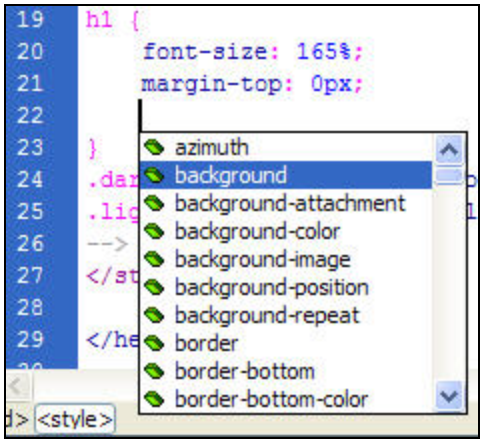
You can edit your internal styles and your external styles sheets directly in the **Document** window. You can open your external CSS file in the same way as you open any HTML document – from the **File** menu or from the **Files** panel.

In the **Document** window, click either the **Code View** or **Split View** button on the toolbar to display the HTML code.

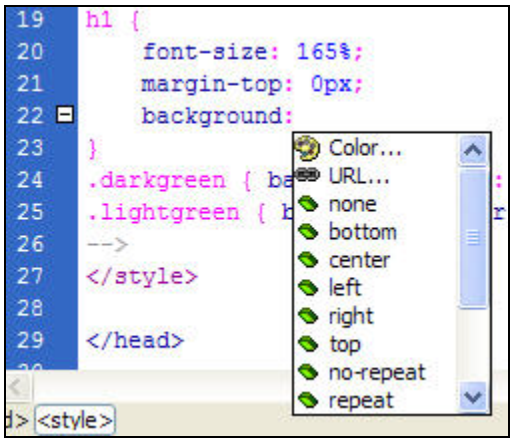


Adding New Style Properties

step 1. To add properties to a style in the **Code View** (HTML) of your Web page, click after the semi-colon of an existing property-value pair and then press **Enter** (Return on the Mac). This action causes Dreamweaver to display the properties menu where you can select a property by selecting a property from the list using the down arrow or typing the first few letters of the name of the property, and then pressing **Enter** (Return on the Mac).



step 2. After you select the new property, the value window displays with some potential values. You may choose one of these values from the list and then press the **Enter** (Return on the Mac) key to select your value from the list. You may also press the **ESC** key to close the window and enter your own value.



step 3. After you enter or select your value for the CSS property, press the semi-colon key to add the ending punctuation for the CSS property-value pair.

step 4. Continue to add additional property-value pairs to the style, if desired.

step 5. Preview your Web page in a browser to view the results of your CSS changes.

SAMPLES

Sample Embedded Styles

Here is a sample XHTML document that uses embedded styles within the document.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
        "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
<title>Sacramento State – Sample Embedded Styles</title>

<style type=”text/css”>
<!--
body {
        background: #FFFFFF;
        font-family: Verdana, Geneva, Arial, helvetica, sans-serif;
        font-size: 80%;
}
#footer {
        color: #00573D;
        font-size: 10px;
        text-align: center;
}
h1 {
        font-size: 165%;
        margin-top: 0px;
}
.darkgreen { background-color: #00573D;}
.lightgreen { background-color: #C6D6CE;}
-->
</style>
</head>

<body>
<h1 class="darkgreen">First Heading</h1>
<p class="lightgreen">The text in this paragraph has a light green background
        color.</p>
<p>Here we have another paragraph, but only <span class="lightgreen">some
        text</span> has a light green background color.</p>

<div id="footer"><p>My Department name</p>
<p>California State University, Sacramento | 6000 J Street | Sacramento, CA 95819 |
        (916) 278-6011</p></div>
</body>
</html>
```

Sample Linked Style Sheet

Here is a sample XHTML document that uses a link to an external style sheet.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
        "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
<title>Sacramento State – Sample Linked Styles</title>
<link rel="stylesheet" type="text/css" href="sample-linked-styles.css" />
</head>

<body>
<h1 class="darkgreen">First Heading</h1>
<p class="lightgreen">The text in this paragraph has a light green background
        color.</p>
<p>Here we have another paragraph, but only <span class="lightgreen">some
        text</span> has a light green background color.</p>

<div id="footer"><p>My Department name</p>
<p>California State University, Sacramento | 6000 J Street | Sacramento, CA 95819 |
        (916) 278-6011</p></div>

</body>
</html>
```

Here is the text of the external style sheet, "sample-linked-styles.css".

```
/* Comment lines go here */

body {
        background: #FFFFFF;
        font-family: Verdana, Geneva, Arial, helvetica, sans-serif;
        font-size: 80%;
}
#footer {
        color: #00573D;
        font-size: 10px;
        text-align: center;
}
h1 {
        font-size: 165%;
        margin-top: 0px;
}
.darkgreen { background-color: #00573D;}
.lightgreen { background-color: #C6D6CE;}
```

RESOURCES

Faculty / Staff Resource Center

Located in ARC 3012. Assistance available on walk-in basis.
FSRC Website - http://www.csus.edu/irt/acr/fsrc/

Training & Tools eNewsletter

To receive email notification regarding online seminars, new technology/tools, and other online teaching, technology and learning events, fill out and submit the Training & Tools eNewsletter request form - http://www.csus.edu/atcs/tools/newsletter/request-form-ait-news.stm.

Getting Help

University Help Desk
(916) 278-7337 or helpdesk@csus.edu
Academic Technology Consultants
http://www.csus.edu/atcs/contact.htm
1on1 Help @ ATCS on Thursdays 1-4 pm in ARC 3005 (no appointment necessary)
Help Desk - Problem Reports & Contact Information
http://www.csus.edu/irt/helpdesk/contact.stm
Training Requests
training@csus.edu

Campus Resources

Training
http://www.csus.edu/training
Training Handouts
http://www.csus.edu/training/handouts
Online Tutorials
http://www.csus.edu/atcs/tools/training/tutorials.stm
Educational Tools
http://www.csus.edu/atcs/tools
Accessibility at Sacramento State
http://www.csus.edu/accessibility

Books on Dreamweaver and HTML

Adobe Dreamweaver CS4 Hands-On Training by Garrick Chow
Dreamweaver CS4 for Dummies by Janine C. Warner
HTML, XHTML, and CSS: 6th Edition by Elizabeth Castro
http://www.cookwood.com/html/extras/cssref.html

References and Resources

Cascading Style Sheets, unknown author, Cal Poly, San Luis Obispo (2003)

Creating Accessible CSS at WebAIM
http://www.webaim.org/techniques/css/

Validate Your Style Sheet at W3C
http://jigsaw.w3.org/css-validator/

Dreamweaver and CSS, by Adobe
http://www.adobe.com/devnet/dreamweaver/css.html

Simple Style Sheets by Christine Hayes and Barbara Moore, Sonoma State University(2003)

Using Cascading Style Sheets (CSS) by Marion Smith, CSU Dominguez Hills
http://www.csudh.edu/webdevgrp/css/default.htm