

Cascading Style Sheets

Introduction

HTML allows designers to determine how a document is viewed in a browser over the World Wide Web (WWW) by applying tags that manipulate the appearance or assign styles to the text. The purpose of cascading style sheets (CSS) is to allow Web authors to manipulate a Web page's appearance without affecting its HTML structure (Rotter, Kahn, & Anderson; 2000). For example, if all sub-headings in a document need to be displayed in a larger font and italicized, then the appropriate HTML tags must be placed around each sub-heading in the text of the code. CSS allow designers to make these specifications without applying individual line code in the HTML document. Thus, CSS separate presentation and content on the Web (Nielsen, 1997).

To facilitate the formatting of Web pages, the World Wide Web Consortium (W3C) developed guidelines for CSS. W3C has developed guidelines for two kinds of CSS, Level 1 and Level 2. Level 1, allow authors to define about fifty properties including fonts, color and background, text spacing, alignment, margins, box properties, and classification properties. Level 2, extends these property definitions by 70. The additional definitions beyond screen-based presentation and include media-specific presentations, such as visual browsers, aural devices, printers, Braille devices, and handheld devices. Level 2, also supports content positioning, downloadable fonts, table layout, features for internationalization, automatic counters and numbering, and some properties related to user interface (Nielsen, 1997).

Significance of CSS

If properly applied, CSS can give a designer the ability to separate content and presentation. However, not all Web designers are convinced that CSS are reliable tools or that content and format should be separated at all in Web publishing. Advocates of CSS claim that CSS allow for cleaner HTML, which is easier in development stages and facilitates in the creation of templates (Young, 1997). Additionally, page-wide or site-wide changes are much easier to implement when using CSS (Rotter, Kahn, & Anderson; 2000).

Supporters of CSS also recognize limitations, one of which is Web browser support. Versions 3.0 of Opera and Microsoft Internet Explorer and Version 4.0 of Netscape Navigator support properties for Level 1, and 4.0 and later versions of all three browsers support properties for Level 2. Some Web development tools have solved the problem of

browser support by translating style sheet properties into HTML code, but Dreamweaver is one of the only programs that will automatically convert styles to HTML tags. In addition to the limitations of browser support, other concerns about designers using CSS to override an individual's browser settings have been raised. When designers misuse style sheets, pages become inaccessible. (Pozadzides & Quinn, 1997)

Some Web authors oppose the use of CSS. For example, Korpela claims that CSS are not sophisticated enough to solve the serious problems involved in separating format and content on the Web. The complexity of CSS invites misunderstandings and misuses. In addition to flaws in the basic setup and structure, Korpela argues that the fundamental principal behind the development of CSS is archaic because CSS tries to fit publishing on the Web into the traditional publishing model, where format and content are separate issues. In Web publishing, where there are many technological implications of formatting, it is imperative for formatters to understand the constraints of the Web and to understand mark up languages. Therefore, he believes that we should not try to separate the two functions.

Korpela's argument against creating tools to facilitate Web development with an archaic mind set and an "in the box" approach is valid. CSS are not perfect. CSS can, however, help designers to set certain styles more accurately and mre conveniently, and this point has caused many Web designers to think highly of CSS.

Discussion

CSS can be created by using a normal text editor, which is similar to creating HTML code, or by using software tools. This paper will discuss how to use Dreamweaver, a software tool, to create CSS.

The Basics of CSS: Tags, Selectors, and Declarations

In order for your style sheet to properly display your Web page, you must attach the Web document to a style sheet. Attaching the style sheet can be done by adding this HTML tag into the Web page's source code: `<STYLE TYPE="text/css">`. Close the tag with `</STYLE>`. Styles should be set right before the `<BODY>` tag. Between the `<STYLE>` tags, assign attributes by using the rules established by W3C.

Each rule has a selector and a declaration. The selector is the part of the code that links the HTML to the style you want to appear. The declaration is the part that defines the attributes that will appear in the displayed Web page.

Example 1

If you want all of your H1 headings to appear in a 24-point font size and in the color blue, use the following tags:

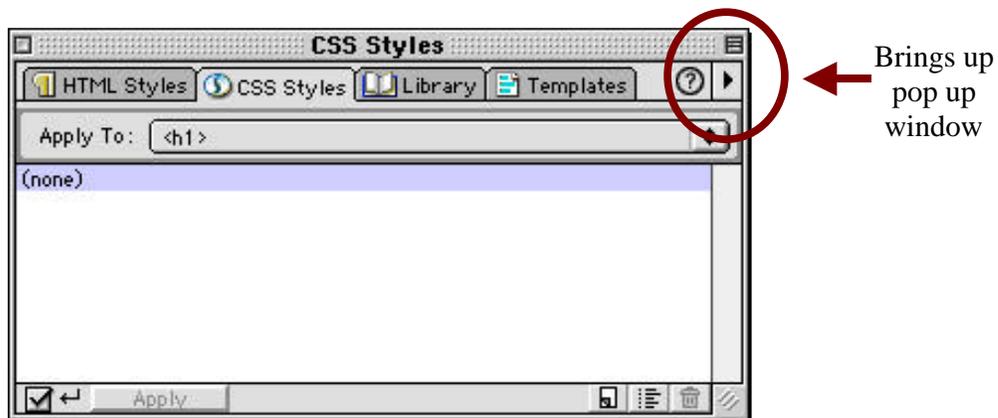
```
<STYLE TYP="text/css">
    H1 {font size: 24pt; color: blue}
</STYLE>

<BODY>
```

In this example, a style is attached to a specific HTML tag. "H1" is the selector and "{font size: 24pt; color: blue}" is the declaration.

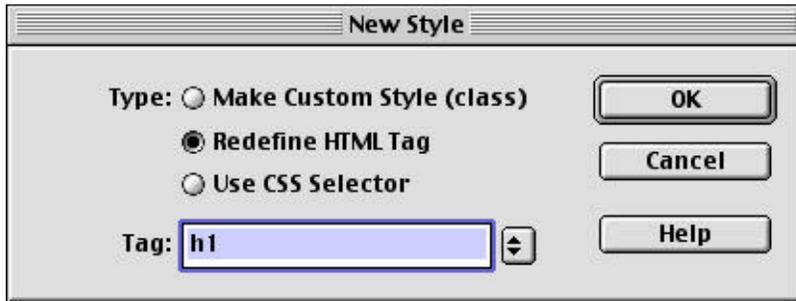
Internal Style Sheets Using Dreamweaver-Adding Styles to HTML Tags

Dreamweaver assists you in adding in selectors and declarations. Example 1 above will be used to show you how to use the CSS Styles palette in Dreamweaver to assign certain properties to a specific HTML tag. To open the CSS palette, go to Window > CSS palette.

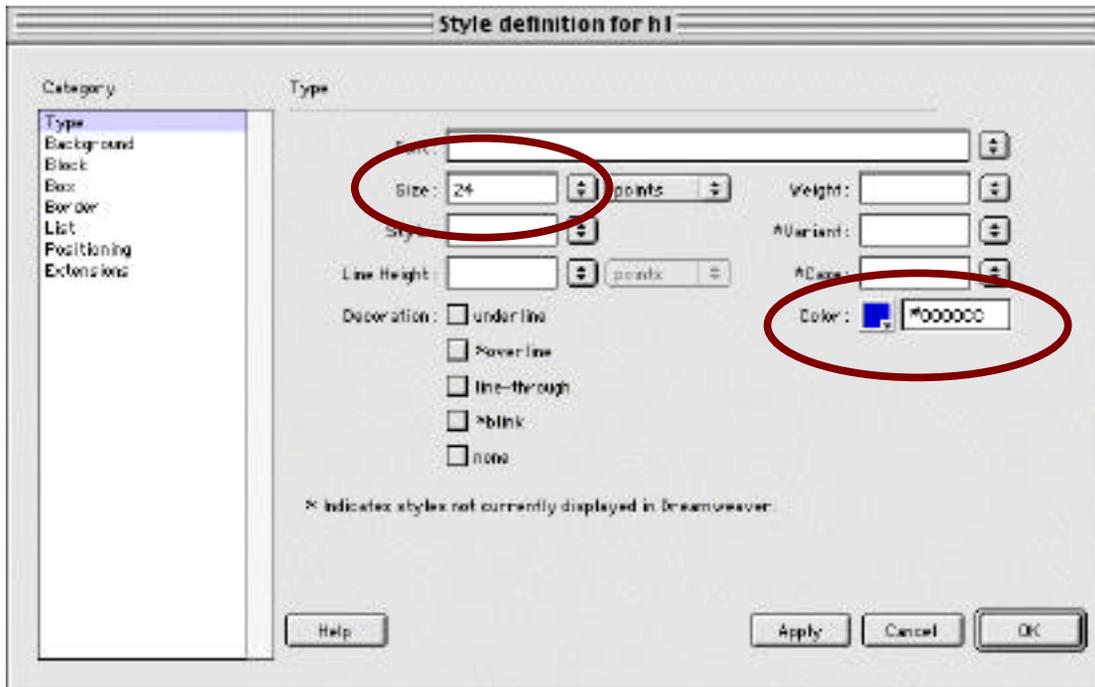


Use the arrow to select "New..." from the pop-up window (see diagram above).

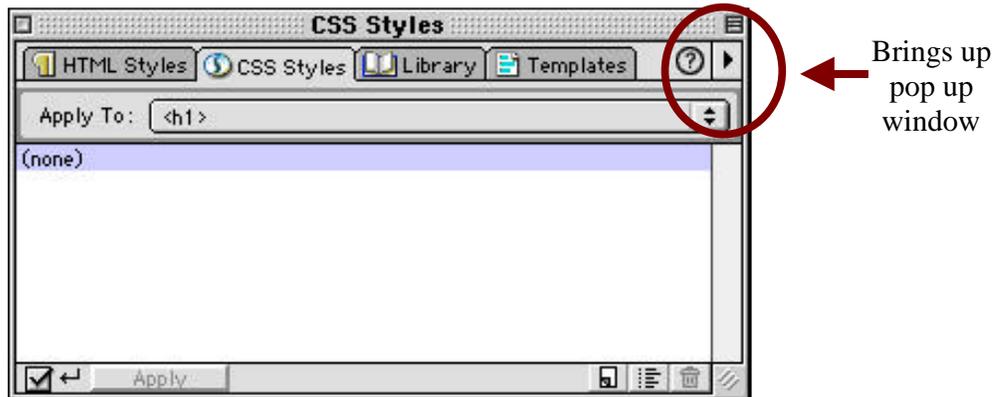
The “New Style” dialog box will display on your screen. For “TYPE,” select the “Redefine HTML Tag” radio button. For “Tag,” use the pop-up menu to select the HTML tag, h1. Click “OK.” (See diagram below.)



The next dialog box that will appear is the “Style definition for h1” box. Since we want every element that has an h1 tag to appear in a 24-point font size and in the color blue, we use the category “Type.” (Click on the other categories including background, block, box, border, list, positioning, and extensions to determine all of the properties that can be manipulated with CSS in Dreamweaver.) Fill in 24 for “Size” and choose a shade of blue for “Color.” Click “OK.” (See diagram below.)



To open the CSS palette, go to Window > CSS palette.

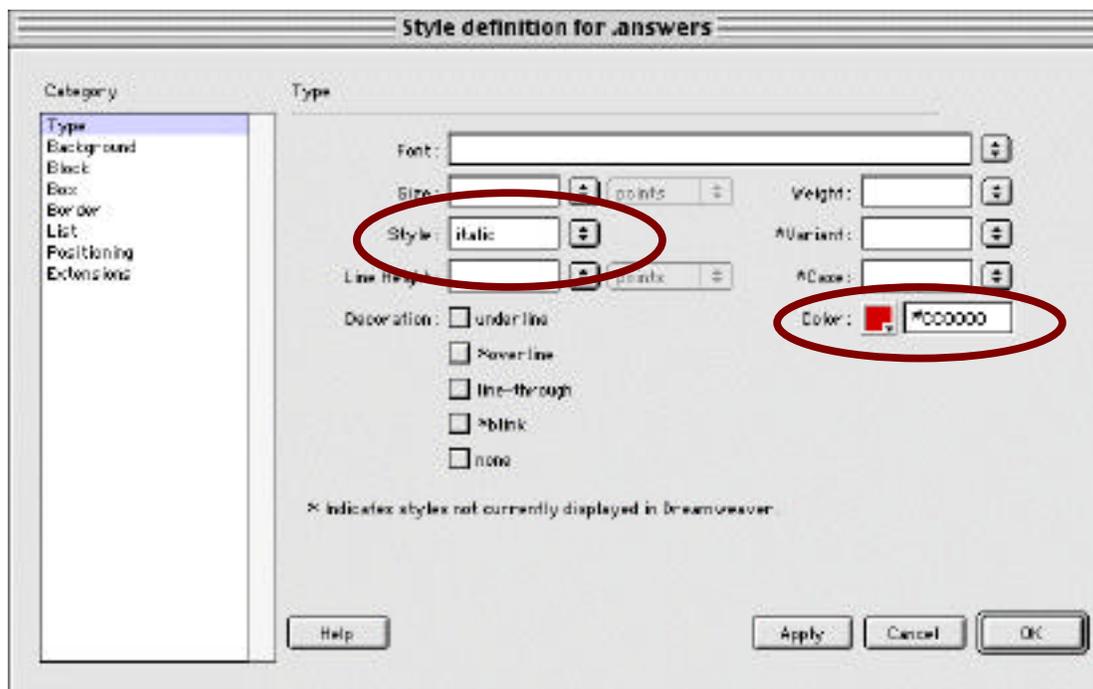


Use the arrow to select “New...” from the pop-up window. (See diagram above.)

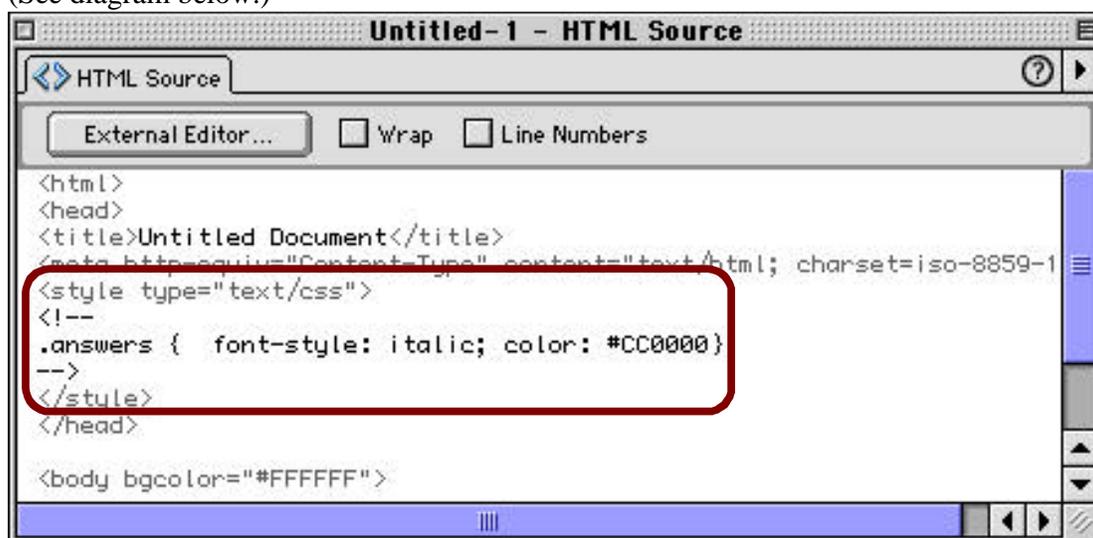
The “New Style” dialog box will display on your screen. For “TYPE,” select the “Make Custom Style (class)” radio button. For this example, we will define a tag called “answers.” We want all of the answers on the Web page to appear in italic typeface and in the color red. For “Tag,” type in the name of your class with a period in front of of it. (See diagram below.)



The next dialog box that will appear is the “Style definition for .answers” box. Since we want every tag associated with the class to appear in italic typeface and in the color red, we will use the category “Type.” Use the drop-down menu to select “italic” for “Style” and choose a shade of red for “Color.” Click “OK.” (See diagram below.)



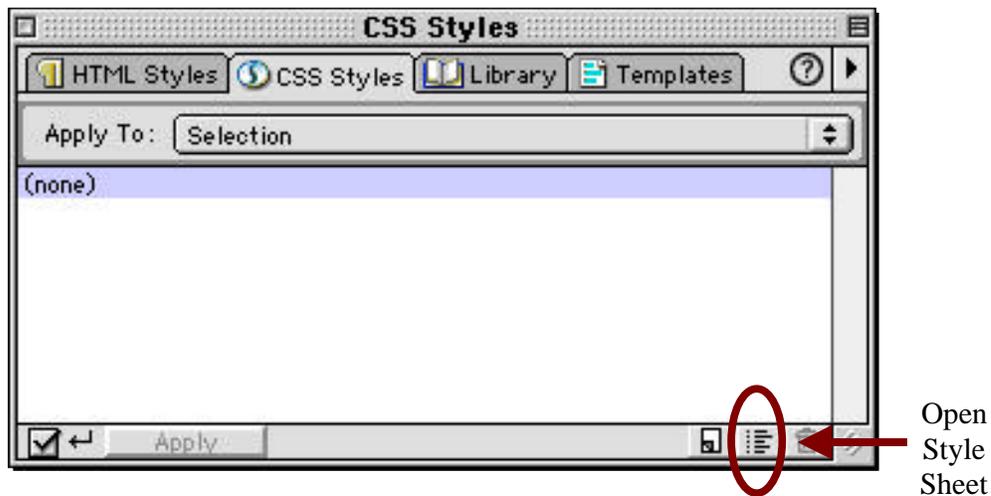
Now view the HTML code in Dreamweaver by selecting WINDOW > HTML SOURCE. (See diagram below.)



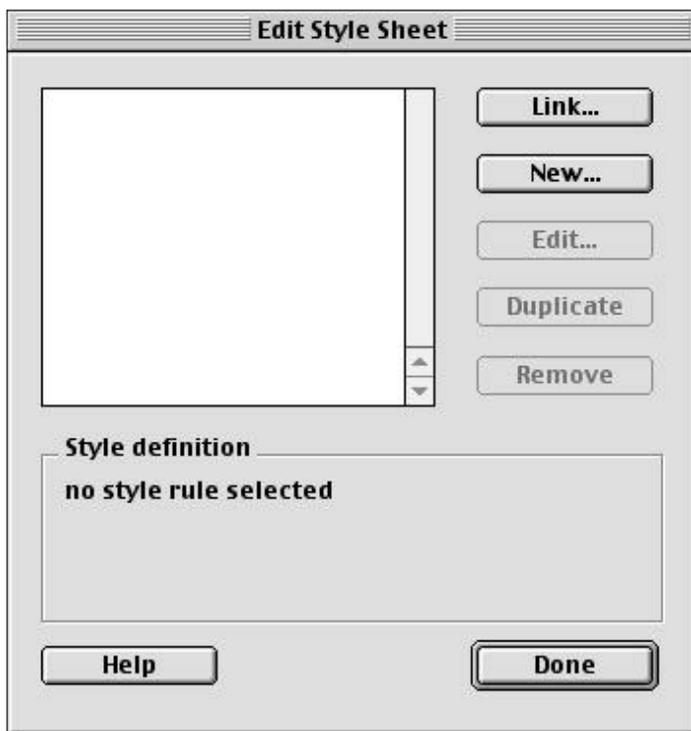
Note that the selector is “.answers.”

External Syle Sheets Using Dreamweaver

If you have more than one page to which you want to apply the same styles, you can create an external style sheet and link to several Web pages. To open the CSS palette, go to Window > CSS palette. Select the “Open Style Sheet” icon. (See diagram below.)



The “Edit Style Sheet” dialog box will display on your screen. (See diagram below.)



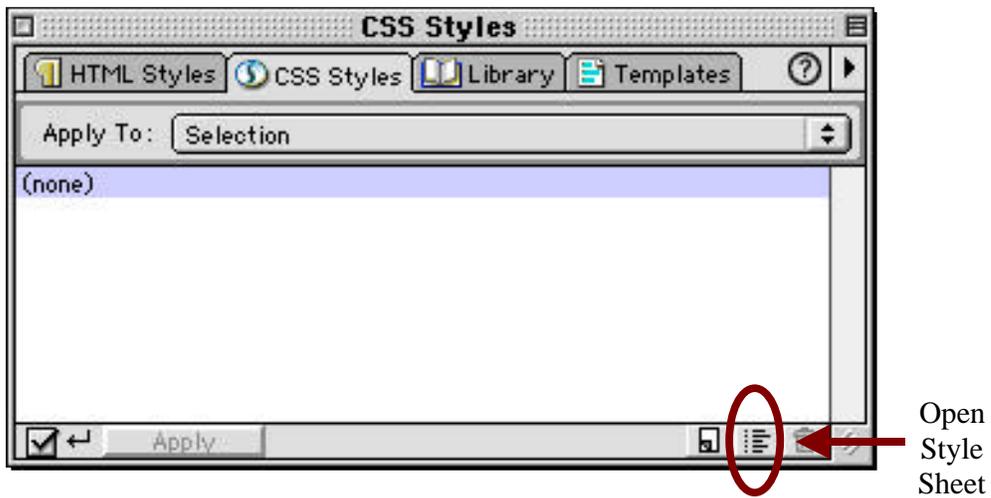
Use the “New...” button to add the style definitions. Each time you add a style, select “New...” and the “New Style” dialog box will display on your screen. Add all styles using this “New...” feature. Note that as you create new styles, the list appears in the “Edit Syle Sheet” screen. When all styles are entered, export the CSS by selecting File > Export > Expor CSS Styles... The “Export Styles As CSS File” dialog box will display on your screen. (See diagram below.) Name the file with the .css extension (for example, mystyles.css), and then click “save.” mystyles.css is an external CSS on your hard drive.



Linking External Style Sheets to an HTML File Using Dreamweaver

In Dreamweaver, open the HTML document to which you want to link the external style sheet you previously created.

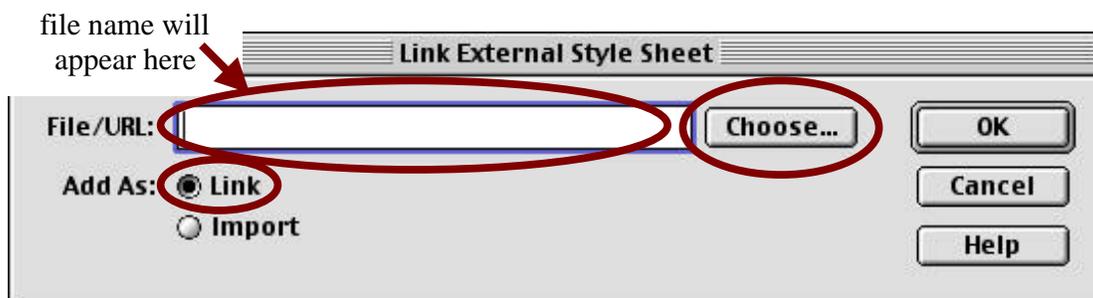
To open the CSS palette, go to Window > CSS palette. Select the “Open Style Sheet” icon. (See diagram below.)



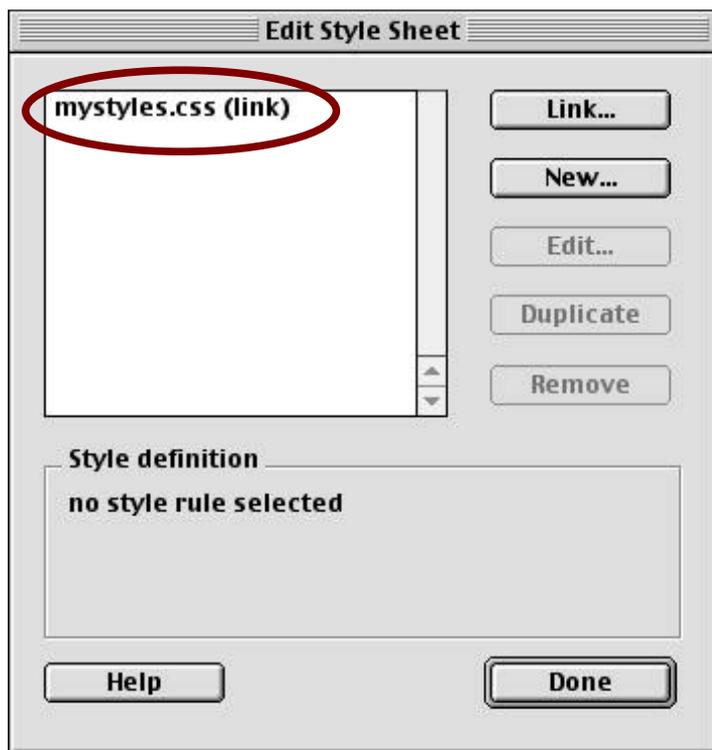
The “Edit Style Sheet” dialog box will display on your screen. Click on “Link...” (See diagram below.)



The “Link External Style Sheet” dialog box will display on your screen. Click on the “Link” radiobutton to the right of “Add As” and then click on “Choose...” (See diagram below.)

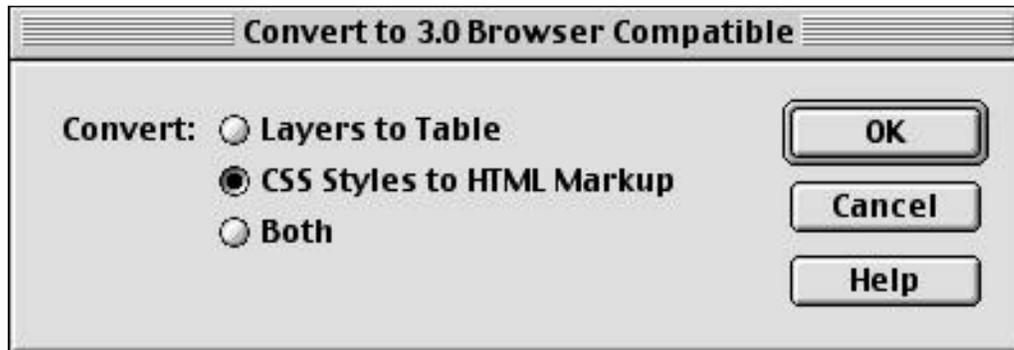


After you click “Choose...,” you will find the .css document that you saved earlier. Click “OK.” This will bring you back to the “Link External Style Sheet” dialog box, but the file name you chose will appear in the “File/URL” text box. (See diagram below.) After you click “OK,” you will be back to the “Edit Style Sheet” dialog box. Notice that the name of your file appears in the text box. (See diagram below.)



Converting CSS into HTML Using Dreamweaver

Dreamweaver is one of the only software tools that can change CSS into HTML to help with browser compatibility. When converting CSS in an HTML document, Dreamweaver will create a new document with HTML, leaving the CSS document in its original form. In order to convert the document, select File > Convert > 3.0 Browser Compatible...When the “Convert to 3.0 Browser Compatible” dialog box appears, select the “CSS Styles to HTML Markup” and click “OK.” (See diagram below.) Your new document, written in HTML, will appear on your screen.



Summary

CSS were created by W3C to help designers separate content from presentation. Although many designers are advocates for CSS because they are much more convenient than tedious HTML code, opponents argue that the separation of content and format is a traditional idea that needs to be abandoned. Opponents also claim that CSS are too complex, often leading to errors, but designers have overcome the complexities of CSS by using software tools that often eliminate common errors. One popular software package, Dreamweaver, helps designers avoid mistakes in HTML, helps them overcome browser support problems, and helps them create both internal and external style sheets.

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