Web Development & Design Foundations with HTML5

Tenth Edition

WEB DEVELOPMENT
& DESIGN FOUNDATIONS
with HTML5

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10th Edition
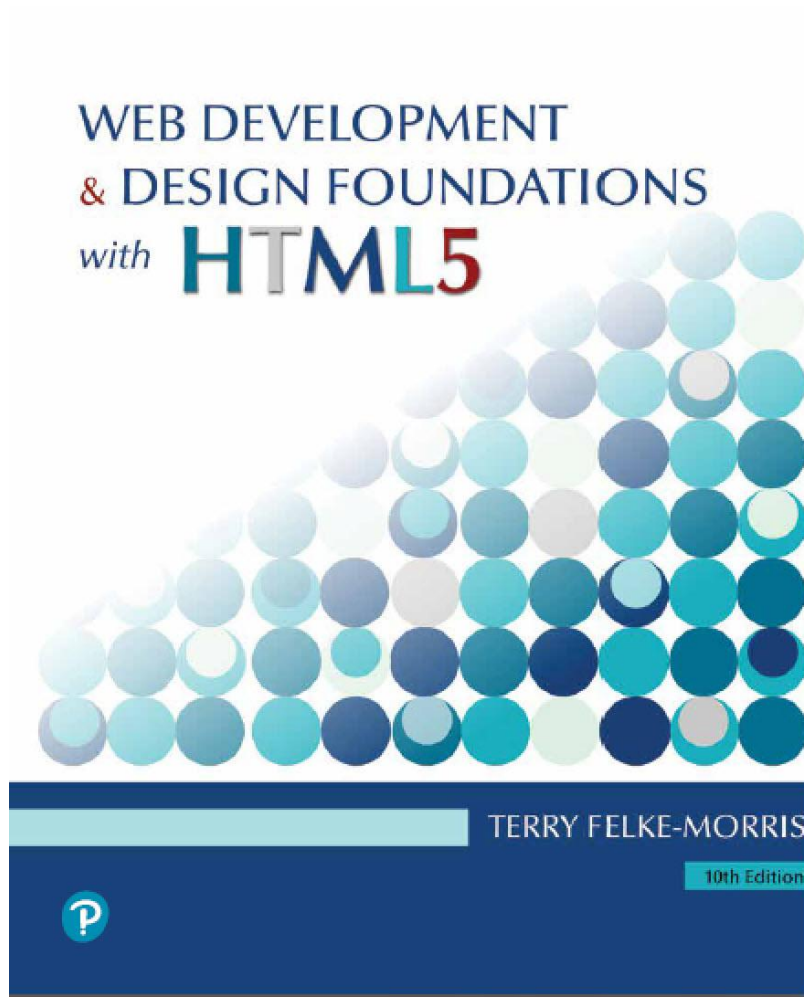
Chapter 3

Configuring Color and Text with CSS

Learning Outcomes

- List advantages of using Cascading Style Sheets
- Use color on web pages
- Create style sheets that configure common color and text properties
- Apply inline styles/display
- Use embedded style sheets
- Use external style sheets
- Configure class, id, and contextual selectors
- Utilize the "cascade" in CSS
- Validate CSS

Overview of Cascading Style Sheets (CSS)

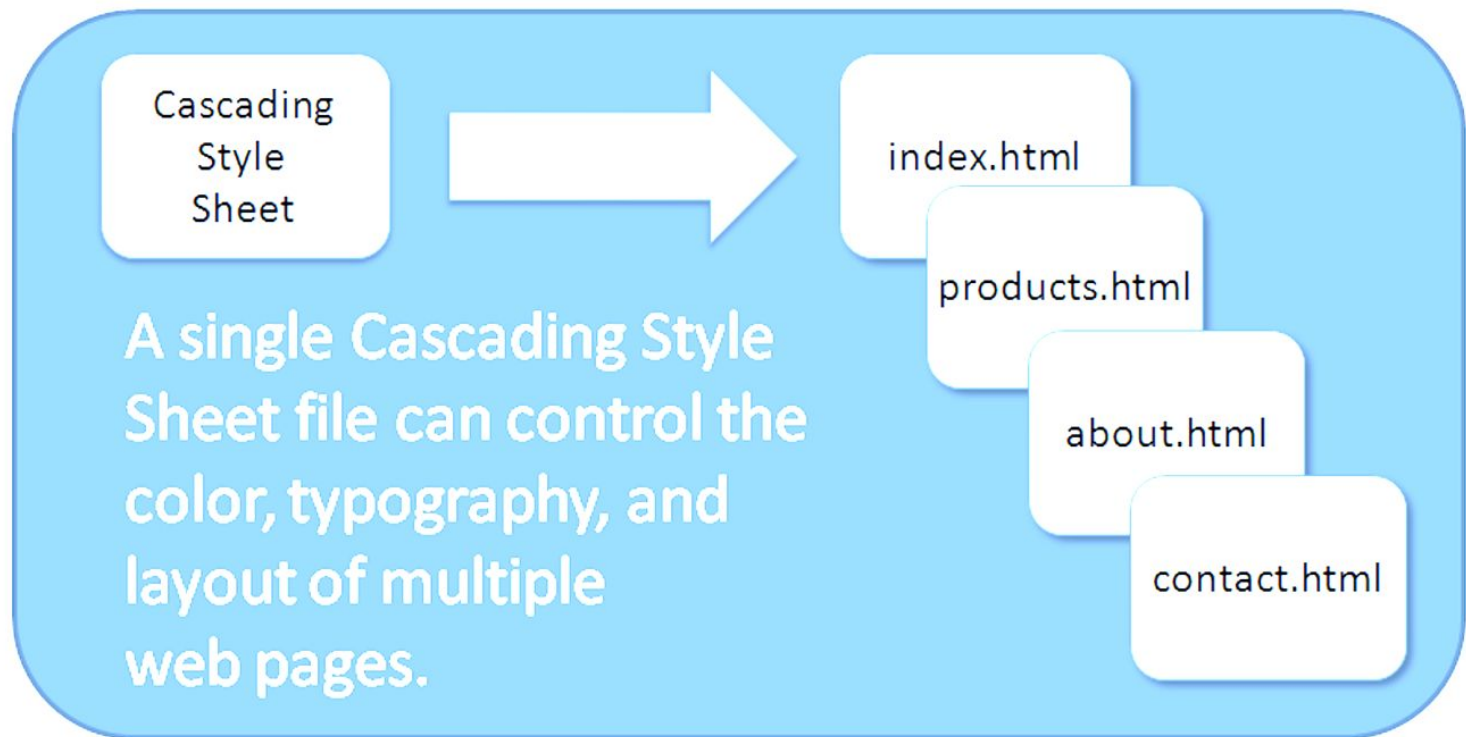- Visit http://www.csszengarden.com

Style Sheets

- used for years in Desktop Publishing
- apply typographical styles and spacing to printed media

CSS

- provides the functionality of style sheets (*and much more*) for web developers
- a flexible, cross-platform, standards-based language developed by the W3C.
- Released in 1994 by Hakon Lie of CERN.

Figure 3.1 The power of a single CSS file

Cascading Style Sheet → index.html

A single Cascading Style Sheet file can control the color, typography, and layout of multiple web pages.

products.html

about.html

contact.html

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CSS Advantages

- Greater typography and page layout control

- Style is separate from structure

- Styles can be stored in a separate document and associated with the web page

- Potentially smaller documents

- Easier site maintenance

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Types of Cascading Style Sheets

1. Inline Styles

2. Embedded Styles

3. External Styles

4. Imported Styles

We will be covering on 1, 2 and 3 in this chapter.

CSS Syntax

Style sheets are composed of "Rules" that describe the styling to be applied.

Each Rule contains a Selector and a Declaration

CSS Syntax Sample

Configure a web page to display blue text and yellow background.

body { color: blue;

background-color: yellow; }

This could also be written using hexadecimal color values as shown below.

body { color: #0000FF;

background-color: #FFFF00; }

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Common Formatting CSS Properties

- See Table 3.1 Common CSS Properties, including:
  - background-color
  - color
  - font-family
  - font-size
  - font-style
  - font-weight
  - line-height
  - margin
  - text-align
  - text-decoration
  - width

Using Color on Web Pages

Computer monitors display color as intensities of red, green, and blue light

RGB Color

The values of red, green, and blue vary from 0 to 255.

Hexadecimal numbers (base 16) represent these color values.
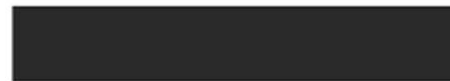
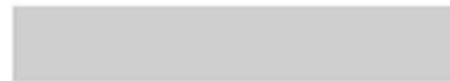# Figure 3.4 Color swatches and hexadecimal color values

Red: #FF0000

Green: #00FF00

Blue: #0000FF

Black: #000000

White: #FFFFFF

Grey: #CCCCCC

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Hexadecimal Color Values

- # indicates a hexadecimal value

- Hex value pairs range from 00 to FF

- Three hex value pairs describe an RGB color

`#000000 black`

`#FF0000 red` `#00FF00 green`

`#0000FF blue` `#CCCCCC grey`

Web Color Palette

- A collection of 216 colors

- Display the most similar
  on the Mac and PC platforms
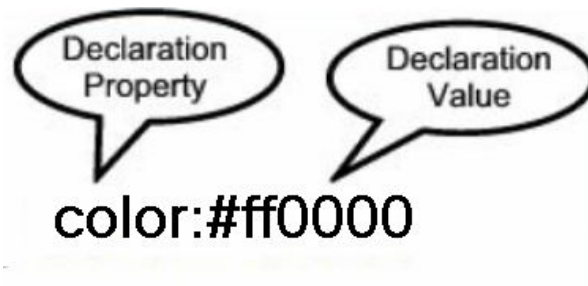
- Hex values:
  00, 33, 66, 99, CC, FF

- Color Chart
  http://webdevfoundations.net/color

Source: http://webdevfoundations.net/color

Configuring Color with Inline CSS

Inline CSS

- Configured in the body of the web page
- Use the style attribute of an HTML tag
- Apply only to the specific element

Declaration Property | Declaration Value

color:#ff0000

Example: configure red color text in an <h1> element:

<h1 style="color:#ff0000">Heading text is red</h1>

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Configuring Color with Inline CSS

Example 2: configure the red text in the heading
    configure a gray background in the heading

Separate style rule declarations with a ; symbol

```
<h1 style="color:#FF0000;background-color:#cccccc">
This is displayed as a red heading with gray background
</h1>
```

Use the style attribute.

CSS Embedded (Internal) Styles

Configured in the head section of a web page.

Use the HTML <style> element

Apply to the entire web page document

Style declarations are contained between the opening and closing <style> tags

Example: Configure a web page with white text on a black background

<style>

body { background-color: #000000;

color: #FFFFFF;

}

</style>

Figure 3.10 The web page after embedded styles are configured

#E2FFFF

#B0E6E6

#237B7B

#15495E

3 - 17
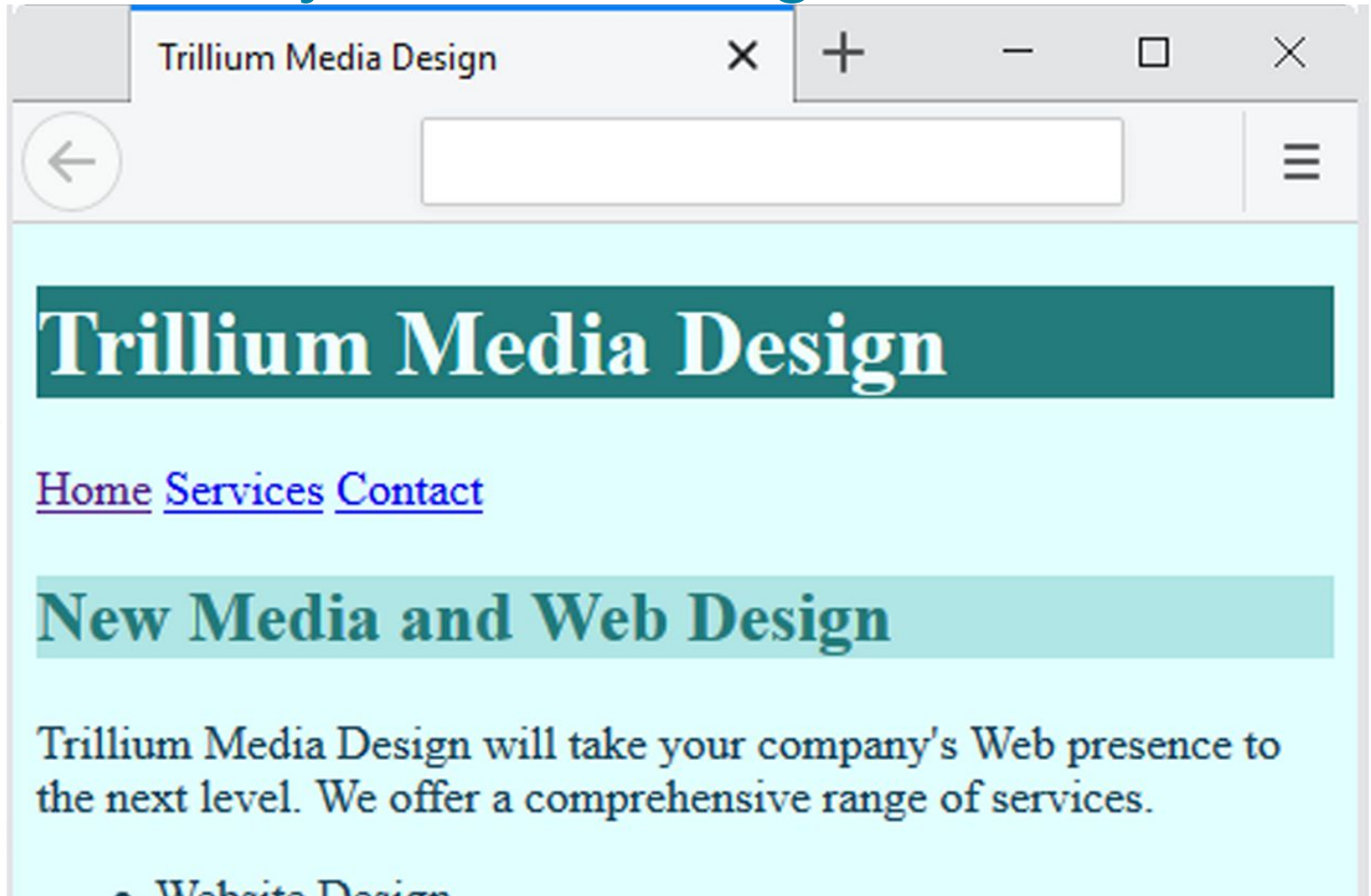
CSS Embedded Styles

- The body selector sets the global style rules for the entire page.

- These global rules are overridden for <h1> and <h2> elements by the h1 and h2 style rules.

```
<style>
body { background-color: #E2FFFF;
    color: #15495E;}
h1 { background-color: #237B7B;
    color: #E2FFFF;}
h2 { background-color: #B0E6E6;
    color: #237B7B;}
</style>
```

Checkpoint 3.1

1. *List three reasons to use CSS on a web page.*

2. *When designing a page that uses colors other than the default colors for text and background, explain why it is a good reason to configure style rules for both text color and background color.*

3. *Describe one advantage to using embedded styles instead of inline styles.*

Configuring Text with CSS

CSS properties for configuring text:

- font-weight
  - Configures the boldness of text

- font-style
  - Configures text to an italic style

- font-size
  - Configures the size of the text

- font-family
  - Configures the font typeface of the text

The font-size Property

Accessibility Recommendation: Use em or percentage font sizes–these can be easily enlarged in all browsers by users

Text Values	Em Units	Px Units	Pt Units	Percentage
xx-small	.5 em	8 px	6 pt	50%
x-small	.60 em	11 px	8 pt	60%
small	.75 em	13 px	10 pt	75%
medium	1 em	16 px	12 pt	100%
large	1.15 em	18 px	13.5 pt	110%
x-large	1.5 em	24 px	18 pt	150%
xx-large	2 em	30 px	24 pt	200%

Figure 3.11 Common fonts

Font-family Category	Font Typeface
serif	Times New Roman, Georgia, Times
sans-serif	Arial, Verdana, Geneva
monospace	Courier New, Lucida Console
cursive	Brush Script MT, Comic Sans MS
fantasy	Jokerman, Curlz MT

The font-family Property

- Not everyone has the same fonts installed in their computer
- Configure a list of fonts and include a generic family name

p { font-family: Arial, Verdana, sans-serif; }

Figure 3.14 CSS configures color and text properties on the web page

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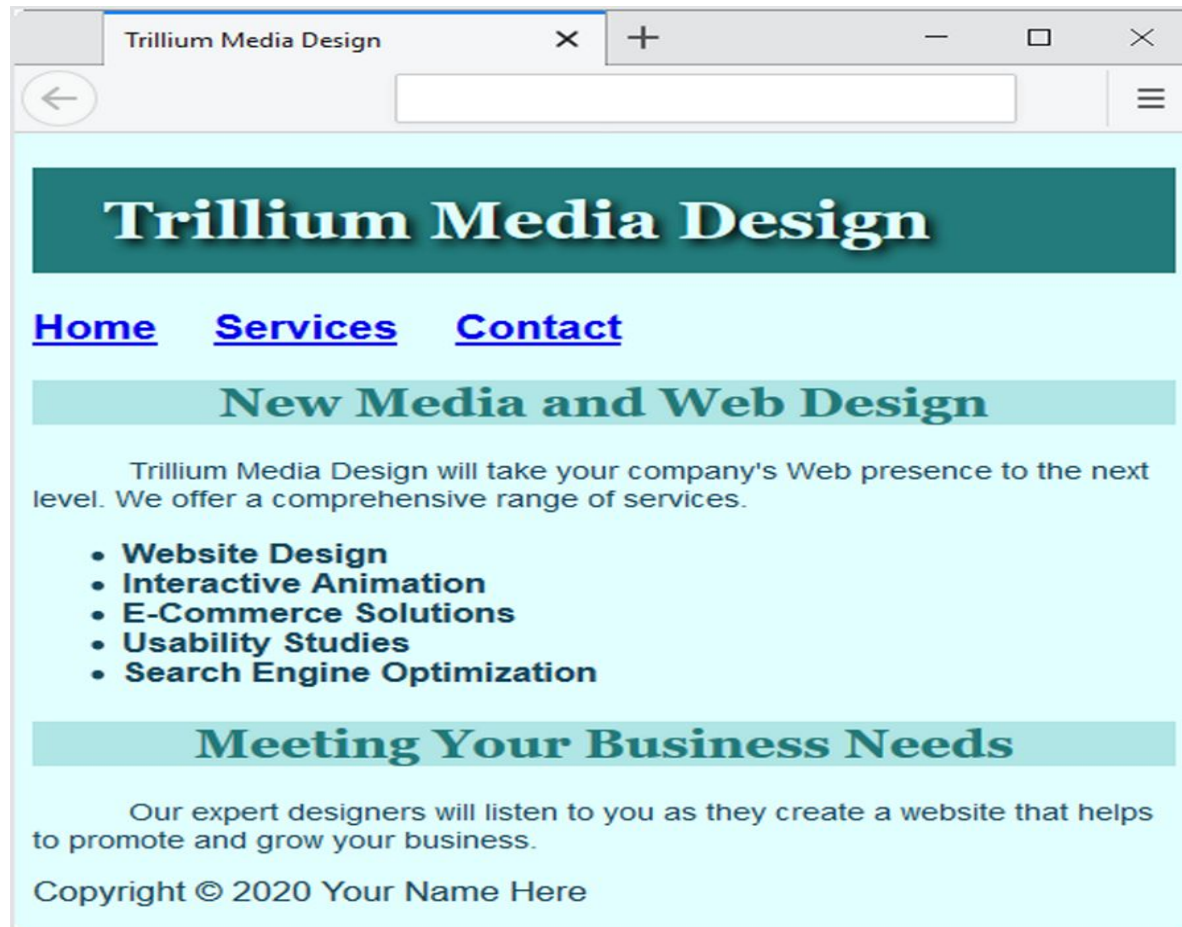
Embedded Styles Example

```
<style>
body { background-color: #E2FFFF; color: #15495E;
     font-family: Arial, Verdana, sans-serif; }
 h1 { background-color: #237B7B;       color: #E2FFFF;
     line-height: 200%;
     font-family: Georgia, "Times New Roman", serif;
     text-indent: 1em;
     text-shadow: 3px 3px 5px #000000; }
h2 { background-color: #B0E6E6; color: #237B7B;
     font-family: Georgia, "Times New Roman", serif;
     text-align: center;  }
nav { font-weight: bold;
       font-size: 1.25em;
       word-spacing: 1em; }
p { font-size: .90em;    text-indent: 3em; }
ul { font-weight: bold; }
</style>
```

More CSS TEXT Properties

- line-height
  - Configures the height of the line of text

- text-align
  - Configures alignment of text within a block display element

- text-indent
  - Configures the indentation of the first line of text

- text-decoration
  - Modifies the appearance of text with an underline, overline, or line-through

More CSS TEXT Properties (2 of 2)

- text-transform
  - Configures the capitalization of text
- letter-spacing
  - Configures space between text characters
- word-spacing
  - Configures space between words
- text-shadow
  - Configures a drop shadow on text

CSS Selectors

CSS style rules can be configured for an:

- HTML element selector

- class selector

- id selector

- descendant selector

Using CSS with "class"

class Selector

- Apply a CSS rule to a certain "class" of elements on a web page
- Does not associate the style to a specific HTML element

Configure with .classname

- code CSS to create a class called "new" with red italic text.

Apply the class:

<p class="new">This is text is red and in italics</p>

```
<style>
.new { color: #FF0000;
       font-style: italic;
 }
</style>
```

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Using CSS with "id"

id Selector

- Apply a CSS
rule to ONE element
on a web page.

Configure with #idname

- Code CSS to create an id called "new"
with red, large, italic text.

Apply the id:
<p id="new">This is text is red, large, and in italics</p>

```
<style>
#new { color: #FF0000;
    font-size:2em;
    font-style: italic;
 }
</style>
```

CSS Descendant Selector

Specify an element within the context of its container (parent) element.

AKA contextual selector

Example :
main p { color: #00FF00;}

The example configures a
green text color only for
p tags located *within* an element assigned to the id named content

Advantage of contextual selectors:
Reduces the number of classes and ids you need to apply in the HTML

span element

Purpose:

- configure a specially formatted area displayed in-line with other elements, such as within a paragraph.

There is no additional empty space above or below a span – it is inline display.

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span Element Example

Embedded CSS:

<style>

.companyname { font-weight: bold;

font-family: Georgia, "Times New Roman", serif;

font-size: 1.25em; }

</style>

HTML:

**<p>Your needs are important to us at <span class="companyname"
>Acme Web Design.**
We will work with you to build your website.</p>

Your needs are important to us at **Acme Web Design**. We will
work with you to build your website.

External Style Sheets - 1

CSS style rules are contained in a text file separate from the HTML documents.

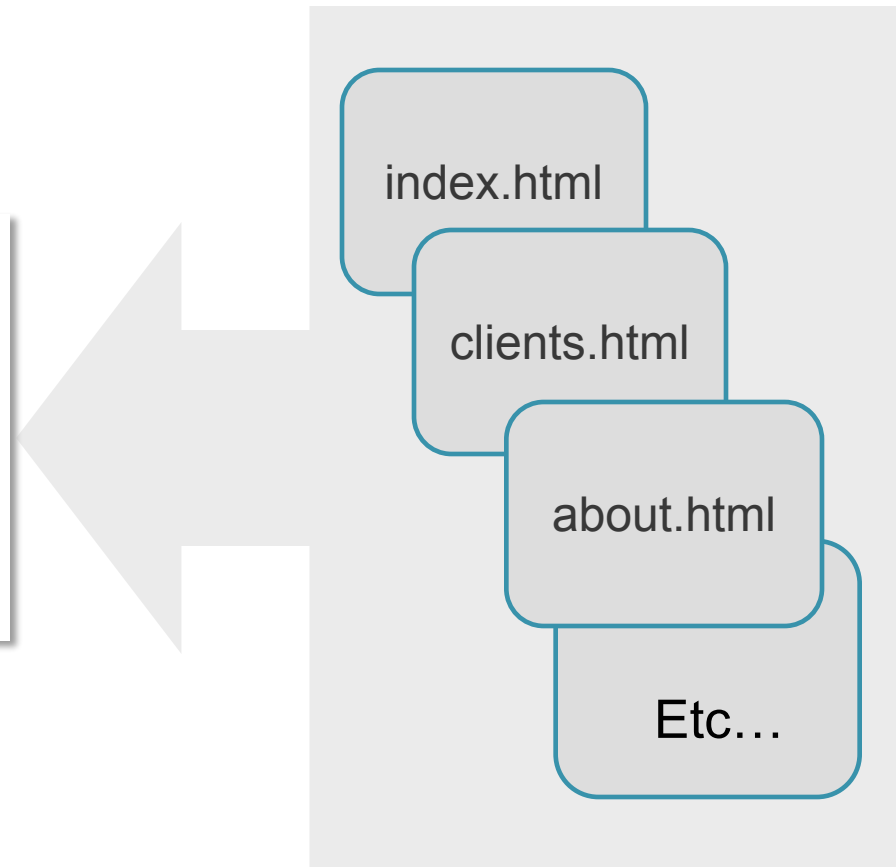The External Style Sheet text file:

- extension ".css"

- contains only style rules

- does not contain any HTML tags

External Style Sheets - 2

Multiple web pages can associate with the same external style sheet file.

site.css

```
body {background-color:#E6E6FA;
        color:#000000;
        font-family: Arial, sans-serif;
        font-size:90%; }
h2 {  color: #003366; }
nav { font-size: 16px;
        font-weight: bold; }
```

index.html

clients.html

about.html

Etc…

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link Element

A self-contained tag

Placed in the head section

Purpose: associates the external style sheet file with the web page.

Example:

<link rel="stylesheet" href="color.css">

Using an External Style Sheet

External Style Sheet color.css

body { background-color: #0000FF;

color: #FFFFFF;

}

To associate the external style sheet called color.css, the HTML code placed in the head section is:

<link rel="stylesheet" href="color.css">

Checkpoint 3.2

1. Describe a reason to use embedded styles. Explain where embedded styles are placed on a web page.

2. Describe a reason to use external styles. Explain where external styles are placed and how web pages indicate they are using external styles.

3. Write the code to configure a web page to use an external style sheet called "mystyles.css".
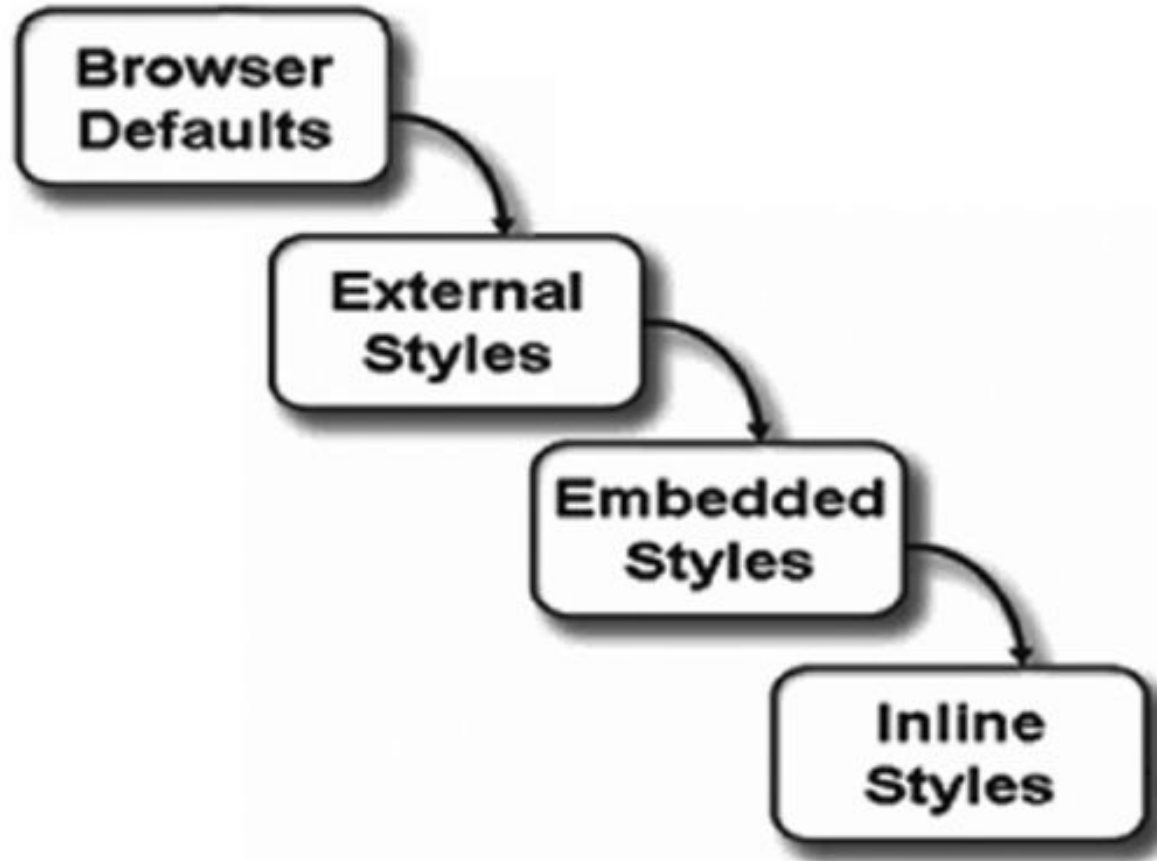
Centering Page Content with CSS

```
#container { margin-left: auto;

    margin-right: auto;

    width: 80%; }
```

Figure 3.23 The page content is centered within the browser viewport

Figure 3.24 The "cascade" of Cascading Style Sheets

W3C CSS Validation

http://jigsaw.w3.org/css-validator/

Partial screenshot of http://jigsaw.w3.org/css-validator

Summary

This chapter introduced you to Cascading Style Sheet Rules associated with color and text on web pages.

You configured inline styles, embedded styles, and external styles.

You applied CSS style rues to HTML, class, id, and descendent selectors.

You are able to submit your CSS to the W3C CSS Validation test.