

Introduction to CSS

Cascading Style Sheets



Progressive Enhancement

- Web pages are often visualized as being made up of layers:
 - Content - the foundational layer
 - Structure
 - Presentation
 - Behavior
- Each layer enhances the base content in some way

The Technology behind the Layers

- Content - MS Word (?) ...anything
- Structure - HTML
- Presentation - CSS
- Behavior - JavaScript



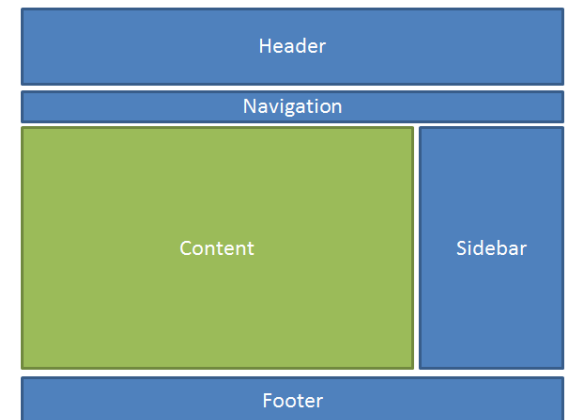
CSS is used for two things

1. Formatting

- Fonts, colors, backgrounds, borders and other embellishments

2. Layout

- Positioning content – non “natural document flow”
- Columnar layouts, e.g. the “c-clamp”



Overview of Cascading Style Sheets (CSS)

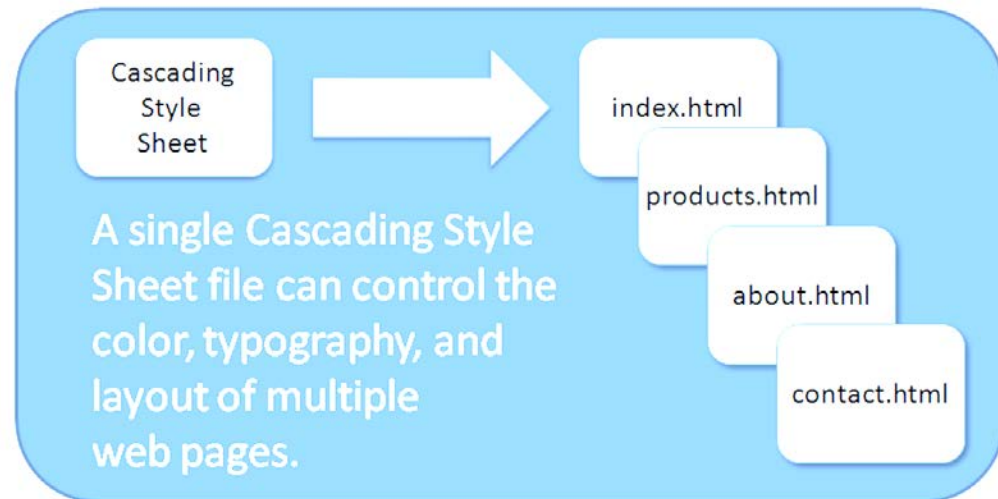
- Style Sheets
 - used for years in Desktop Publishing
 - apply typographical styles and spacing to printed media
- CSS
 - provides the functionality of style sheets (and much more) for web developers
 - a flexible, cross-platform, standards-based language developed by the W3C.



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



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;  
}
```



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

More Common Formatting Properties

- margin
- padding
- color
- background-color
- line-height
- text-align
- text-decoration
- width

The font-family Property

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

- 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; }

Using Color on Web Pages



Red: #FF0000



Green: #00FF00



Blue: #0000FF



Black: #000000



White: #FFFFFF



Grey: #CCCCCC

- 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.

Three places to put css

- Inline Styles
 - body section
 - HTML style attribute
 - apply only to the specific element
- Embedded Styles
 - head section
 - HTML style element
 - apply to the entire web page document
- External Styles
 - Separate text file with .css file extension
 - Associate with a HTML link element in the head section of a web page
- ~~Imported Styles~~

Inline CSS

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

Separate style rule declarations with ;

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

This is displayed as a red heading with gray background

CSS Embedded (Internal) Styles

- Configured in the header 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>
```

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

Using an External Style Sheet

External Style Sheet

```
body {  
    background-color: #0000FF;  
    color: #FFFFFF;  
}
```

To associate the external style sheet, the HTML code placed in the head section is:

```
<link rel="stylesheet" href="styles.css">
```

- A self-contained tag
- Placed in the header section
- Purpose: associates the external style sheet file with the web page.
- Example:

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

External Style Sheets - 2

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

styles.css

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

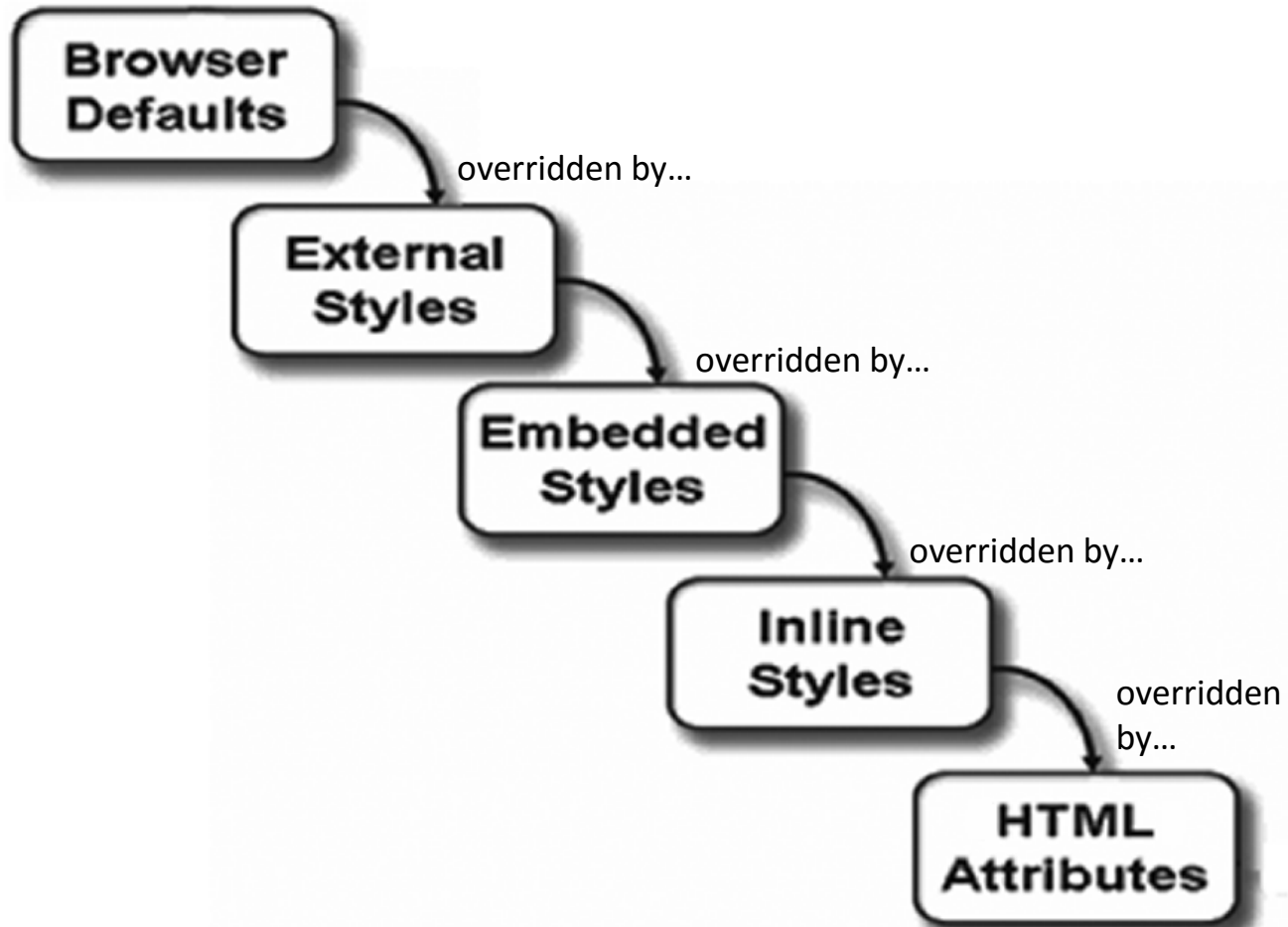
index.html

clients.html

about.html

Etc...

The “Cascade”



W3C CSS Validation

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

