

Cascading Style Sheets

Overview and Basic
use of CSS

What are Style Sheets?

- A World Wide Web Consortium (W3C) defined standard
- A way for web page designers to separate the formatting of a document from the HTML markup
- A way of centrally managing the “look” for an entire web site

What are Style Sheets?

- A way to layout web pages without the use of complex tables and tricks
- A way for users to take control of how web pages are displayed
- Resource:
<http://www.w3schools.com/css/default.asp>

Style Anatomy

Selector

`h1`

```
{  
  color: #0000FF;  
  font-size: 24pt;  
}
```

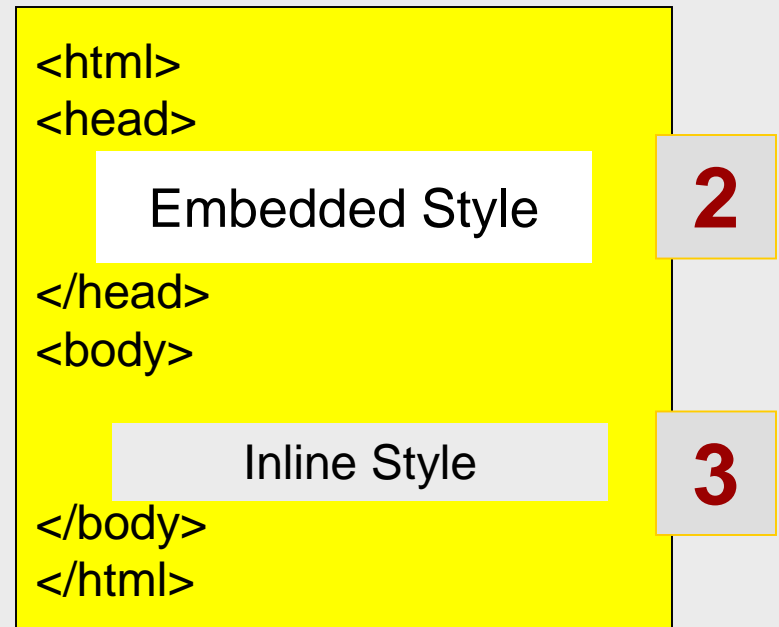
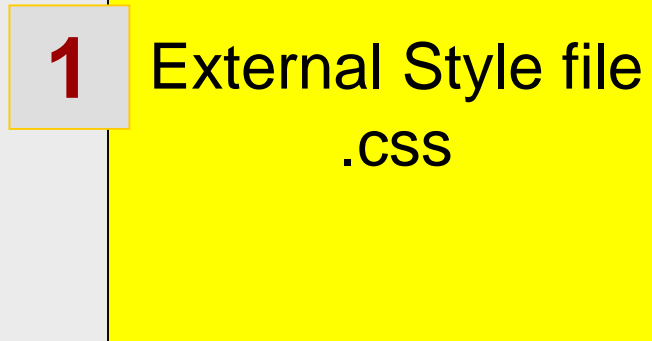
Property

Value

Declarations

Types of Style Sheets

Each has a smaller scope but takes higher precedence



External Style Sheets

- Influences several pages (any/all pages that <link> to the style file)

stylefile.css

```
h1 { color:#FF3355;
      text-align:center;}
h2,h3 { color: #22FFCC;
         font-style: italic;}
p { font-family:Arial,
     Helvetica; }
```

HTML Page

```
<html>
<head>
<link rel="stylesheet"
      type="text/css"
      href="stylefile.css"/>
</head>
<body>
<h1>A Heading</h1>
<h2>Another Heading</h2>
</body>
```

Embedded Style Sheets

- Influences the single page that implements `<style>` tag
- `<style>` tags should be placed in the `<head>` section of the HTML page

```
<head>
<style type="text/css">
<!--
  h1 { font-family: Arial, Helvetica, Verdana;
        color: blue;
        text-align: center;}
  p { font-family: Arial, Helvetica, sans-serif;
        font-style: italic;
        color: red;}
-->
</style>
</head>
```

NOTE: HTML comment tag allow older browsers to ignore styles they were not coded to support

Inline Styles

- Influences the single HTML element that implements the `style="..."` attribute

```
<body>  
<p style="font-weight:bold;  
        background-color:blue;  
        text-align:center;">
```

This paragraph will be bold, and centered against a blue background.

```
</p>  
</body>
```


Calling Style Sheets

- Linked (in the <HEAD>)

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

- Embedded (in the <HEAD>)

- `<style> h1 {color: #FFFFFF;} </style>`

- Inline (in the tag)

- `<p style="color: #FFFFFF"></p>`

Grouping Selectors

- Instead of separate selectors

```
h1 { font-size: 48pt;
      color: #FFFF00; }
h2 { font-size: 40pt;
      color: #FFFF00; }
```

- Combine rules for shared attributes

```
h1, h2 { color: #FFFF00; }
h1 { font-size: 48pt; }
h2 { font-size: 40pt; }
```

➤ Easier to make changes

Classes

- Classes

- Allow styles for groups of elements

CSS: `td.navbar { color: blue; }`

HTML: `<td class="navbar"></td>`

Style Classes

```
<html>
<head>
<title>Styled Page</title>
<style type="text/css">
<!--
p.norm {font-family: 'Times New Roman';
        text-indent: 0.5in; }
p.spec {font-family: Arial;
        font-style: italic;
        text-indent: 1in;}
-->
</style>
</head>
<body>
<p class="norm">Normal paragraph</p>
<p class="spec">Special paragraph</p>
</body>
</html>
```

Create your own class names

Apply them to
HTML elements

Shared Style Classes

- Style classes that do not specify what type of tag before the period can be used by any tag

```
<style type="text/css">
<!--
.emphasize {color: red; }
-->
```

.emphasize is the name of the class

```
</style>
```

```
<body>
```

```
<h1 class="emphasize">Page Message</h1>
```

```
<p>Welcome to your <span class="emphasize">new
home</span></p>
```

```
</body>
```

Multiple Style Classes

- Style classes that do not specify what type of tag before the period can be used by any tag

```
<style type="text/css">
<!--
.big {font-size: 120%; }
.bold {font-weight: bold; }
-->
```

```
</style>
```

```
<body>
```

```
<p>Welcome to your <span class="big bold">new
home</span></p>
```

```
</body>
```

The paragraph element implements both `.big` and `.bold` styles

Style Ids

- Specifies a particular element on a page
- Similar to classes, but the in the case of "id"s you should have only one element with the id (i.e. They should be unique)

- In element start tag

```
<element id="this">Blah blah</element>
```

- In style

```
element#this {  
    property:value;}
```

- ID wildcard, all elements with that ID:

```
#this {  
    property:value;}
```

Style Ids

```
<style type="text/css">
```

```
<! - -
```

```
p#intro{color: red }
```

```
- - >
```

.intro is the id of the page element

```
</style>
```

```
<body>
```

```
<p id="intro"> >This is my introduction  
paragraph.</p>
```

```
</body>
```


Pseudo-elements

- Special-case selectors
- Anchors
 - `a:link` (when a link is not active, and has not been visited)
 - `a:visited` (after the link has been visited)
 - `a:hover` (when the mouse is hovering over the link)
 - `a:active` (when a link has focus or has been selected)
- Can use pseudo-elements with classes
 - e.g., `a.navbar:active`
- Other pseudo-elements
 - `:first-line` , `:first-letter` , `:after` , `:before` , `:selection`
- Resource:
http://www.w3schools.com/Css/css_pseudo_classes.asp

CSS Units

- Used for specific heights and lengths
- CSS supports several length units
 - px – Pixels – screen dots
 - pt – Points – font sizes
 - in – Inches
 - cm –Centimeters
 - % - percent of the current/parent font
 - em – height of current font
- Pixels vs. Percentages
 - For easiest/best design control – pixels
 - For best flexibility/accessibility – % or em

Fonts

■ font-family

- Ordered list of font names
 - Implements the first font supported by the computer rendering the page
- Quote names with spaces: e.g., "Arial Black"

```
p.arial
```

```
{  
    font-family: Arial, "Times New Roman", Helvetica,  
                sans-serif;  
}
```

- http://www.w3schools.com/cssref/pr_font_font-family.asp

■ font-size

- larger, smaller, or specific height

```
p.big { font-size: 60px; }
```

- http://www.w3schools.com/cssref/pr_font_font-size.asp

Fonts

■ font-style

- normal or italic

```
p.plain { font-style: normal; }
```

```
p.italic { font-style: italic; }
```

- http://www.w3schools.com/cssref/pr_font_font-style.asp

■ font-weight

- normal, lighter, bold, or bolder

```
p.bolder { font-weight: bolder; }
```

- http://www.w3schools.com/cssref/pr_font_weight.asp

Colors

■ color:

- Named Colors (140 names are predefined):
red, blue, green
- http://www.w3schools.com/cssref/css_colors.asp
- Hex: **#FFCC00, #FC0**
- RGB values: **rgb(123, 123, 123)**
- http://www.w3schools.com/cssref/css_colors_legal.asp

```
p.green { color: #00FF00; }
```

■ background-color:

- color or transparent

```
p.highlight { background-color: #FFCC00; }
```

Text

■ line-height

- Normal, number, length, percentage

```
p.wellspaced { line-height: 150%; }
```

- http://www.w3schools.com/cssref/pr_dim_line-height.asp

■ text-align

- left, right, center, justify

```
p { text-align: justify; }
```

- http://www.w3schools.com/cssref/pr_text_text-align.asp

Positioning of Elements

- You can place/layout your page using CSS
- Usually takes the form of `<div>..</div>` tags with id or class names
- Types of positioning:
 - Static – default, element shows up as it would normally
 - Relative – position the element relative to where it would be (if static)
 - Fixed - You can specify a position on a page, and it will stay there (fixed to the body)
 - Absolute – similar to Fixed, except you it does not have to be locked relative to the page (can be in another element)
- Note: A "positioned" element is one whose position is anything except static.
- http://www.w3schools.com/css/css_positioning.asp

Some Tips

- Always define a generic font-family last
 - End font-family declarations with serif, sans-serif, cursive, fantasy, or monospace

```
body {  
    font-family: Gothic, Stencil, Arial, sans-serif;  
}
```

- Define font styles for `body`, `p`, and `td`
 - `td` elements do not always inherit font sizes, and font settings are sometimes lost in tables (issue with older browsers)

```
body, p, td { font-size: 12pt; }
```


Making CSS valid

- Like XHTML w3c provides a validator at: <http://jigsaw.w3.org/css-validator/>
- It will check to make sure you have used acceptable properties, proper/appropriate values and that your syntax is correct
 - i.e. closing braces, colons instead of equal signs

Technical Tips

- Use linked style sheets
 - Makes updates easier
 - Your HTML is cleaner
- Test
 - Different browsers
 - Different platforms
- If style sheets are removed, the page should still be readable

CSS References

Online specs can be found at:

<http://www.w3.org/TR/REC-CSS1>

Online specs can be found at:

<http://www.w3.org/TR/REC-CSS2>

Online resource can be found at:

<http://www.w3schools.com/css/default.asp>