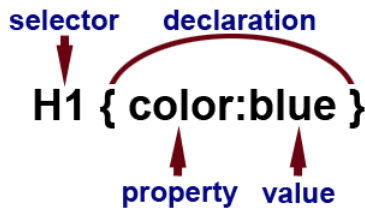


Cascading Style Sheets

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A Style (aka “Rule”)



Internal, External and Inline Style Sheets

Inline Style Sheets

- * Style information goes around text, much like the old-fashioned tags
- * Like the old tags, the style only applies to that text
- * This is the weakest implementation of style sheets
- * Most commonly used when using layers (<DIV> tag). (More on that later).

* Create a new file and call it **cssinline.html**

* In “Code View”, insert the text below

cssinline.html

```
<span style="color: red; font-family: 'Arial,Helvetica', sans-serif; "> This text is styled in red with  
Arrial or Helvetica font, if available.</span>
```

- The last semi-colon isn't necessary, but it's a good idea to use it.

* Save the file **cssinline.html** and check it in a browser.

Internal Style Sheets

- * Also called an “Embedded” Style Sheet
- * Style information goes in the <HEAD> section of the document
- * Styles are available to use on other text in this document
- * Styles ARE NOT available for use in other documents

* Create a new file and call it **cssinternal.html**

cssinternal.html

```
<!DOCTYPE html>  
<html lang="en-US">  
<head>  
<title>Internal Styles</title>
```

<pre> <style> .branding { font-size: 24px; font-family: Arial, Helvetica, sans-serif; } </style> </head> </body> This text is styled as part of an Internal Style Sheet. </body> </html> </pre>	<p>← This specifies the style information for .branding</p> <p>← This calls on the branding style for the selected text</p>
---	---

- Save the file **cssinternal.html** and check it in a browser.

DIV NAMES: Try to use structural names instead of presentational names.

- <branding>
- <nav-main>
- <subnav>
- <main-content>
- <sidebar>

HTML 5 would use:

- <header>
- <nav>
- <section>
- <article>
- <aside>
- <footer>

(More on this later)

External Style Sheets

The External CSS File

- * An external file holds the style information (i.e. stylesheet.css)
- * The HTML file just contains a link to that style sheet
- * The styles contained in the external style sheet can be used by all of the files on your site
- * Create a new file called **stylesheet.css**.
 - Save it in the same folder as your other HTML files for this lesson.
- * Insert the text below

stylesheet.css
<pre> .branding { font-size: 24px; font-family: Arial, Helvetica, sans-serif; } </pre>

- Save the file **stylesheet.css**

The HTML File

- * Create a new file and call it **cssexternal.html**
- * Insert the text on the left below

cssexternal.html	
<pre> <!DOCTYPE html> <html lang="en-US"> <head> <title>External Styles</title> <link rel="stylesheet" href="stylesheet.css"> </head> <body> This text is styled as part of an External Style Sheet. </body> </html> </pre>	<p>← This connects the HTML file to the CSS file</p> <p>← This calls on the branding style from the external style sheet</p>

- * Save the file **cssexternal.html** and check it in a browser.

Why are they Called Cascading?

- * A web page gets its style information in the following order of priority:

- 1). Inline: (Overrides Internal and External)
- 2). Internal: (Overrides External)
- 3). External

- * You can specify styles that will apply to all of the pages on your site in an *External Style Sheet*, and then override them with *Internal* or *Inline Styles* when you need to make exceptions to those styles.

Kinds of Styles

*** **NOTE:** For these examples, we'll use an *Internal Style Sheet*, placing the CSS in the **<HEAD>** section of the document

Redefining an HTML Tag

- * So far we've been applying the kind of CSS style we'll cover in #2 below, a Class.
- * Another powerful way to use CSS is to re-define a tag
- * If the style information gets removed, the tag goes back to normal
- * It maintains the tag's original properties, i.e. an **<H3>** tag always puts a paragraph-like break after it
- * Create a new file and call it **redefinetag.html**
- * In "Code View", insert the text on the left below

<pre>font-size: 24px; font-family: Arial, Helvetica, sans-serif; } </style> </head> </body> <p class="nav-text">This style is applied to the entire tag.</p> </body> </html></pre>	<p>← This specifies the style information for .nav-text</p> <p>← This calls on the nav-text style for the selected <P> tag</p>
--	--

- * Save the file **classtag.html** and check it in a browser.
- * We could have more than one class of <P>. Another paragraph could use a different style.

2. Class Applied to a Selection of Text:

- * We will apply the **nav-text** class to **selected text**
- * Create a new file and call it **classselection.html**
- * Insert the text on the left below

classselection.html	
<pre><!DOCTYPE html> <html lang="en-US"> <head> <title>Selection of Text</title> <style> .nav-text { font-size: 24px; font-family: Arial, Helvetica, sans-serif; } </style> </head> </body> <p>This style is applied only to a selection of text within this paragraph.</p> </body> </html></pre>	<p>← This specifies the style information for .nav-text</p> <p>← This calls on the nav-text style for the selected text</p>

- * Save the file **classselection.html** and check it in a browser.

Advanced CSS Selectors

- * There are 4 ways to utilize Advanced CSS Selectors:
 1. Groups of Tags
 2. Contextual Selectors
 3. Link Pseudo Class Selectors
 4. IDs

1. Groups of Tags

- * We will apply the **blue color** to <H1>, <H2>, <H3> and <H4> tags.
- * We will allow <H4> to additionally have a Courier font.

* We do this in cases where we want multiple tags to have the same properties and don't want to have to specify them in each style rule.

* Create a new file and call it **selectorsgroup.html**

* Insert the text on the left below

selectorsgroup.html	
<pre><!DOCTYPE html> <html lang="en-US"> <head> <title>Selectors</title> <style> h1, h2, h3, h4 { color: blue; } h4 { font-family: Courier, Courier New; } </style> </head> </body> <H3>This is H3 Text</H3> <H4>This is H4 Text </H4> </body> </html></pre>	<p>← This specifies the style information for <H1>, <H2>, <H3> and <H4> tags ** NOTE: Tags are separated by a COMMA</p> <p>← Both <H3> and <H4> will be blue ← <H4> will also have a Courier font face</p>

* Save the file **selectorsgroup.html** and check it in a browser.

2. Contextual Selectors

* Used when you want to style a particular combination of tags in a certain order

* We will apply a green color and Courier text whenever a <TD> is followed by a link <A HREF>
- This example shows a way to make links within a table look different from other links.

* Create a new file and call it **selectorscontextual.html**

* Insert the text on the left below

selectorscontextual.html	
<pre><!DOCTYPE html> <html lang="en-US"> <head> <title>Contextual Selectors</title> <style> td a { color: #00CC00; font-family: "Courier New", Courier, mono; } </style> </head> </body> <table width="100%" border="1"> <tr></pre>	<p>← This specifies the style rules for a situation where a <TD> is followed by a link ** NOTE: Tags are separated by a SPACE</p> <p>← Here is <TD> followed by a link</p>

```

<td>
  <a href="about.html">Here is a link</a>
</td>
</tr>
</table>
</body>
</html>

```

*** NOTE: The tags must be used in this order. If we had specified instead bold followed by italic, the tags would have to be `<I>Text here</I>`, not `<I>Text here</I>`

* Save the file **selectorscontextual.html** and check it in a browser.

3a. Link Pseudo Class Selectors (Redefining Links)

* Allows you to redefine the `<a>` tag.

* Allows a rollover effect with `a:hover`

* Create a new file and call it **selectorspseudo1.html**

* Insert the text on the left below

selectorspseudo1.html

```

<!DOCTYPE html>
<html>
<html lang="en-US">
<title>Pseudo Selectors</title>
<style>
a:link {
  font-family: Arial, Helvetica, sans-serif;
  font-size: 12px;
  color: #0000FF;
  text-decoration: none;
}
a:visited {
  font-family: Arial, Helvetica, sans-serif;
  font-size: 12px;
  color: #4444FF;
  text-decoration: none;
}
a:hover {
  font-family: Arial, Helvetica, sans-serif;
  font-size: 12px;
  color: #0000FF;
  text-decoration: underline;
}
a:active {
  font-family: Arial, Helvetica, sans-serif;
  font-size: 12px;
  color: #4444FF;
  text-decoration: none;
}
</style>
</head>

```

← This specifies the style information for a links, visited links, active links and for when the mouse hovers over a link.

Tags must be in this order:

- link
- visited
- hover
- active

← A standard link

```
</body>
<a href="about.html">Click here</a>
</body>
</html>
```

* Save the file **selectorspseudo1.html** and check it in a browser.

3b. Link Pseudo Class Selectors (Different Links for Different Purposes)

* Allows you to create different types of links for different purposes

* Using the file **selectorspseudo1.html**, re-save it as **selectorspseudo2.html**

* Add the text in **orange** below

selectorspseudo2.html

```
<!DOCTYPE html>
<html lang="en-US">
<head>
<title>Pseudo Selectors – More Links</title>
<style>
a:link {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 12px;
    color: #0000FF;
    text-decoration: none;
}
a:visited {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 12px;
    color: #4444FF;
    text-decoration: none;
}
a:hover {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 12px;
    color: #0000FF;
    text-decoration: underline;
}
a:active {
    font-family: Arial, Helvetica, sans-serif;
    font-size: 12px;
    color: #4444FF;
    text-decoration: none;
}
a.lesson:link {
    font-family: Courier, Courier New;
    font-size: 11px;
    color: #00DD00;
    font-weight: bold;
    text-decoration: none;
}
```

← This section specifies styles for another type of link we'll call lesson


```

a.lesson:visited {
    font-family: Courier, Courier New;
    font-size: 11px;
    color: #00DD00;
    font-weight: bold;
    text-decoration: none;
}

a.lesson:hover {
    font-family: Courier, Courier New;
    font-size: 11px;
    color: #00AA00;
    font-weight: bold;
    text-decoration: underline;
}

a.lesson:active {
    font-family: Courier, Courier New;
    font-size: 11px;
    color: #00DD00;
    font-weight: bold;
    text-decoration: underline;
}
</style>
</head>
</body>
<a href="about.html">Here is the regular link</a><br />
<a class ="lesson" href="about.html">Here is a
different type of link</a>
</body>
</html>

```

← The standard link
← The different type of link

* Save the file **selectorspseudo2.html** and check it in a browser.

4. IDs

- * Starts with a pound sign (i.e. **#header**).
- * Used to identify objects on a page.
- * Only be used once on a page (IDs used more than once will cause site to **not validate**).
- * Often used to ID **layout DIVs** or images so they can be tracked.
- * Javascript will refer to IDs, but not DIVs.

* Create a new file and call it **selectorsid.html**

* Insert the text on the left below

selectorsid.html

```

<!DOCTYPE html>
<html lang="en-US">
<head>
<title>IDs</title>
<style>
#header {
    position: relative;
    background-color: #000000;
    color: #99FF99;

```

← This specifies the style information for the header ID

```

}
</style>
</head>
</body>
<p id="header">This text can only be used once on
this page.</p></body>
</html>

```

← Here is <P> with an ID of “header”

*** This is mainly used for keeping track of layers. <DIV> (More on that to come)
 Save the file [selectorsid.html](#) and check it in a browser.

Styling Tables

table-style.html

<pre> <table> <tr> <th>Top left cell</th> <th>Top right cell</th> </tr> <tr> <td>Bottom left cell</td> <td>Bottom right cell</td> </tr> </table> </pre>	<pre> /* TABLE BORDERS */ table, th, td { border: 1px solid black; /* dotted, dashed, solid, double, groove, ridge, inset, outset, none */ border-collapse: collapse; /* separate; */ } /* TABLE WIDTH & HEIGHT */ table { width:600px; height: 200px; } /* HORIZONTAL & VERTICAL ALIGNMENT */ th { text-align: center; vertical-align: bottom; } /* TABLE PADDING */ th, td { padding: 15px; text-align: left; } /* HOVER EFFECT ON ROWS */ tr:hover { background-color: #f5f5f5; } </style> </pre>
---	--

Using Multiple Classes and Shorthand

MULTIPLE CLASSES IN A SINGLE ELEMENT

- You can use multiple classes in a DIV

```
<div class="class1 class2 class3">
```

SHORTHAND

```
body{  
  background: url("bg.gif");  
  background-color: #fff;  
  background-repeat: repeat-x;  
}
```

Can be done in “shorthand”

You can add several properties to the same line, such as...

```
body {  
  background: url("bg.gif") #fff repeat-x;  
}
```

Margin & Padding Syntax – Normal (Clockwise)

margin: margin-top | margin-right | margin-bottom | margin-left

Shorthand – All margins set to 2em

```
p {  
  margin: 2em;  
}
```

Shorthand – Top & Bottom margins set to 1em. Right and Left margins set to 2em.

```
p {  
  margin: 1em 2em;  
}
```

Commonly used for layout...

```
margin: 0px auto;
```

(This is top and bottom margin 0. Right and left margin auto).

* IE 5 and older may not center. See Google search for the fix.

Properties

Colors and Backgrounds

Foreground Color

```
h1 { color: #ff0000; }
```

Background Color

```
body { background-color: #FFCC66;
}
h1 { color: #990000;
background-color: #FC9804;
}
```

Background Images (“placing” and background-repeat)

```
body { background-color: #FFCC66;
background-image: url("image.gif");
background-repeat: no-repeat; }
h1 { color: #990000;
background-color: #FC9804; }
```

Can use:

background-repeat: repeat-x (Image repeats horizontally)

background-repeat: repeat-y (Image repeats vertically)

background-repeat: repeat (Image repeats both horizontally and vertically)

background-repeat: no-repeat (Image is not repeated)

Lock Background Image (background-attachment)

```
body { background-color: #FFCC66;
background-image: url("image.gif");
background-repeat: no-repeat;
background-attachment: fixed; }
h1 { color: #990000;
background-color: #FC9804; }
```

Can use:

background-attachment: scroll (Image scrolls with the page – unlocked)

background-attachment: fixed (Image is locked)

Place Background Image (background-position)

```
body { background-color: #FFCC66;
background-image: url("image.gif");
background-repeat: no-repeat;
background-attachment: fixed;
background-position: right bottom; }
h1 { color: #990000;
background-color: #FC9804; }
```

Can use:

background-position: 2cm 2cm (Image is positioned 2 cm from the left and 2 cm down the page)

background-position: 50% 25% (Image is centrally positioned horizontally and ¼ way down the page)

background-position: right top (Image is positioned in top right of the page)

background-position: right bottom (Image is positioned in bottom right of the page)

* **SHORTHAND/COMPILING (YOU LEAVE OUT THE “PROPERTY”)**

You can add several properties to the same line.

```
background: #FFCC66 url("butterfly.gif") no-repeat fixed right bottom;
```

Fonts

The property **font-family** is used to set a prioritized list of fonts to be used to display a given element or web page. If the first font on the list is not installed on the computer used to access the site, the next font on the list will be tried until a suitable font is found.

font-family

Can be specified as either...

Generic Family: serif or sans-serif

Family Name: Sometimes called “fonts” (Arial, Times New Roman, or Tahoma)

```
h1 {font-family: arial, verdana, sans-serif;}
```

```
h2 {font-family: "Times New Roman", serif;}
```

font-style

```
h1 {font-style: italic;}
```

Can use:

font-style: normal, italic or oblique

font-weight

```
p {font-weight: bold;}
```

Can use:

font-weight: normal or bold or numeric

Or: 100, 200, 300, 400, 500, 600, 700, 800, 900 (400 is normal. 700 is bold.)

font-variant

```
h1 {font-variant: small-caps;}
```

```
h2 {font-variant: normal;}
```

Can use:

font-variant: normal or small-caps. (**Small caps** is all upper-case letters, but smaller after the first letter of a word).

font-size

```
h1 {font-size: 30px;}
h2 {font-size: 12pt;}
h3 {font-size: 120%;}
p {font-size: 1em;}
```

px: For screens - Fixed-size units. One unit is one pixel. Does not scale upward for visually-impaired readers or downward for mobile devices.

pt: For print – For anything that can be printed on paper. One point is equal to 1/72 of an inch. Fixed size units that cannot scale in size.

%: The current font is equal to 100%. Text is scalable.

em: The best unit for web documents. Scalable and device-friendly. An em is equal to the current font size, i.e. 12 pt.

- 1 em = 12 pt.
- 2 em = 24 pt.
- .5 em=6 pt.

*** SHORTHAND/COMPILING (YOU LEAVE OUT THE “PROPERTY”)**

You can add several properties to the same line.

```
p { font: italic bold 30px arial, sans-serif; }
```

Text

text-indent

```
p { text-indent: 30px; }
```

text-align (justification)

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

Can use:

right, center or justify (both left and right margins are straight)

text-decoration

```
h1 { text-decoration: overline; }
```

Can use:

underline, overline (above the text), line-through (strikethrough) or none.

letter-spacing (similar to kerning)

```
p { letter-spacing: 3px; }
```

text-transform

```
p { text-transform: uppercase; }
```

Can use:

capitalize

Capitalizes the first letter of each word. For example: "john doe" will be "John Doe".

uppercase

Converts all letters to uppercase. For example: "john doe" will be "JOHN DOE".

lowercase

Converts all letters to lowercase. For example: "JOHN DOE" will be "john doe".

none

No transformations - the text is presented as it appears in the HTML code.

Advanced CSS

NOTE: Working with Color in CSS

CSS Color Systems

Colors in CSS can be specified by the following methods...

- Hexadecimal colors
- RGB colors
- RGBA colors (RGB, plus opacity. Opacity can be 0 to 1))
- HSL colors (Hue, Saturation, Luminance)
- HSLA colors (Hue, Saturation, Luminance, plus opacity. Opacity can be 0 to 1)
- Predefined/Cross-browser color names (i.e. red, green, blue, yellow etc.)

All of these are red.

```
{background-color: #ff0000;}
```

```
{background-color: rgb(255,0,0);}
```

```
{background-color: rgba(255,0,0,0.3);} (Opacity can be 0 to 1)
```

```
{background-color: hsl(120,100%,50%);} (Saturation and Luminance are expressed as %)
```

```
{background-color: hsla(120,100%,50%,0.3);} (Saturation and Luminance are expressed as %)
```

```
{background-color: red;} (140 color names. See: http://www.w3schools.com/cssref/css\_colornames.asp)
```

NOTE: CSS3 Advanced Properties and Browser Support

CSS Vendor Prefixes

Browsers are based on different “rendering engines.”

Non-Prefixed Properties

border-radius: 10px;

(This is said to be **non-prefixed**)

- The latest versions of Chrome, Safari, Firefox and IE will work with this.
- Some older versions may have “issues.”

Vendor Prefixes

This property required “**vendor prefixes**” in order for each browser to render it properly.

Android: -webkit-

Chrome: -webkit-

Firefox: -moz-

Internet Explorer: -ms-

iOS: -webkit-

Opera: -o-

Safari: -webkit-

Usage Examples:

-webkit-border-radius: 10px;

-moz-border-radius: 10px;

-ms-border-radius: 10px;

-o-border-radius: 10px;

These are not always needed, but they were added because it didn't hurt. But, always put the **non-prefixed** version last. (Because it cascades and you want newer browsers to use the newer property with the latest specs that are the W3C version).

-webkit-border-radius: 10px;

-moz-border-radius: 10px;

-ms-border-radius: 10px;

-o-border-radius: 10px;

border-radius: 10px;

NOTE: Many argue that the vendor prefixes are now no longer necessary for the latest browser releases as they have all adopted the official CSS3 syntax.

CONCLUSION: USE BOTH **WEBKIT** AND **NON-PREFIXED** TO HANDLE SAFARI AND MOBILE.

background: -webkit-linear-gradient(top, #efefef 0%, #bbbbbb 100%);

background: linear-gradient(to bottom, #efefef 0%, #bbbbbb 100%);

Rounded Corners

Example: border-radius: 10px;

Example:

Gradients

Example: background: linear-gradient(orange, red);

gradients.html

```
<!DOCTYPE html>
<html>
<head>
<title>mockup</title>
<meta http-equiv="Content-Type"
content="text/html; charset=utf-8">
<!-- Save for Web Styles (mockup.psd) -->
<style type="text/css">
/* GRADIENT GOES FROM TOP TO BOTTOM
BY DEFAULAT */
h1 {
background: linear-gradient(#f00, #0f0);
width: 250px;
}
/* GRADIENT GOES TO RIGHT */
h2 {
background: linear-gradient(to right, #f00, #0f0);
width: 250px;
}
/* GRADIENT GOES FROM TOP LEFT TO
BOTTOM RIGHT */
h3 {
background: linear-gradient(to bottom right,
#f00, #0f0);
width: 250px;
}
/* GRADIENT GOES 20 DEGREES. (90 IS LEFT
TO RIGHT. 180 IS BOTTOM TO TOP. 270 IS
RIGHT TO LEFT. 360 IS BOTTOM TO TOP). */
h4 {
background: linear-gradient(360deg, #f00, #0f0);
width: 250px;
}
/* GRADIENT WITH MULTIPLE COLORS. SEE
HSL COLORS AT: http://hslpicker.com */
p {
background: linear-gradient(hsl(0, 100%,
50%),hsl(60, 100%, 50%),hsl(120, 100%,
50%),hsl(180, 100%, 50%),hsl(240, 100%,
50%),hsl(300, 100%, 50%));
width: 250px;
}
</style>
```



My Primary Header

A horizontal bar with a linear gradient from red on the left to green on the right. The text "My Primary Header" is centered in a bold, black, sans-serif font.

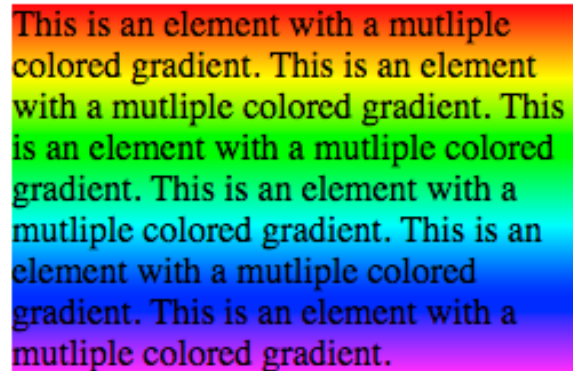
My Second Header

A horizontal bar with a linear gradient from red on the left to green on the right. The text "My Second Header" is centered in a bold, black, sans-serif font.

My Third Header

A horizontal bar with a linear gradient from red on the left to green on the right. The text "My Third Header" is centered in a bold, black, sans-serif font.

My Fourth Header

A horizontal bar with a linear gradient from red on the left to green on the right. The text "My Fourth Header" is centered in a bold, black, sans-serif font.

This is an element with a mutiple colored gradient. This is an element with a mutiple colored gradient. This is an element with a mutiple colored gradient. This is an element with a mutiple colored gradient. This is an element with a mutiple colored gradient. This is an element with a mutiple colored gradient.

A rectangular area with a vertical rainbow gradient from red at the top to purple at the bottom. The text is repeated six times, centered vertically and horizontally within the gradient.

```
</head>
<body>
<section>
<h1>My Primary Header</h1>
<article>
<h2>My Second Header</h2>
<h3>My Third Header</h3>
<h4>My Fourth Header</h4>
</article>
<p>This is an element with a mutiple colored
gradient. This is an element with a mutiple colored
gradient. This is an element with a mutiple colored
gradient. This is an element with a mutiple colored
gradient. This is an element with a mutiple colored
gradient. </p>
</section>

</body>
</html>
```

<http://www.htmldog.com/guides/css/advanced/gradients/>