

Today's Topics

- ▶ Inheritance
- ▶ The “C” in CSS
- ▶ Clever Commenting
- ▶ Formatting Text

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Inheritance

- ▶ Inheritance in CSS is the mechanism through which certain properties are passed on from a parent element down to its children.
 - Not all CSS properties are inherited, because it doesn't make sense for some of them to be.
 - Similar to genetics.

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When Styles Collide

- ▶ There will be times when the same CSS property is defined for an element in multiple places.

```
body {  
    color: #D0000D;  
    background-color: #333333;  
    font-family: Helvetica, Arial, sans-serif;  
    font-size: 14px;  
}  
  
h1 {  
    color: #323EAD;  
    font-weight: normal;  
}  
  
p {  
    color: #137232;  
    font-size: 15px;  
}  
  
h1 {  
    color: #D0000D;  
}
```

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The Cascade

- ▶ Fortunately for you, there's actually a system at work known as the cascade to govern these conflicts.
- ▶ Mechanism that controls the end result when multiple, conflicting CSS declarations apply to the same element.
- ▶ Style conflicts happen in two cases:
 - Through inheritance (same property is inherited from multiple ancestors)
 - When one or more styles apply to the same element (see prev. slide)

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How Styles Cascade

- ▶ Inherited Styles Accumulate
- ▶ Nearest Ancestor Wins
- ▶ Directly Applied Style Wins

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One Tag, Many Styles

- ▶ What style should the browser obey when multiple styles are applied directly to a given element?
- ▶ It depends!
 - The tag has both an element selector and a class style applied to it
 - The same style name appears more than once in the stylesheet
 - A tag has both a class and an ID style applied to it
 - There's more than one style sheet containing the same style name
 - There are complex selectors targeting the same element

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Specificity













- ▶ It can be thought of as a measure of how specific a rule's selector is.
- ▶ A selector with low specificity may match many elements, while a selector with high specificity might only match a single element on a page.
- ▶ So how do we calculate specificity?

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Specificity

 <p>a</p> <p>1 x element selector</p> <p>Sith: 0, 0, 1</p>	 <p>p a</p> <p>2 x element selectors</p> <p>Sith: 0, 0, 2</p>	 <p>.whatever</p> <p>1 x class selector</p> <p>Sith: 0, 1, 0</p>	 <p>a.whatever</p> <p>1 x element selector 1 x class selector</p> <p>Sith: 0, 1, 1</p>
 <p>p a.whatever</p> <p>2 x element selectors 1 x class selector</p> <p>Sith: 0, 1, 2</p>	 <p>.whatever .whatever</p> <p>2 x class selectors</p> <p>Sith: 0, 2, 0</p>	 <p>p.whatever a.whatever</p> <p>2 x element selectors 2 x class selectors</p> <p>Sith: 0, 2, 2</p>	 <p>#whatever</p> <p>1 x id selector</p> <p>Sith: 1, 0, 0</p>
 <p>a#whatever</p> <p>1 x element selector 1 x id selector</p> <p>Sith: 1, 0, 1</p>	 <p>.whatever a#whatever</p> <p>1 x element selectors 1 x class selector 1 x id selector</p> <p>Sith: 1, 1, 1</p>	 <p>.whatever .whatever #whatever</p> <p>2 x class selectors 1 x id selector</p> <p>Sith: 1, 2, 0</p>	 <p>#whatever #whatever</p> <p>2 x id selectors</p> <p>Sith: 2, 0, 0</p>

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Source Order

- ▶ If two declarations affect the same element, have the same importance and the same specificity, the final distinguishing mark is the source order.
- ▶ The declaration that appears later in the style sheets will “win” over those that come before it.

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Changing the Specificity

- ▶ !important declarations
- ▶ Increase specificity

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The Cascade

- ▶ Three different style sheets
 - User Agent/Browser
 - Author
 - User

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User Agent/Browser

- ▶ Every browser has a default style sheet
- ▶ Helps render documents without styles applied

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Author

- ▶ Applied *after* user agent/browser style sheet
- ▶ Implemented by the Web developer or designer
 - That's you!

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User

- ▶ Applied *after* author style sheet
- ▶ Essentially, this is a custom style sheet that anyone can use

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!importance

- ▶ The conflicting declarations will be applied in the following order; later ones will override earlier ones:
 - 1. User agent declarations
 - 2. Author normal declarations
 - 3. User normal declarations
 - 4. Author important declarations
 - 5. User important declarations

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Starting with a Clean Slate

- ▶ All browsers are not created equally
- ▶ The concept of erasing browser styling is known as a CSS Reset or Reset
- ▶ Eric Meyer Reset

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Starting with a Clean Slate

```
html, body, h1, h2, h3, h4, h5, h6, p, ol, ul, li, pre, code, address,
variable, form, fieldset, blockquote {
    padding: 0;
    margin: 0;
    font-size: 100%;
    font-weight: normal;
}
ol {
    margin-left: 1.4em;
    list-style: decimal;
}
ul {
    margin-left: 1.4em;
    list-style: square;
}
img {
    border: 0;
}
```

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`
`

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Organization

- ▶ Just like HTML, there are CSS comments
- ▶ Use these comments!!
- ▶ Particularly useful for organizing sections of your style sheet
- ▶ Also for adding notes for yourself or other developers
- ▶ Written as */* Comment */*

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Unit Types

- ▶ Absolute
- ▶ Relative

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Unit Types

- ▶ Absolute
 - ▶ Length
 - Inches
 - Centimeters
 - Millimeters
 - Points
 - Picas
 - ▶ Keywords

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Unit Types

- ▶ Relative
 - ▶ Length
 - Pixels
 - Percentages
 - EMs

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Color

- ▶ Controls the foreground color
- ▶ Unit types
 - hexadecimal
 - predefined
 - RGB

`color: #f00;`

`color: red;`

`color: rgb(255, 0, 0);`

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Color Values: predefined names

- ▶ aqua
- ▶ black
- ▶ blue
- ▶ fuchsia
- ▶ gray
- ▶ green
- ▶ lime
- ▶ maroon
- ▶ navy
- ▶ olive
- ▶ orange
- ▶ purple
- ▶ red
- ▶ silver
- ▶ teal
- ▶ white
- ▶ yellow
- ▶ transparent

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Opacity

- ▶ Controls the element transparency
- ▶ Value of 1.0 is fully opaque; value of 0 is invisible
- ▶ Unit types
 - integer

`opacity: 0.5;`

`opacity: 0.25;`

- ▶ Opacity sets the opacity value for an element and all of its children

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RGBA(A)

- ▶ Controls the element transparency via the alpha channel
- ▶ Value of 1.0 is fully opaque; value of 0 is invisible
- ▶ Unit types
 - integer

`color: rgba(255, 0, 0, 0.25);`

`background-color: rgba(255, 0, 0, 0.5);`

- ▶ RGBA sets the opacity value only for a single declaration

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font-size

- ▶ Controls the font size
- ▶ Unit types
 - pixel
 - percentage
 - em
 - predefined

font-size: 2px;

font-size: 100%;

font-size: 1em;

font-size: medium;

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font-family

- ▶ Controls the font family
- ▶ Font names with spaces should be quoted
- ▶ Each font family is separated by a comma
- ▶ Should always provide a backup

```
font-family: arial, sans-serif;
```

```
font-family: "trebuchet ms", arial, sans-serif;
```

```
font-family: courier, monospace;
```

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font-weight

- ▶ Controls the font weight (bold or not bold)
- ▶ Unit types
 - integer (100, 200, 300, ..., 900)
 - predefined (bolder, bold, lighter)
 - normal

font-weight: **bold**;

font-weight: 500;

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font-style

- ▶ Controls the font style (italic or not italic)
- ▶ Unit types
 - predefined (italic, oblique)
 - normal

font-style: **normal**;

font-style: **italic**;

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font-variant

- ▶ Controls the font variant (small caps)
- ▶ Unit types
 - predefined (small-caps)
 - normal

font-variant: normal;

font-variant: small-caps;

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line-height

- ▶ Controls the *leading*
- ▶ Unit types
 - number
 - length
 - percentage
 - normal

```
line-height: 1.2;
```

```
line-height: 1.2em;
```

```
line-height: 120%;
```

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Short Hand

- ▶ Properties that combine other properties into one
- ▶ Saves time
- ▶ Saves file size when working on large projects
- ▶ Makes file easier to read

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font

- ▶ Combines
 - font-style*
 - font-variant
 - font-weight
 - font-size*
 - line-height
 - font-family*
- ▶ The order of the properties matter!

```
font: italic small-caps bold 1.5em/2 arial, helvetica, sans-serif;
```

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Web-safe Fonts

- ▶ <http://www.ampsoft.net/webdesign-I/WindowsMacFonts.html>
- ▶ <http://www.type tester.org>

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letter-spacing

- ▶ Controls the *kerning*
- ▶ Unit types
 - length
 - normal

`letter-spacing: 1em;`

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word-spacing

- ▶ Controls the word *Kerning*
- ▶ Unit types
 - length
 - normal

```
word-spacing: 1em;
```

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text-align

- ▶ Controls the text alignment
- ▶ Unit types
 - predefined (left, right, center, justify)

```
text-align: left;
```

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text-decoration

- ▶ Controls any text decoration
- ▶ Unit types
 - predefined (none, underline, overline, line-through, blink)

`text-decoration: underline;`

text-indent

- ▶ Controls any text indentation at the beginning of a paragraph
- ▶ Unit types
 - length
 - percentage

```
text-indent: 2em;
```

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text-transform

- ▶ Controls capitalization
- ▶ Unit types
 - predefined (capitalize, uppercase, lowercase)

`text-transform: uppercase;`

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text-shadow

- ▶ Controls the text drop shadows
- ▶ Unit types
 - length
 - percent

```
text-shadow: 2px 2px 2px #111;
```

- ▶ The following represents what each value represents
 - x-axis
 - y-axis
 - cast length / feathering / blur
 - color

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vertical-align

- ▶ Controls vertical alignment
- ▶ Only works on inline elements within block-level elements
- ▶ Unit types
 - percentage
 - length
 - predefined (baseline, middle, sub, super, text-top, text-bottom)

```
vertical-align: middle;
```

```
vertical-align: -10px;
```

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CSS3 Vendor Prefixes

- ▶ Required to implement certain CSS3 features

Microsoft: -ms-

Mozilla: -moz-

Webkit: -web-

Opera: -o-

Konqueror: -khtml-

- ▶ Always include the non prefixed code as well

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List Style Properties

- ▶ list-style-image
- ▶ list-style-position
- ▶ list-style-type

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list-style-image

- ▶ Replaces a list-item marker with an image
- ▶ Unit types
 - predefined (none, url)

```
list-style-image: none;  
list-style-image: url("images/icon.png");
```

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list-style-position

- ▶ Controls the list-item marker position in relation to each list item
- ▶ Unit types
 - predefined (inside, outside)

```
list-style-position: outside;  
list-style-position: inside;
```

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list-style-type

- ▶ Controls the type of list-item marker
- ▶ Unit types
 - predefined (none, disc, circle, square, ..., lower-roman)

`list-style-type: none;`

`list-style-type: decimal-leading-zero;`

Shorthand: list-style

- ▶ Combines
 - list-style-image
 - list-style-position
 - list-style-type

```
list-style: url("images/icon.gif") inside disc;
```

```
list-style: outside square;
```

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