

CSE 154

LECTURE 3: MORE CSS



Cascading Style Sheets (CSS): `<link>`

```
<head>
  ...
  <link href="filename" type="text/css" rel="stylesheet" />
  ...
</head>
```

HTML

- CSS describes the appearance and layout of information on a web page (as opposed to HTML, which describes the content of the page)
- can be embedded in HTML or placed into separate .css file (preferred)

Basic CSS rule syntax

```
selector {  
    property: value;  
    property: value;  
    ...  
    property: value;  
}
```

```
p {  
    font-family: sans-serif;  
    color: red;  
}
```

- a CSS file consists of one or more rules
- a rule's selector specifies HTML element(s) and applies style properties
- a selector of * selects all elements

Inline styles: the style attribute (BAD!)

```
<p style="font-family: sans-serif; color: red;">  
This is a paragraph</p>
```

HTML

This is a paragraph

output

- higher precedence than embedded or linked styles
- used for one-time overrides and styling a particular element
- this is *bad style*; DO NOT DO THIS (why?)

Embedding style sheets: <style> (BAD!)

```
<head>
  <style type="text/css">
    p { font-family: sans-serif; color: red; }
    h2 { background-color: yellow; }
  </style>
</head>
```

HTML

- CSS code can be embedded within the head of an HTML page
- this is *bad style*; DO NOT DO THIS (why?)

CSS properties for fonts

property	description
<u>font-family</u>	which font will be used
<u>font-size</u>	how large the letters will be drawn
<u>font-style</u>	used to enable/disable italic style
<u>font-weight</u>	used to enable/disable bold style
<u>Complete list of font properties</u>	

font-size

```
p {  
    font-size: 14pt;  
}
```

This paragraph uses the style above.

- units: pixels (px) vs. point (pt) vs. m-size (em)
16px, 16pt, **1.16em**
- vague font sizes: xx-small, x-small, small, medium, large, x-large, **xx-large**,
smaller, **larger**
- percentage font sizes, e.g.: 90%, 120%

font-family

```
p {  
  font-family: Georgia;  
}  
h2 {  
  font-family: "Courier New";  
}
```

This paragraph uses the first style above.

This h2 uses the second style above.

- enclose multi-word font names in quotes

More about font-family

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

This paragraph uses the above style.

- can specify multiple fonts from highest to lowest priority
- generic font names:

serif, sans-serif, *cursive*, **FANTASY**, monospace

font-weight, font-style

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

This paragraph uses the style above.

- either of the above can be set to normal to turn them off (e.g. headings)

Grouping styles

```
p, h1, h2 {  
  color: green;  
}  
h2 {  
  background-color: yellow;  
}
```

CSS

This paragraph uses the above style.

This h2 uses the above styles.

output

- A style can select multiple elements separated by commas
- The individual elements can also have their own styles

CSS properties for text

property	description
<code>text-align</code>	alignment of text within its element
<code>text-decoration</code>	decorations such as underlining
<code>line-height</code> , <code>word-spacing</code> , <code>letter-spacing</code>	gaps between the various portions of the text
<code>text-indent</code>	indents the first letter of each paragraph

[Complete list of text properties](http://www.w3schools.com/css/css_reference.asp#text) (http://www.w3schools.com/css/css_reference.asp#text)

text-align

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

```
h2 { text-align: center; }
```

CSS

The Emperor's Quote

[TO LUKE SKYWALKER] The alliance... will die. As will your friends. Good, I can feel your anger. I am unarmed. Take your weapon. Strike me down with all of your hatred and your journey towards the dark side will be complete.

output

- can be left, right, center, or justify (which widens all full lines of the element so that they occupy its entire width)

Text-decoration

```
p {  
  text-decoration: underline;  
}
```

CSS

This paragraph uses the style above.

output

- can also be overline, ~~line-through~~, blink, or none
- effects can be combined:

```
text-decoration: overline underline;
```

text-shadow

```
p {  
    font-weight: bold;  
    text-shadow: 2px 2px gray;  
}
```

CSS

This paragraph uses the style above.

output

- shadow is specified as an X-offset, a Y-offset, and an optional color

The list-style-type property

```
ol { list-style-type: lower-roman; }
```

CSS

Possible values:

- i. none : No marker
- ii. disc (default), circle, square
- iii. Decimal: 1, 2, 3, etc.
- iv. decimal-leading-zero: 01, 02, 03, etc.
- v. lower-roman: i, ii, iii, iv, v, etc.
- vi. upper-roman: I, II, III, IV, V, etc.
- vii. lower-alpha: a, b, c, d, e, etc.
- viii. upper-alpha: A, B, C, D, E, etc.
- x. lower-greek: alpha, beta, gamma, etc.
- others: hebrew, armenian, georgian, cjk-ideographic, hiragana...

CSS properties for backgrounds

property	description
background-color	color to fill background
background-image	image to place in background
background-position	placement of bg image within element
background-repeat	whether/how bg image should be repeated
background-attachment	whether bg image scrolls with page
background	shorthand to set all background properties

background-image

```
body {  
    background-image: url("images/draft.jpg");  
}
```

CSS

This is the first paragraph

This is the second paragraph...

It occupies 2 lines

- background image/color fills the element's content area

background-repeat

```
body {  
  background-image: url("images/draft.jpg");  
  background-repeat: repeat-x;  
}
```

CSS

This is the first paragraph

This is the second paragraph..

It occupies 2 lines

- can be repeat (default), repeat-x, repeat-y, or no-repeat

background-position

```
body {  
  background-image: url("images/draft.jpg");  
  background-repeat: no-repeat;  
  background-position: 370px 20px;  
}
```

CSS

This is the first paragraph

This is the second paragraph...
It occupies 2 lines



- value consists of two tokens, each of which can be top, left, right, bottom, center, a percentage, or a length value in px, pt, etc.
- value can be negative to shift left/up by a given amount

The opacity property

```
body { background-image: url("images/marty-mcfly.jpg");  
background-repeat: repeat; }  
p { background-color: yellow; }  
p.mcfly1 { opacity: 0.75; }  
p.mcfly2 { opacity: 0.50; }  
p.mcfly3 { opacity: 0.25; }
```

CSS

Marty McFly in 1985

Marty McFly in 1955 fading away, stage 1

Marty McFly in 1955 fading away, stage 2

Marty McFly in 1955 fading away, stage 3



property	description
opacity	how not-transparent the element is; value ranges from 1.0 (opaque) to 0.0 (transparent)

box-shadow

```
box-shadow: h-shadow v-shadow blur;
```

CSS

```
box-shadow: 10px 10px 5px;
```

CSS

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nam vitae viverra nulla, sit amet vulputate elit. Curabitur sit amet augue venenatis, facilisis nulla ac, aliquet erat. Nullam diam nibh, pharetra ut mi eget, efficitur aliquam ante. Nunc non ipsum a turpis ultrices ultrices. Donec ut massa euismod, egestas diam non, rutrum massa. Ut id risus et nibh scelerisque porta. Quisque volutpat rhoncus tellus. Aenean mollis commodo urna. Nunc magna sapien, interdum nec arcu id, rhoncus gravida urna. Suspendisse ex odio, consequat eu lorem vestibulum, volutpat sollicitudin nulla. Aenean ac libero velit. Proin consequat augue mi, sit amet consequat dui hendrerit et. Ut eleifend, tellus quis gravida facilisis, neque ante hendrerit magna, quis rhoncus est lorem eu felis.

Styles that conflict

```
p, h1, h2 { color: blue; font-style: italic; }  
h2 { color: red; background-color: yellow; }
```

CSS

This paragraph uses the first style above.

This heading uses both styles above.

output

- when two styles set conflicting values for the same property, the latter style takes precedence

Cascading style sheets

- It's called Cascading Style Sheets because the properties of an element *cascade* together in this order:
 - browser's default styles (reference)
 - external style sheet files (in a `<link>` tag)
 - internal style sheets (in a `<style>` tag in the page header)
 - inline style (the `style` attribute of an HTML element)

Inheriting styles (explanation)

```
body { font-family: sans-serif; background-color: yellow; }  
p { color: red; background-color: aqua; }  
a { text-decoration: underline; }  
h2 { font-weight: bold; text-align: center; }
```

CSS

This is a heading

A styled paragraph. Previous slides are available on the website.

- A bulleted list

output

- when multiple styles apply to an element, they are inherited
- a more tightly matching rule can override a more general inherited rule
- not all properties are inherited (notice link's color above)