

Session 4

Style Sheets (CSS)

1

Reading

■ Reading - Style Sheet Tutorials

www.htmldog.com/guides/cssbeginner/ - beginner's guide

www.westciv.com/style_master/academy/css_tutorial/index.html

www.webreference.com/html/tutorials/ - Tutorials 5, 6, and 8

www.hotdesign.com/seibold/index.html

■ For conversion of common HTML attributes to CSS

www.dev-archive.net/articles/translate.html

www.digital-web.com/tutorials/tutorial_2001-5.shtml

www.digital-web.com/tutorials/tutorial_2002-06.shtml

aamcf.co.uk/html/attr

■ A great reference containing tables of CSS properties - and lots more

<http://www.blooberry.com/indexdot/css/index.html>

© Robert Kelly, 2001-2012

2

Lecture Objectives

- Understand the advantages of CSS style sheets in HTML documents
- Become familiar with the syntax of CSS
- Learn how to recognize styling in HTML that can be moved into a CSS style sheet

© Robert Kelly, 2001-2012

3

Limitations of HTML

- Maintenance
- Site compatibility
- Quick change to a site look and feel
- User overrides
- Handling by multiple User Agents

© Robert Kelly, 2001-2012

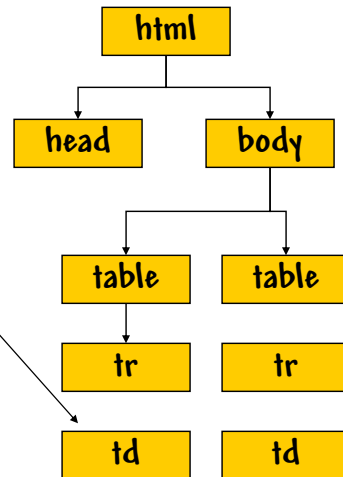
4

Styling in HTML

- In pure HTML, viewing information is included in the HTML tag

```
<td width="20" bgColor="#333399">
```

Styling is usually contained within the tag - and applies to that element



© Robert Kelly, 2001-2012

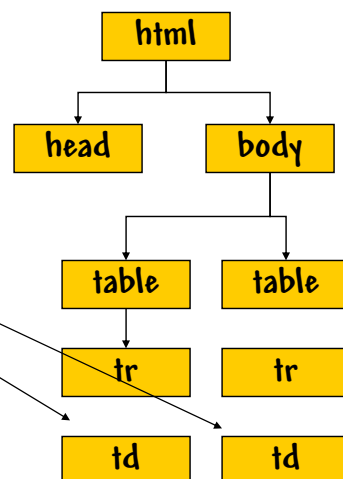
5

Styling in HTML/CSS

- With style sheets (CSS), styling information is contained within a style sheet

```
td {color:#333399;}
```

Styling is usually contained within a style sheet - and applies to any matching element



© Robert Kelly, 2001-2012

6

What are Style Sheets?

- A way to separate the appearance of Web pages from the content of Web pages

HTML should not contain information
about how data is displayed

- A recommendation of the W3C
- A way to standardize appearance for many pages in a Web site
- Contained within
 - A text file (with a `css` suffix) written according to a grammar (CSS 1 or CSS 2)
 - An HTML Style tag
 - Your browser

© Robert Kelly, 2001-2012

7

Do Many Web Sites Use Style Sheets?

- Use is increasing today, but most of it is auto generated - not designed for the site
- Browser support is vastly improved for current browsers
 - IE - all of CSS 1 (with some bugs) in 6.0; IE 7.0 only slightly improved
 - Opera - all of CSS 1 and most of CSS 2
 - Firefox - all of CSS 1 and most of CSS 2

© Robert Kelly, 2001-2012

8

Style Sheet Example

Selector Each of these statements contains directives, referred to as a rule set

```
body
{font-family: verdana, "minion web", helvetica,
sans-serif;
font-size: 1em;
text-align: justify;}
```

Property **Property value**

```
code
{font-family: courier, sans-serif;
font-size: 1em;}
```

Final ";" in a list is not required, but it is good style to use it

© Robert Kelly, 2001-2012

9

Selectors

■ Selectors specify how to apply a given style to the html document. Possibilities include:

- All of the elements `td {color:#333399;}`
- Some of the elements `td.some {color:#333399;}`
- One of the elements `td#one {color:#333399;}`

To apply to elements, the affected elements are coded as

The token (in this case "some") can be any string

`<td class="some">`

`<td id="one">`

© Robert Kelly, 2001-2012

10

Selectors

- A selector token can also match to
 - multiple elements (class attribute)
 - A single token (id attribute)
- You can also use a psuedoclass (represents a special characteristic of an element)
- Examples:

```
.danger { color: red; }  
a:link { color: green; }  
a:visited { color: red; }
```

The components of
the anchor element
where the link has
been visited

© Robert Kelly, 2001-2012

11

Some Selector Types

- HTML element or list of elements (e.g., body, table, h1)
- Class (used in conjunction with the html 4.0 class attribute, as in:

```
.instruction {css statements}
```

and

```
<p class="instruction">
```
- Pseudo-selectors (e.g., mouseover changes, first line & first letter)

```
a:anchor { background-color: yellow }
```
- Contextual (e.g., paragraphs inside lists)
- Link (normal, visited, active, hover)

© Robert Kelly, 2001-2012

12

CSS Syntax

- Every css file contains a series of statements
- A statement:
 - Identifies the elements it affects (selector)
 - Suggests how the element will be presented to the user (directive properties)
- A rule-set statement contains a selector and any number of directives enclosed in {}

```
body
{font-family: verdana, "minion web", helvetica,
  sans-serif;
font-size: 1em;
text-align: justify;}
```

© Robert Kelly, 2001-2012

13

Properties

- | ■ Categories | ■ Values |
|---------------------------------------------------|--------------|
| ■ Text style | ■ Length |
| ■ Text layout | ■ Percentage |
| ■ Background | ■ URL |
| ■ Border | ■ Color |
| ■ Margin | ■ Keyword |
| ■ Padding | ■ Others |
| ■ Page layout (absolute, fixed, relative, static) | |
| ■ Element type | |
| ■ User interface (cursor, focus-outline) | |

© Robert Kelly, 2001-2012

14

Typical Values

- Units
 - Absolute values (in, cm, mm, pt, em, px)
 - Relative values (large, percentage)
- Colors
 - RGB
 - Shorthand notation
 - Percentage primary color contribution
- Font
 - Family (serif, sans serif, monospace)
 - Weight
 - Size

© Robert Kelly, 2001-2012

15

div and span Elements

- In pure HTML, you can apply styling to a collection of elements by enclosing them in a styling element (e.g., font, center, b)
`Forgot Password?`
- These styling elements are not allowed in Strict HTML, so you enclose elements in a container - and then apply styling to the container
- In HTML, the containers are
 - div - for block elements
 - span - for in-line elements

© Robert Kelly, 2001-2012

16

How Do You Convert Spacing

- CSS assumes that the page is presented by displaying a collection of blocks
- Each block is displayed using the CSS box model



Sides can be set individually or for the entire box

Values of the padding, border, and margin can be set to 0

© Robert Kelly, 2001-2012

17

How to Refer to the Style Sheet

- Embedded (in the head element of the HTML):

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

- Linked (to an external .css file):

```
<link rel="stylesheet" type="text/css" href="http://www.westciv.com.au/style/style.css">
```

© Robert Kelly, 2001-2012

18

Multiple Style Sheets

- Cascading implies a sequence of styling operations in the order they are encountered in the rendering process
- Style attribute can be used in individual html elements - by a style sheet / selector is preferred

© Robert Kelly, 2001-2012

19

How Do I Convert to Style Sheets?

- Look for HTML styling tags (bold, italic, bgcolor)
- Validate a document with Strict (4.01 or xhtml) - many styling tags/properties will be identified since they are not supported in Strict
- Replace flagged properties with a style sheet
- Look for repeated patterns (e.g. a few style principles for paragraph elements)

© Robert Kelly, 2001-2012

20

Tools to Help with Style Sheets

- Tools for conversion to CSS and for validation are identified in the References section of the class home page
 - GUI Tidy
 - Dreamweaver

© Robert Kelly, 2001-2012

21

Style Sheets Through Tidy

- Save your HTML to your hard disk
- Use Tools/Quick Tools/Convert (or GUI Tidy) to generate a style sheet
- Examine generated style sheet
- Save and revalidate
- Correct errors and replace the doctype statement with a xhtml Strict statement - revalidate
- Can you remove any of the generated class selector types (e.g., c4)?

© Robert Kelly, 2001-2012

24

Example

```
H1, H2, H3, H4, H5, H6, DT, TH, THEAD, TFOOT {  
  color: rgb(245,245,245);  
  background: #212121;  
}  
A:link {  
  text-decoration: none;  
  font-weight: bold;  
  color: #F60;  
  background: #212121;  
}  
  
A:visited {  
  text-decoration: none;  
  font-weight: bold;  
  color: #C9C;  
  background: #212121;  
}  
...
```

Look at
CSE336
Web site

© Robert Kelly, 2001-2012

25

Have You Satisfied the Lecture Objectives

- Understand the advantages of CSS style sheets in HTML documents
- Become familiar with the syntax of CSS
- Learn how to recognize styling in HTML that can be moved into a CSS style sheet

© Robert Kelly, 2001-2012

26