

CGS 3175: Internet Applications Fall 2009

Cascading Style Sheets (CSS) – Part 2

Instructor : Dr. Mark Llewellyn
markl@cs.ucf.edu
HEC 236, 407-823-2790
<http://www.cs.ucf.edu/courses/cgs3175/fall2009>

School of Electrical Engineering and Computer Science
University of Central Florida



CSS – Classes and IDs

- You might be wondering after reading the first part of the CSS notes and creating your first style sheets what to do if you need to assign more than one style to the same element.
- For example, suppose that you define the following style for the `<p>` element:

```
p { color: red }
```

- If you define the `<p>` element like this, all paragraphs in your document will be formatted with red text. If you want some paragraphs to have black text, you'll need to override the global styles with an inline style. This however can become quite tedious if many style changes are needed in a single document.
- The better solution is to use a **class** or **id selector**.



CSS – Classes and IDs

- **Class** and **id selectors** are used to define styles in your document that are independent of elements.
- Classes can be used to define styles for any number of elements and for any number of occurrences of elements in a document.
- The **id** attribute occurs only once in a document, so it should not be used to declare styles for a number of elements.
- For example, if you know that a certain element in a document will be used to uniquely identify the document, but you are not sure which element it will be in each document, you can use the **id** selector to generically reference the unique element independent of the document itself.
- The syntax for the class and id attributes are shown on the next two pages.



Class Selector Syntax

Style Sheet

```
.class_example {  
    color : red  
}
```

XHTML document reference

```
<p class="class_example">
```



ID Selector Syntax

Style Sheet

```
#id_example {  
    color : black  
}
```

XHTML document reference

```
<p id="id_example">
```



Using `class` and `id` Selectors

- Using `class` and `id` selectors for style formatting requires certain changes to the XHTML document because the appropriate attributes must be defined for each element to be formatted.
- Classes can also be assigned to individual elements to allow more control over formatting. This is done by placing the name of an element in front of the period in a class style declaration. For example, the following defines class formatting styles that apply only to the `<p>` element:

```
p          { color: black }  
p.red_text { color: red   }  
p.cyan_text { color: cyan }
```

- These declarations set font colors for the `<p>` element depending on which class is defined in the element. If no class attribute is specified, then the declaration for the `<p>` element of black is applied.



Using `class` and `id` Selectors

- Let's look at a slightly more complex example, using our original `markup.xhtml` file for our course description (see page 60, XHTML – Part 1).
- We'll modify this original example using `class` and `id` attributes. We'll also define a new linked style sheet (external to the document) as well as using a global style sheet (internal to the document) and also include a few inline styles as well.
- Pages 8 & 9 show the linked style sheet we'll call `fourthCSS.css`.
- Pages 10-11 show the modified XHTML document with global and inline styles.
- Finally page 12 illustrates how the document is rendered in a browser.



*C:\Courses\CGS 3175 - Internet Applications\Fall 2009\example code - new\CSS - Part 2\fourthCSS.css - Notepad++

File Edit Search View Format Language Settings Macro Run TextFX Plugins Window ?

template.html commentform.html fourthCSS.css

```
1  /* My fourth Cascading Style Sheet */
2  /* file name: fourthCSS.css */
3
4  /* define a class called box */
5  div.box {
6      margin-top: 50px;
7      background-color: yellow;
8      color: #000090;
9      border-style: double;
10     padding: 10px;
11     border-color: #000090;
12 }
13 /* define styles for <p> element */
14 p {
15     font-size: 16pt;
16 }
17 /* define specific properties for the <p> element with the class name of description */
18 p.description {
19     color: #000099;
20     background-color: #cccccc;
21     font-style: italic;
22 }
```

fourthCSS.css (first part)

Cascade Style Sheets File nb char: 848 nb line: 40 Ln: 17 Col: 1 Sel: 0 Dos\Windows ANSI INS



*C:\Courses\CGS 3175 - Internet Applications\Fall 2009\example code - new\CSS - Part 2\fourthCSS.css - Notepad++

File Edit Search View Format Language Settings Macro Run TextFX Plugins Window ?

template.html commentform.html fourthCSS.css

fourthCSS.css (second part)

```
23
24 /* define a unique id selector that will be applied to one element within the document */
25 #identifier {
26     color: red;
27 }
28
29 /* define a class to align text to the right */
30 .right {
31     text-align: right;
32 }
33
34 /* define universal element formatting styles */
35 * {
36     color: #333333;
37     font-family: arial;
38     font-size: 10pt;
39 }
40
```

Cascade Style Sheets File nb char : 848 nb line : 40 Ln : 17 Col : 1 Sel : 0 Dos\Windows ANSI INS



C:\Courses\CGS 3175 - Internet Applications\Fall 2009\example code - new\CSS - Part 2\markup with fourthCSS.html - Notepad++

File Edit Search View Format Language Settings Macro Run TextFX Plugins Window ?

template.html commentform.html fourthCSS.css markup with fourthCSS.html

```
1 <?xml version="1.0" encoding="UTF-8" standalone="no" ?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
3   "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
4 <html xmlns="http://www.w3.org/1999/xhtml">
5   <head>
6     <title>Internet Applications Fall 2009</title>
7     <link rel="stylesheet" href="fourthCSS.css" type="text/css" />
8     <style type="text/css">
9       <!--
10         h1 {
11           font-size:30pt;
12           text-align:center;
13           font-style:italic;
14         }
15         h2 {
16           font-size:18pt;
17           text-align: left;
18           font-style: italic;
19         }
20         h3 {
21           font-size:16pt;
22           text-align: left;
23           font-style: italic;
24         }
25       -->
26     </style>
27   </head>
```

markup with fourthCSS.html
(first part)

Hyper Text Markup Language file nb char: 1427 nb line: 47 Ln: 31 Col: 79 Sel: 0 Dos\Windows ANSI INS



```
C:\Courses\CGS 3175 - Internet Applications\Fall 2009\example code - new\CSS - Part 2\markup with fourthCSS.html - Notepad++
File Edit Search View Format Language Settings Macro Run TextFX Plugins Window ?
template.html commentform.html fourthCSS.css markup with fourthCSS.html
27 </head>
28 <body>
29     <h1>Course Description</h1>
30     <div class="box">
31         <div class="right"><strong>Course Name: </strong> <span style="color:red">Internet</span>
32             <strong>Course Number: </strong> CGS 3175 <br />
33             <strong>Instructor: </strong> Dr. Mark Llewellyn <br />
34             <strong>Class Meets: </strong> Tuesday and Thursday, 7:30pm-8:45pm, HEC 103 <br />
35         </div>
36         <h2 id="identifier">Course Description: </h2>
37         <p class="description">This course covers Internet applications including how to writ
38         </p>
39         <h3>Prerequisites: </h3>
40         <ul>
41             <li>CGS 1060C or,</li>
42             <li>CGS 2100C</li>
43         </ul>
44     </body>
45 </html>
46
47
Hyper Text Markup Language file nb char: 1427 nb line: 47 Ln: 31 Col: 79 Sel: 0 Dos\Windows ANSI INS
markup with fourthCSS.html
(second part)
```



Internet Applications Fall 2009 - Windows Internet Explorer

C:\Courses\CGS 3175 - Internet Applications\Fall 2009\exam Google

File Edit View Favorites Tools Help

Google Search Bookmarks Sign In

Favorites Suggested Sites Free Hotmail Web Slice Gallery KeepVid- Download and s...

CNN.co... Internet ... W3C CSS... Intern... x

Course Description

Course Name: **Internet** Applications

Course Number: CGS 3175
Instructor: Dr. Mark Llewellyn
Class Meets: Tuesday and Thursday, 7:30pm-8:45pm, HEC 103

Course Description:

This course covers Internet applications including how to write XHTML Web documents.

Prerequisites:

- CGS 1060C or,
- CGS 2100C

Done Computer | Protected Mode: Off 100%



Property Inheritance

- We looked at nesting elements in XHTML (see XHTML – Part 3).
- Elements that are contained within other elements are said to be **children** of the outer elements, and the outer elements are referred to as **parents** of the nested elements.
- This hierarchy of elements is applied to CSS in the form of property inheritance.
- **Property inheritance** means the properties that are defined for parent elements are passed along to child elements, unless the child element overrides the property.



Property Inheritance

- For example, if the parent of an element sets its font to be 18 points, the child elements will also have a font size of 18 points unless they declare their own rules to override the rules defined by the parent.
- Using the course description example from the previous set of notes – the one that used the style sheet named `secondCSS.css`, let's create a new style sheet called `inheritance.css` to demonstrate property inheritance for this XHTML document.



C:\Courses\CGS 3175 - Internet Applications\Fall 2009\example code - new\CSS - ...

File Edit Search View Format Language Settings Macro Run TextFX Plugins
Window ?

template.html commentform.html fourthCSS.css markup with fourthCSS.html inherit:

```
1  /* Cascading Style Sheet Showing Inheritance*/
2  /* file name: inheritance.css */
3
4  /* define the body style */
5  body {
6      color: green;
7      font-style: normal;
8      font-size: 12pt;
9  }
10 /* define strong style */
11 strong {
12     color: white;
13     background-color: blue;
14 }
15 /* define paragraph style */
16 p {
17     margin-top: 50px;
18     color: blue;
19     background-color: yellow;
20     font-size: 20pt;
21     font-style: italic;
22     border-style: double;
23 }
```

nb char: 447 Ln: 23 Col: 1 Sel: 0 Dos\Windows ANSI INS

inheritance.css



```

<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>Internet Applications Fall 2008</title>
    <link rel="stylesheet" href="inheritance.css" type="text/css" />
  </head>
  <body>
    <strong>Course Name: </strong> Internet Applications <br />
    <strong>Course Number: </strong> CGS 3175 <br />
    <strong>Instructor: </strong> Dr. Mark Llewellyn <br />
    <strong>Class Meets: </strong> Tuesday and Thursday, 1:30pm-2:45pm, HEC
118 <br />
    <p>
      <strong>Course Description: </strong> This course covers Internet
applications including how to write XHTML Web documents.
    </p>
    <strong>Prerequisites: </strong>
    <ul>
      <li> CGS 1060C or,</li>
      <li> CGS 2100C</li>
    </ul>
  </body>
</html>

```



C:\Courses\CGS 3175 - Internet Applications\Fall 2009\exam

Google

File Edit View Favorites Tools Help

Google

Search

Sign In

Favorites



Suggested Sites



Free Hotmail



Web Slice



W3...

Inter...

[Vali...

Inter...

I...



Course Name: Internet Applications
Course Number: CGS 3175
Instructor: Dr. Mark Llewellyn
Class Meets: Tuesday and Thursday, 7:30-8:45pm, HEC 103

Notice that all text within the `` elements is white which overrides the settings of the `` element's parent, which is `<body>`, since the `<body>` element sets the text color to green.

Since the Course Description is contained within the `<p>` element, this overrides the style defined in the parent element `<body>`.

Course Description: *This course covers Internet applications including how to construct XHTML Web documents.*

Prerequisites:

Here `` overrides `<p>` which overrides `<body>`.

- CGS 1060C or,
- CGS 2100C

The list elements are not overridden and appear in the green color as specified by the `<body>` element.



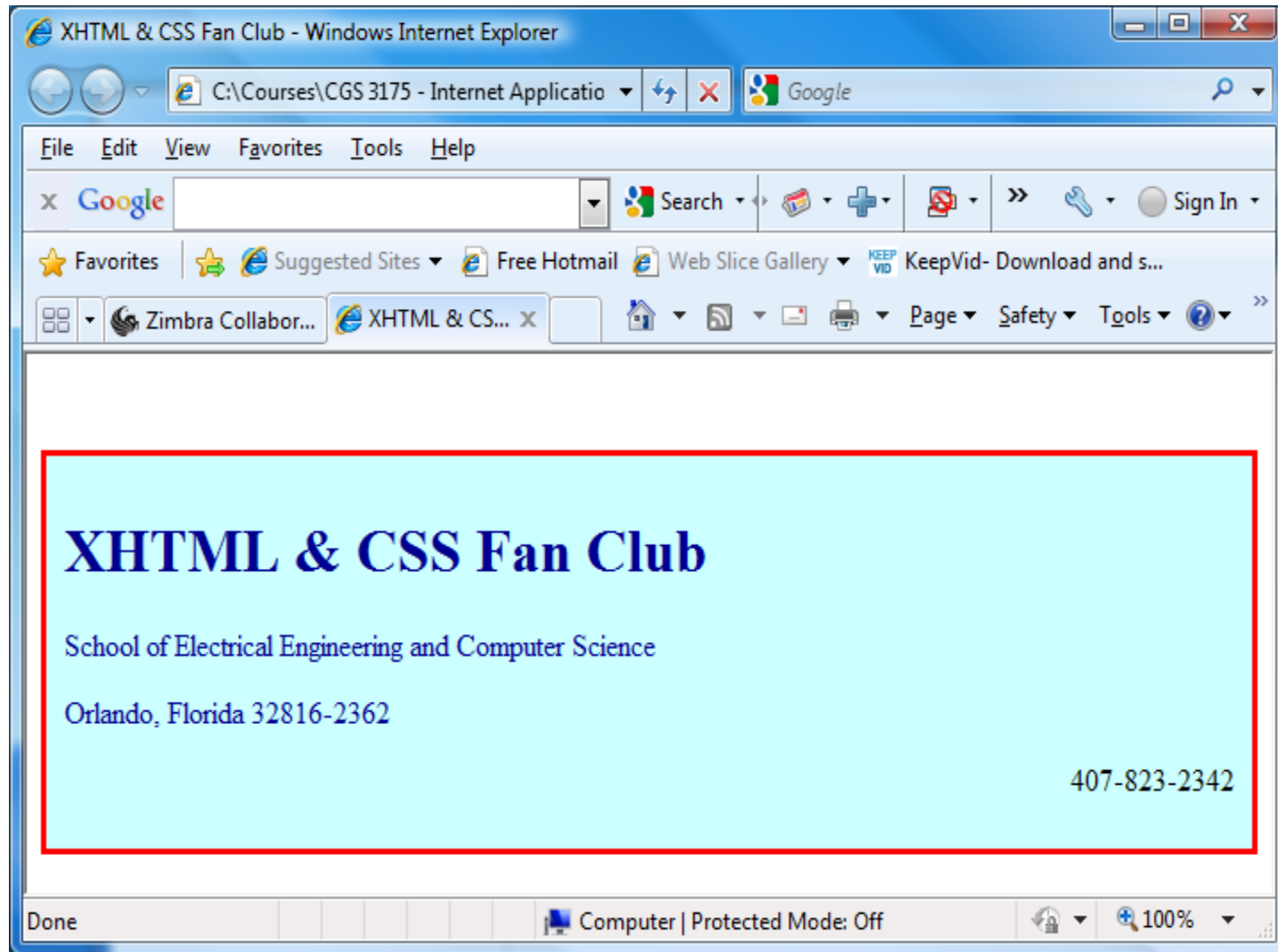
Practice Problems

1. Create an XHTML document and two different linked style sheets that will generate versions of the document shown on the following two pages when rendered by a browser. **Be sure to use at least one class in your stylesheet.** Change the link element in the header of your XHTML document to restyle the page using the two different linked style sheets.

Use the color charts found on the course web site (helpful things) to set the colors. Experiment a bit and change the colors to your preferences.



Practice Problems



Practice Problems

