

AAPP009-4-2 Web Development  
**INTRODUCTION TO CSS**

# Topic & Structure of the lesson

- Introduction
- CSS Syntax
- HTML Selectors
- Class Selectors
- ID Selectors
- Inline Styles
- Embedded Style Sheets
- Linking External Style Sheets
- Conflicting Styles

# Learning Outcomes

At the end of the module, you should be able to:

- Control the appearance of a Web site by creating style sheets.
- Use a style sheet to give all the pages of a Web site the same look and feel.
- Use style sheets to separate presentation from content.

# Introduction

- Cascading Style Sheets (CSS)
  - Separation of structure from presentation
- a **style sheet** is a document that contains instructions that define how to display HTML elements in a Web page.
- These instructions are called **styles**.
- An external style sheet typically has the .css file extension.
- 3 types
  - Inline
  - Embedded
  - External

# CSS Syntax

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

declaration                      declaration

The **selector** points to the HTML element you want to style.

The **declaration** block contains one or more declarations separated by semicolons.

Each **declaration** includes a CSS property name and a value, separated by a colon.

Multiple CSS declarations are separated with semicolons, and declaration blocks are surrounded by curly braces.

# HTML Selectors

- HTML selectors are the text part of a HTML tag and are used to define the behavior of the specific HTML tag.
- For example; H1 is the selector for <H1> tag.
- Although HTML tag and the selector appear to be identical, they are not the same.
- The HTML selector is used to control the behavior of its specific HTML tag.

```
h1    { font-family: arial, sans-serif }  
p     { font-size: 14pt }
```

# ID Selectors

- The #id selector styles the element with the specified id.
- Can be applied to any HTML tag

```
#userDefineName { font-size: 14pt; color: blue; }
```

```
<p id="userDefineName">Do Re Mi</p>
```

# Class Selectors

- Class selectors are selectors that you create from scratch.
- Can be applied to any HTML tag.

```
.userDefineName { font-size: 14pt; color: blue; }
```

```
<p class="userDefineName">Do Re Mi</p>
```

- You can also apply a selector to a specific HTML element by simply stating the HTML selector first.

```
p.jam { color:red; }
```

This CSS will only be applied to paragraph elements that have the class “jam”.



# CSS ID vs. CSS Class

- Has same benefit - you can have the same HTML element, but present it differently depending on its class or ID.
- The difference between a CSS ID and CSS Class is that an ID can be used to identify one element, whereas a class can be used to identify more than one.

# Inline Styles

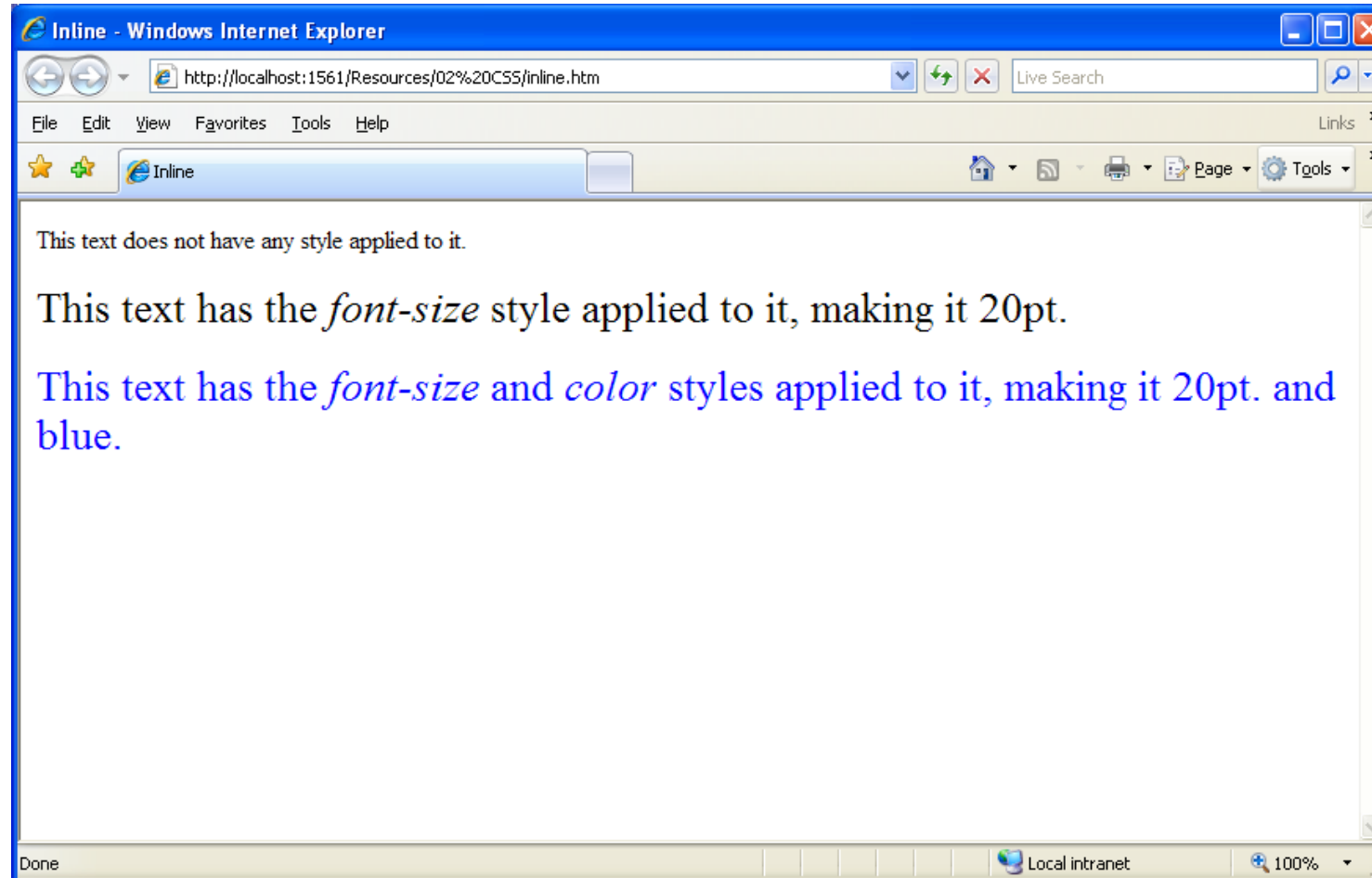
- Declare an individual element's format
  - Attribute `style`
  - CSS property
  - Followed by a colon and a value
- **Inline style** is a one-time style instruction placed in an individual HTML tag.
- However, using inline CSS means that you are not taking advantage of the true powers of CSS, and it means that you are not separating content from presentation.

```
<p style="font-size: 20pt; color: #0000ff">
```

# Inline Styles

```
1 <!DOCTYPE html>
2 <!-- inline.html -->
3 <!-- Using Inline Styles -->
4 <html>
5
6 <head>
7 <title>Inline</title>
8 </head>
9
10 <body>
11
12 <p>This text does not have any style applied to it.</p>
13 <!-- The style attribute allows you to declare -->
14 <!-- inline styles. Separate multiple styles -->
15 <!-- with a semicolon. -->
16 <p style="font-size: 20pt">This text has the <em>font-size</em> style applied to it, making it 20pt. </p>
17 <p style="font-size: 20pt; color: #0000ff">This text has the <em>font-size</em> and <em>color</em> styles applied to it,
18 taking 19 it 20pt. and blue.</p>
19
20 </body>
21 </html>
22
```

# Inline Styles



# Embedded Style Sheets

- Embed an entire CSS document in an XHTML document's head section
  - Multipurpose Internet Mail Extensions (MIME) type
    - Describes a file's content
  - Property `background-color`
    - Specifies the background color
  - Property `font-family`
    - Specifies the name of the font to use
  - Property `font-size`
    - Specifies a 14-point font
- it only affects the style of the page on which it is written

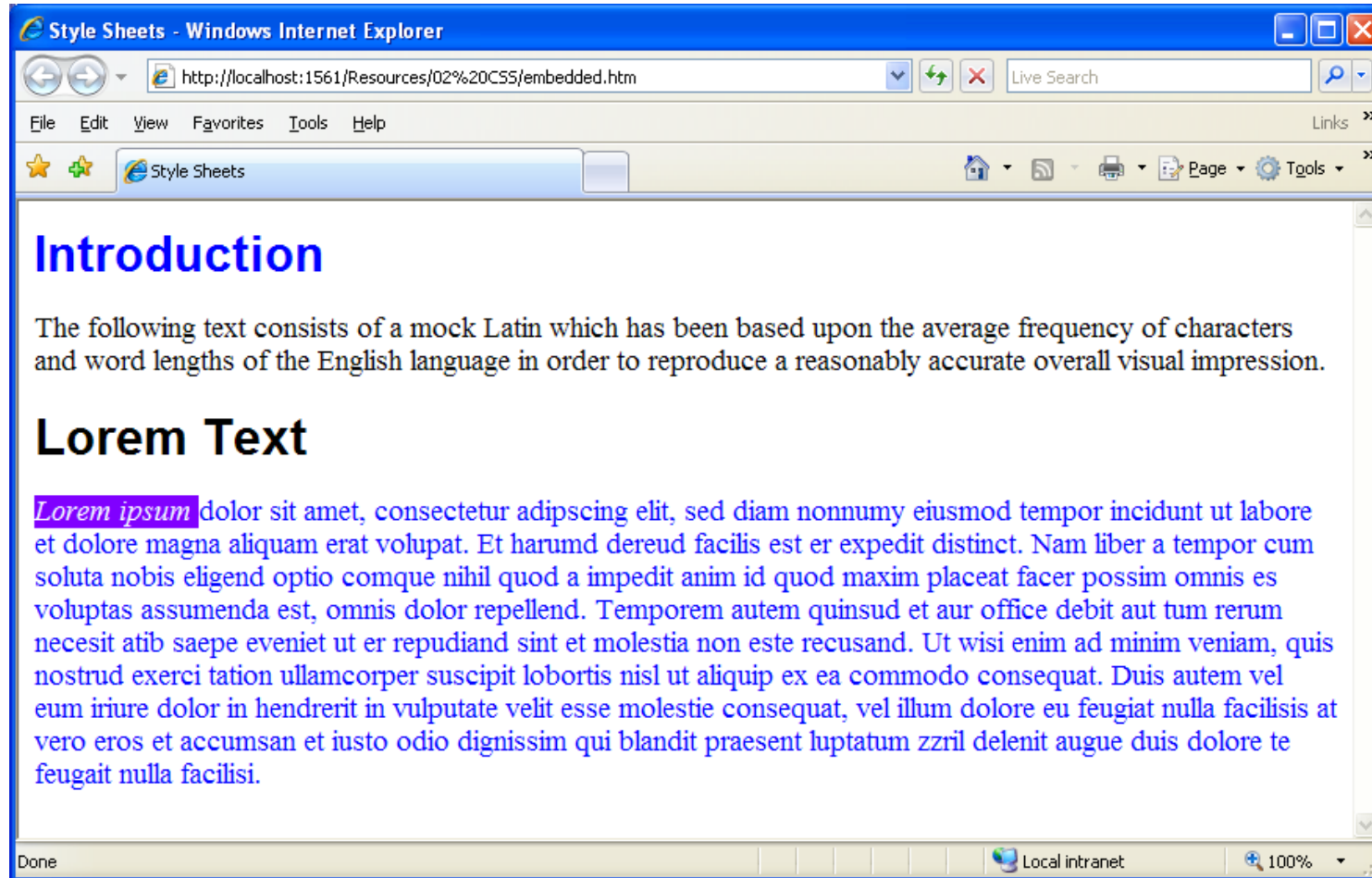
# Embedded Style Sheets

```
1 <!DOCTYPE html>
2 <html>
3
4 <!-- Declaring a style sheet in the header section. -->
5
6 <head>
7 <title>Style Sheets</title>
8 <!-- this begins the style sheet section -->
9 <style type="text/css">
10 em {
11     background-color: #8000ff;
12     color: white;
13 }
14 h1 {
15     font-family: arial, sans-serif;
16 }
17 p {
18     font-size: 14pt;
19 }
20 .special {
21     color: blue;
22 }
23 </style>
24 </head>
```

# Embedded Style Sheets

```
26 <body>
27
28 <!-- this class attribute applies the .special style -->
29 <h1 class="special">Introduction</h1>
30 <p>The following text consists of a mock Latin which has been based upon the average
31 frequency of characters and word lengths of the English language in order to reproduce
32 a reasonably accurate overall visual impression.</p>
33 <h1>Lorem Text</h1>
34 <p class="special"><em>Lorem ipsum </em>dolor sit amet, consectetur adipiscing elit,
35 sed diam nonnumy eiusmod tempor incididunt ut labore et dolore magna aliquam erat
36 voluptat. Et harumd dereud facilis est er expedit distinct. Nam liber a tempor cum
37 soluta nobis eligend optio comque nihil quod a impedit anim id quod maxim placeat
38 facer possim omnis es voluptas assumenda est, omnis dolor repellend. Temporem autem
39 quinsud et aur office debit aut tum rerum necessit atib saepe eveniet ut er repudiand
40 sint et molestia non este recusand. Ut wisi enim ad minim veniam, quis nostrud exerci
41 tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis
42 autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat,
43 vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et iusto odio
44 dignissim qui blandit praesent luptatum zzril delenit augue duis dolore te feugait
45 nulla facilisi.</p>
46
47 </body>
48
49 </html>
```

# Embedded Style Sheets





# Linking External Style Sheets

- External style sheets
  - Can provide uniform look and feel to entire site
- One external style sheet can control the appearance of many Web pages.
- By creating a CSS file that contains all of the style information for your website, you can:
  - Maintain a consistent look across all pages that link to the style sheet.
  - Easily update the look of all pages by changing the values in one file.
  - Make your pages much smaller and quicker to download, because all of the style information has been removed to one file.

# Linking External Style Sheets

- Each page must link to the style sheet using the <link> tag.
- The <link> tag goes inside the head section:

```
<link href="stylesheet.css" rel="stylesheet" >
```

# Linking External Style Sheet

```
1 <!DOCTYPE html>
2 <html>
3
4 <head>
5
6 <title>Linking External Style Sheets</title>
7
8 <link href="stylesheet.css" rel="stylesheet" type="text/css" />
9
10 </head>
11
12 <body>
13
14 <a href="http://www.google.com">Google</a><br />
15 <a href="http://www.yahoo.com">Yahoo</a><br />
16 <a href="http://www.microsoft.com">Microsoft</a>
17
18 </body>
19
20 </html>
```

# External Style Sheet

stylesheet.css

```
a:active {  
    background-color: yellow;  
}  
a:hover {  
    font-weight: bold;  
}  
a:link {  
    color: orange;  
    text-decoration: none;  
}  
a:visited {  
    color: green;  
}
```

**Tip:** Use the **:link** selector to style links to unvisited pages, the **:hover** selector to style links when you mouse over them, and the **:active** selector to style links when you click on them.

```
selector:pseudo-class {  
    property: value;  
}
```

pseudo-class is used to define a special state of an element.

The **:active** selector is used to select and style the active link.

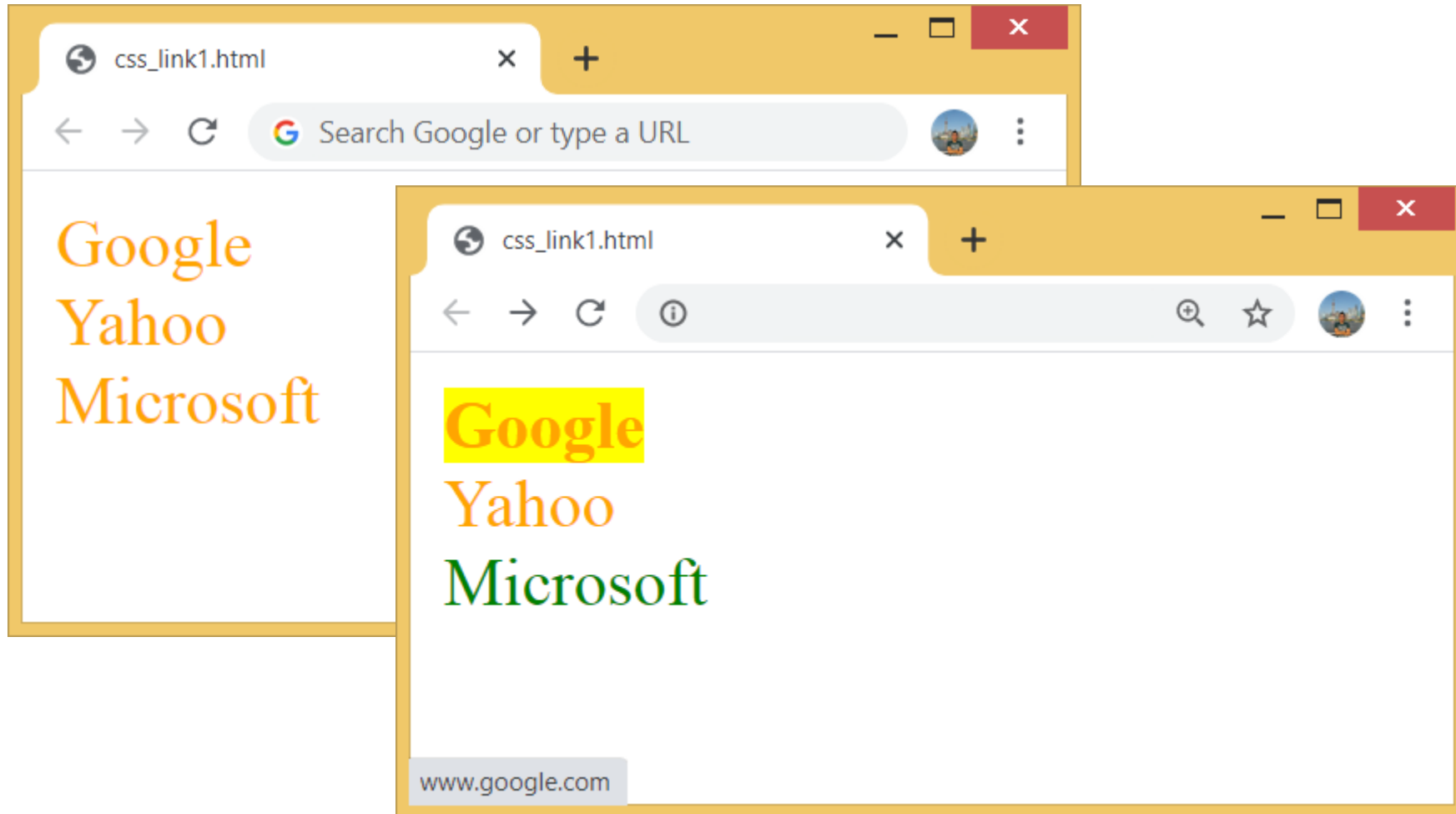
A link becomes active when you click on it.

The **:hover** selector is used to select elements when you mouse over them.

The **:link** selector is used to select unvisited links. It does not style links you have already visited.

The **:visited** selector is used to select visited links. Browsers limits the styles that can be set for a:visited links, due to security issues.

# Linking External Style Sheets



# CSS Color Format

- Methods in specifying Colors in CSS:

- Hexadecimal colors `background-color: #ff0000;`
- RGB colors `background-color: rgb(255, 0, 0);`
- RGBA colors `background-color: rgba(255, 0, 0, 0.3);`
- HSL colors `background-color: hsl(120, 100%, 50%);`
- HSLA colors `background-color: hsla(120, 100%, 50%, 0.3);`
- Predefined/Cross-browser color names

```
background-color: blue;
```

- With the 'currentcolor' keyword

```
color: blue; /* Blue text color */
```

```
border: 10px solid currentcolor; /* Blue border color */
```

# Conflicting Styles

- You could use any or all of these types of styles in a single HTML document.
- If multiple style instructions exist, they will “cascade” into a single set of instructions, with some instructions taking priority over others.
- This list describes the priority
  1. Inline Style (affects single HTML element; overrides all other style instructions)
  2. Embedded Style Sheet (affects one HTML document; overrides external style sheet)
  3. External Style Sheet (affects multiple documents, overridden by #1 and #2)
  4. Browser default

# Conflicting Styles

Some other points to keep in mind:

- If two styles are applied to the same text, the browser displays all attributes of both styles unless specific attributes conflict.
- If attributes from two styles applied to the same text conflict, the browser displays the attribute of the innermost style (the style closest to the text itself).
- HTML formatting will override any CSS formatting.
- Again, please understand that different browsers may implement CSS differently. It is very important to test your Web pages in a variety of browsers to make sure your pages display correctly.



# Conflicting Styles

## conflictCSS.html

```
1 <!DOCTYPE html>
2 <html>
3
4 <head>
5 <title>Conflicting Styles</title>
6 <link href="conflictstyles.css" rel="stylesheet" type="text/css" />
7 <style>
8 h1 {
9     color: green;
10 }
11 h2 {
12     color: green;
13 }
14 </style>
15 </head>
16
17 <body>
18
19 <h1><span style="color: red">This is Heading One</span></h1>
20 <h2>This is Heading Two</h2>
21 <h3>This is Heading Three</h3>
22
23 </body>
24
25 </html>
```

## conflictstyles.css

```
1 h1 {
2     color: blue;
3 }
4 h2 {
5     color: blue;
6 }
7 h3 {
8     color: blue;
9 }
```

What is the font color output for h1, h2 and h3?

# Q & A