

# CS355 Web Technologies

---

Dr. Ismail Hababeh

German-Jordanian University

Lecture 5

---

# Cascading Style Sheets

- Cascading Style sheets **CSS** determines how the **elements in HTML** documents are **displayed and formatted**.
- CSS allows to **separate the content** of a web page **from the presentation** (format and styling) of that content
- CSS code can be added to HTML elements of the web page in any combination of the following ways:

**Inline:** using the **style** attribute within the <body> section

**Internal:** using **<style> section** within the <head>section

**External:** using an **external CSS file**

# Inline Cascading Style Sheets

- **CSS code** is placed directly into an HTML element within the **<body> section** of a web page.
- **CSS code** is used to **apply a unique style to a single HTML element**.
- **Example:** Set the **text color** of the **<h1>** element to blue

```
<body>  
    <h1 style="color:blue;">This is a Blue Heading</h1>  
</body>
```

**This is a Blue Heading**

# Internal Cascading Style Sheets

- Used to **define a style** for a **single HTML page**.
- Add a **<style> section** within the <head> section of the page.
- All required declarations go within this **<style>** section

```
<html>
  <head>
    <style>
      body {background-color: powderblue;}
      h1 {color: blue;}
      p {color:red;}
    </style>
  </head>
  <body>
    <h1>This is a heading</h1>
    <p>This is a paragraph.</p>
  </body>
</html>
```

**This is a heading**

This is a paragraph.

# Internal Cascading Style Sheets- Notes

- **Styles** declared in the internal style sheet **affect all matching elements** on the page.
- In the **previous example**, all page elements in the **body, header1, and paragraphs** are formatted according to the declared styles.

# External Cascading Style Sheets

- Used to **define the style for many HTML pages**.
  - Create a new file (with a **.css** extension) and write your **style declarations** into this file.
  - Add a **<link>** element into HTML file within the **<head>** section.  
`<link rel="stylesheet" href="style.css">`
- The **<link>** element instructs the browser to **load the external file** specified by the **href** attribute and to **apply the CSS style declarations** contained in the **.CSS** file.
- The **rel** attribute defines the relationship between a linked resource and the current document.

# External Cascading Style Sheets - Example

```
<html>
```

```
<head>
```

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

```
</head>
```

```
<body>
```

```
<h1>This is a heading</h1>
```

```
<p>This is a paragraph.</p>
```

```
</body>
```

```
</html>
```

**This is a heading**

This is a paragraph.

# External Cascading Style Sheets - Notes

- An external style sheet file can be written in any text editor.
- The file must be saved with a .css extension.
- The .css file must not contain any HTML code
- The syntax of a CSS declaration:  
`selector {property:value;}`
- The description of the "style.css" file in the previous example:

```
body { background-color: powderblue; }
```

```
h1 { color:blue; }
```

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



# External Cascading Style Sheets - Notes

- Styles declared in an external style sheet will affect all matching elements on all web pages that link to the style sheet.
- By editing the external style sheet, we can make site-wide changes (even to large number of pages) instantly.

# CSS Text Attributes

- The CSS **color** attribute defines the text color to be used, blue, green, yellow, ...etc.
- The CSS **font-family** attribute defines the font name, Arial, Verdana, Times New Roman, ...etc.
- The CSS **font-size** attribute defines the text font size.
- The CSS **font-style** attribute defines the text font style such as *italic*.
- The CSS **text-align** attribute defines the text alignment, center, left, right, justify, ...etc.
- The CSS **text-decoration** attribute defines the text decoration, underline, line-through, blink, ...etc.

# CSS Text Attributes – Internal Cascading Example

```
<html>
<head>
<style>
  h1 {
    color: blue;
    font-family: verdana;
    font-size: 300%;
  }
  p {
    color: red;
    font-family: courier;
    font-size: 160%;
  }
</style>
</head>
<body>
<h1>This is a heading</h1>
<p>This is a paragraph.</p>
</body>
</html>
```

**This is a heading**

This is a paragraph.

# Cascading Style Sheets - Borders and Spacing

- CSS **Border** attribute defines a border around an HTML element.
- CSS **Padding** attribute defines a space between the text and the border.
- CSS **Margin** attribute defines a margin (space) outside the border.
- **Example:**

```
<html><head>
<style>
  h1 { color: blue; font-family: verdana; font-size: 300%; }
  p {color: red; font-size: 160%; border: 2px solid
    powderblue; padding: 30px; margin: 50px; }
</style>
</head>
<body>
<h1>This is a heading</h1>
<p>This is a paragraph.</p>
</body>
</html>
```

**This is a heading**

**This is a paragraph.**

# How Browsers Process CSS

- A **web browser processes all CSS code** from inline, internal, or external methods.
- Example: all the following CSS methods would be applied on the web page elements
  - An **inline style** sheet could make the heading *italic*.
  - An **internal style** sheet could specify the font size of the heading.
  - An **external style** sheet could define the font name of a heading.

# Question?

- Browser may receive conflicting instructions from the CSS code. Problem !

- Example:

What if each of the CSS style methods (inline, internal, and external) specified a different color for the heading text?

- Describe how the browser will solve this problem.

# Examples

---

# Inline Styles Example #1 – 1/2

```
1  <!DOCTYPE html>
2
3  <!-- Fig. 4.1: inline.html -->
4  <!-- Using inline styles -->
5  <html>
6      <head>
7          <meta charset = "utf-8">
8          <title>Inline Styles</title>
9      </head>
10     <body>
11         <p>This text does not have any style applied to it.</p>
12
13         <!-- The style attribute allows you to declare -->
14         <!-- inline styles. Separate multiple -->
15         <!-- style properties with a semicolon. -->
16         <p style = "font-size: 20pt;">This text has the
17             <em>font-size</em> style applied to it, making it 20pt.
18         </p>
19
20         <p style = "font-size: 20pt; color: deepskyblue;">
21             This text has the <em>font-size</em> and
22             <em>color</em> styles applied to it, making it
23             20pt and deep sky blue.</p>
24     </body>
25 </html>
```



## Inline Styles Example #1 – 2/2 - Output



# Embedded Styles Sheets

## Example #2 – 1/3

```
1  <!DOCTYPE html>
2
3  <!-- Fig. 4.3: embedded.html -->
4  <!-- Embedded style sheet. -->
5  <html>
6      <head>
7          <meta charset = "utf-8">
8          <title>Embedded Style Sheet</title>
9
10         <!-- this begins the style sheet section -->
11         <style type = "text/css">
12             em        { font-weight: bold;
13                         color: black; }
14             h1        { font-family: tahoma, helvetica, sans-serif; }
15             p          { font-size: 12pt;
16                         font-family: arial, sans-serif; }
17             .special { color: purple; }
18         </style>
19     </head>
```

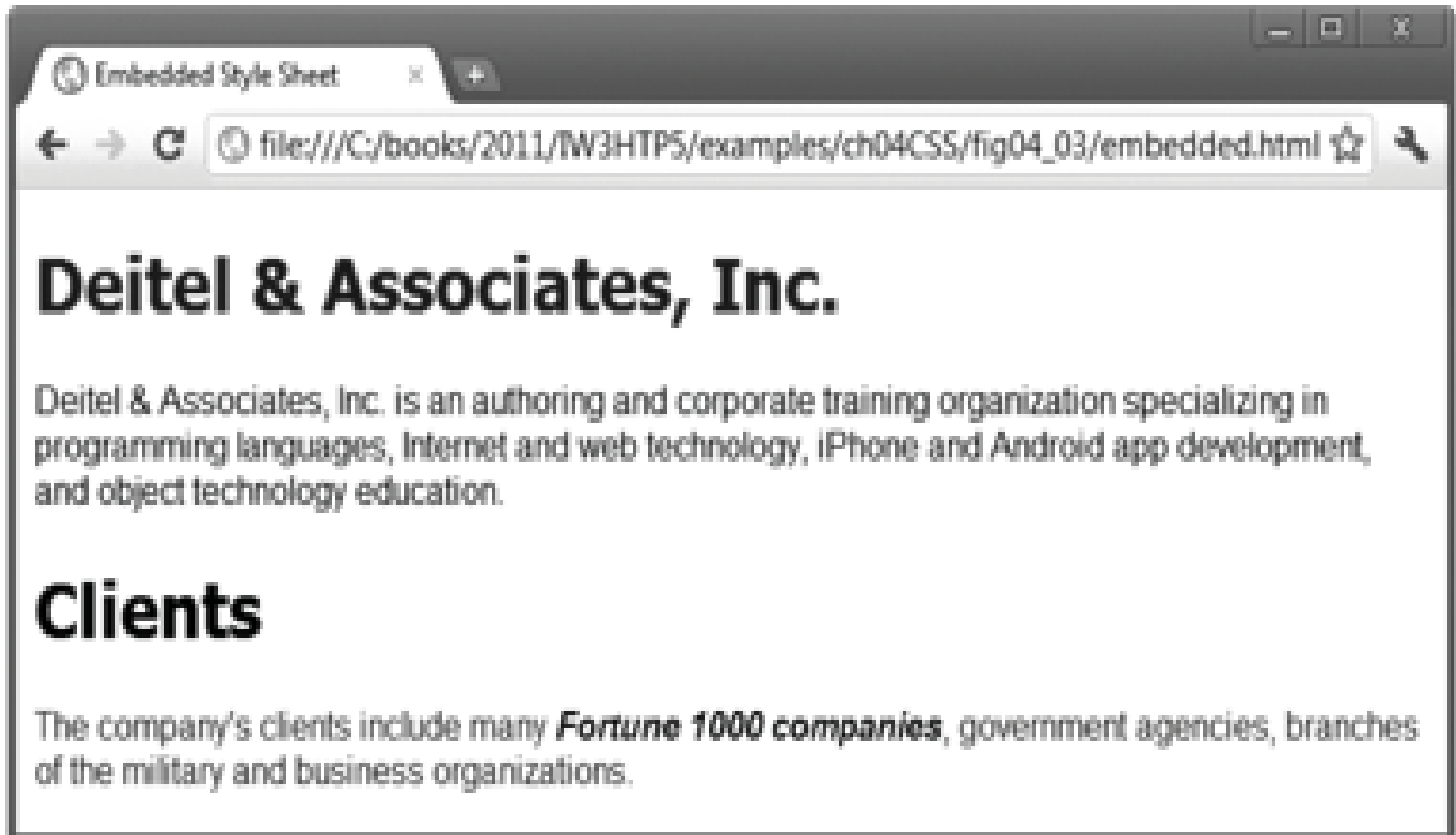
# Embedded Styles Sheets

## Example #2 – 2/3

```
20  <body>
21      <!-- this attribute applies the .special style class -->
22      <h1 class = "special">Deitel & Associates, Inc.</h1>
23
24      <p>Deitel & Associates, Inc. is an authoring and
25          corporate training organization specializing in
26          programming languages, Internet and web technology,
27          iPhone and Android app development, and object
28          technology education.</p>
29
30      <h1>Clients</h1>
31      <p class = "special"> The company's clients include many
32          <em>Fortune 1000 companies</em>, government agencies,
33          branches of the military and business organizations.</p>
34  </body>
35  </html>
```

# Embedded Styles Sheets

## Example #2 – 3/3



# Linking External Style Sheets

## Example #3 – 1/4

```
1  <!DOCTYPE html>
2
3  <!-- Fig. 4.8: external.html -->
4  <!-- Linking an external style sheet. -->
5  <html>
6      <head>
7          <meta charset = "utf-8">
8          <title>Linking External Style Sheets</title>
9          <link rel = "stylesheet" type = "text/css"
10             href = "styles.css">
11      </head>
12      <body>
13          <h1>Shopping list for <em>Monday</em>:</h1>
14
15          <ul>
16              <li>Milk</li>
17              <li>Bread
18                  <ul>
19                      <li>white bread</li>
20                      <li>Rye bread</li>
21                      <li>Whole wheat bread</li>
22                  </ul>
23              </li>
```

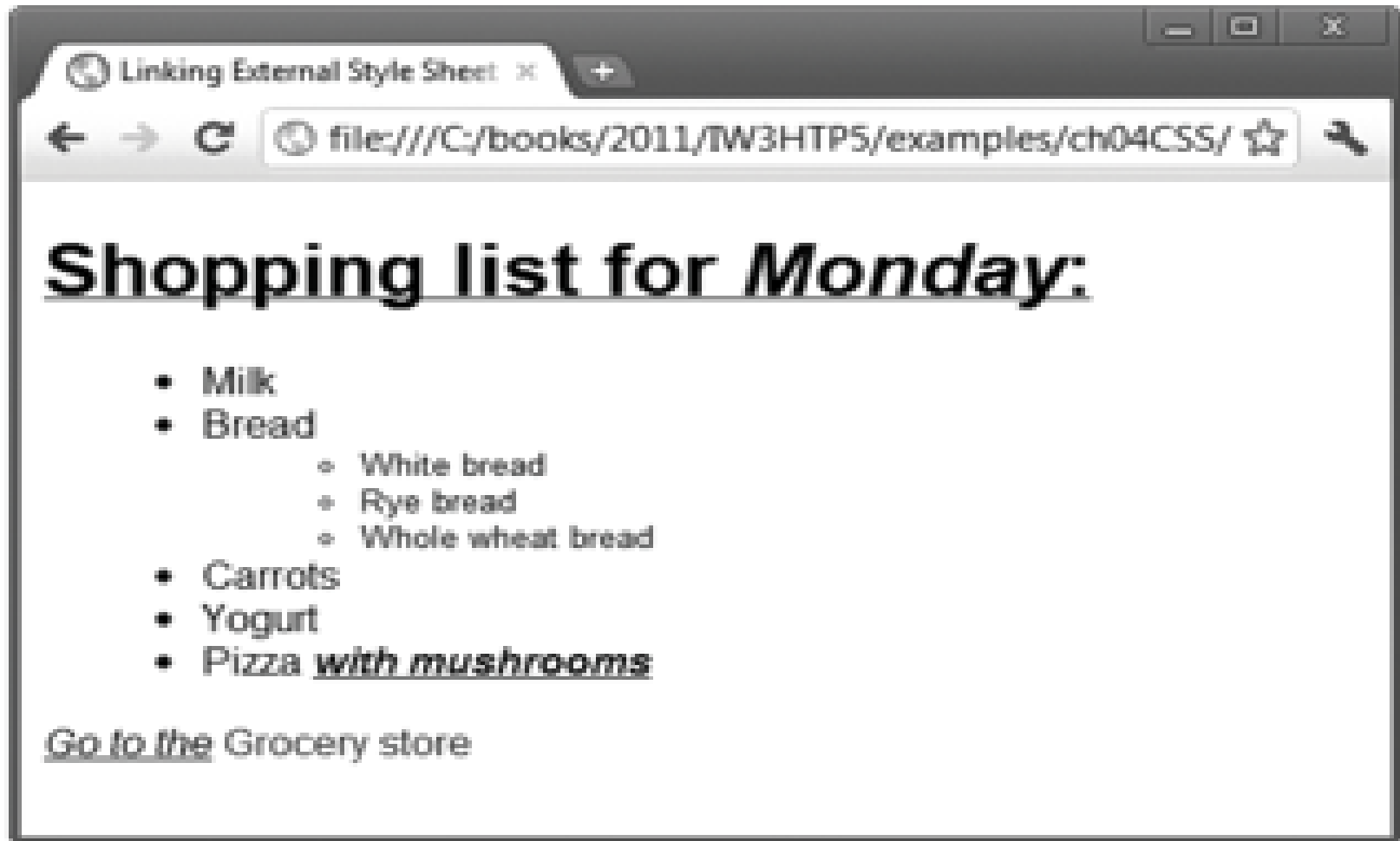
# Linking External Style Sheets

## Example #3 – 2/4

```
24         <li>Carrots</li>
25         <li>Yogurt</li>
26         <li>Pizza <em>with mushrooms</em></li>
27     </ul>
28
29     <p><em>Go to the</em>
30         <a class = "nodec" href = "http://www.deitel.com">
31             Grocery store</a>
32     </p>
33 </body>
34 </html>
```

# Linking External Style Sheets

## Example #3 – 3/4 – Output 1/2



# Linking External Style Sheets

## Example #3 – 4/4 – Output 2/2

