Chapter 4
Introduction to Cascading Style Sheets (CSS): Part 1

Internet & World Wide Web
How to Program, 5/e

Introduction

- Two aspects of any document are _content_ and _style_
    - Content: information to be presented
    - Style: how the information is presented
- HTML's main role is to define content
- Defining style: Cascading Style Sheets 3 (CSS3)
    - Used to specify the presentation of elements separately from the structure of the document.

CSS Advantages

- Separation of content from presentation
- Site-wide consistency
- Reduce data transfer over a network
- Easy to reformat pages for device portability
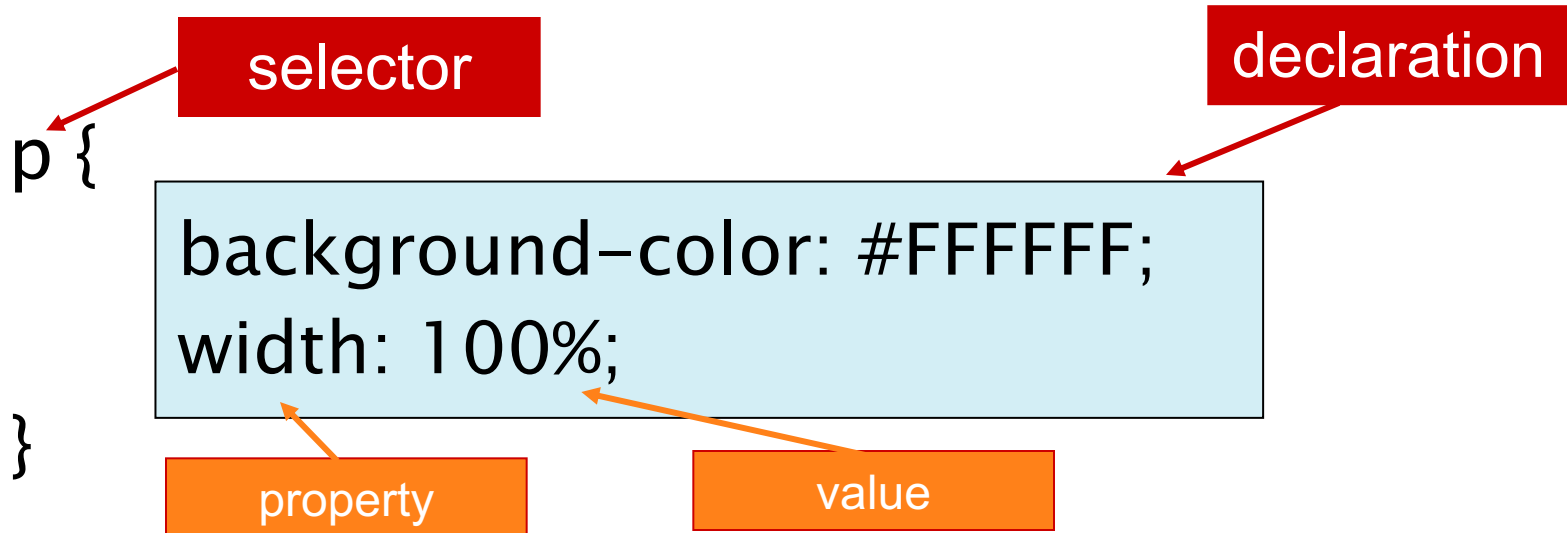- Better accessibility

CSS validator

`jigsaw.w3.org/css-validator/`

- This tool can help you make sure that your code is correct and will work on CSS3-compliant browsers.

A Style Sheet

▸ A style sheet is a set of rules.

selector

declaration

p {

background-color: #FFFFFF;
width: 100%;

}

property

value

Style Classes

Style Classes

▸ Style–class declarations are preceded by a period (.).

▸ Use attribute *class* to define a class in HTML

```css
.special { color: purple; }
```

```html
<h1 class = "special">Deitel & Associates, Inc.</h1>
```

Pseudo Classes

- A pseudo class give access to information not declared in the HTML document
- Examples: hover, visited (visited links), link (unvisited links)
- Complete list of pseudo classes can be found at

http://www.w3schools.com/css/css_pseudo_classes.asp

Different Selectors

Any body element

Class *nodesc* under all <a> elements

Pseudo-class hover for all <a> elements

Child element <em> of all <li> elements

All <h1> and <em> elements

```css
body      { font-family: arial, helvetica, sans-serif; }
a.nodec   { text-decoration: none; }
a:hover   { text-decoration: underline; }
li em     { font-weight: bold; }
h1, em    { text-decoration: underline; }
ul        { margin-left: 20px; }
ul ul     { font-size: .8em; }
#exam     { font-family: helvetica; }
```

Id exam

Use IDs for styling purposes? Think Again

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Conflicting Styles

- Most styles defined for parent elements are also **inherited** by child (nested) elements.
- Styles specified for child elements have higher specificity and take precedence over styles defined for their parent elements
- Styles may be defined by an **author (us!)**, a **user**, or a **user agent (browser)**.
  - Styles **cascade** (and hence the term "Cascading Style Sheets"), or flow together, such that the ultimate appearance of elements on a page results from combining styles defined in several ways.
  - Styles defined by authors take precedence over styles defined by the user.
  - Styles defined by the user take precedence over styles defined by the user agent.

Three Ways to Specify CSS Styles

- Inline styles
  - Styles declared in HTML elements
  - Only apply to the element where style is declared
  - Do not truly separate presentation from content
- Embedded styles
  - Styles declared in an HTML document's head section
  - Apply to the entire HTML document
- External styles (preferred)
  - Styles defined in external style sheets
  - Apply to all HTML documents on a site

Inline Style Example

```
<p style="font-size: 20pt; color:deepskyblue;" >
    This is an inline-style example.
</p>
```

- Demo:

Embedded Style Example

```html
<html>
   <head>
      <meta charset = "utf-8">
      <title>More Styles</title>
      <style type = "text/css">
         body       { font-family: arial, helvetica, sans-serif; }
         a.nodec    { text-decoration: none; }
         a:hover    { text-decoration: underline; }
         li em      { font-weight: bold; }
         h1, em     { text-decoration: underline; }
         ul         { margin-left: 20px; }
         ul ul      { font-size: .8em; }
         #exam      { text-decoration: overline; }
      </style>
   </head>
```

▸ Demo:

Linking External CSS

```
<head>
    <title>Linking External Style Sheets</title>
    <link rel="stylesheets" type="text/css"
        href="styles.css"
</head>
```

▸ Demo:

CSS Fonts

- `font-weight` property specifies the "boldness" of text. Possible values are:
  - `bold`
  - `normal` (the default)
  - `bolder` (bolder than bold text)
  - `lighter` (lighter than normal text)
  - Boldness also can be specified with multiples of 100, from 100 to 900 (e.g., 100, 200, …, 900). Text specified as normal is equivalent to 400, and bold text is equivalent to 700

CSS Fonts

font-family Property

▸ font-family property specifies the name of the font to use.

  ▪ Generic font families allow authors to specify a type of font instead of a specific font, in case a browser does not support a specific font.

  ▪ Times New Roman is outdated

  ▪ Use Arial, Helvetica, and Sans-serif

CSS Fonts

font-size Property

- font-size property specifies the size used to render the font.
- You can specify a point size or a relative value such as xx-small, x-small, small, smaller, medium, large, larger, x-large and xx-large.
- Relative font-size values are preferred over points, because an author does not know the specific measurements of each client's display.
- Relative values permit more flexible viewing of web pages.
  - For example, users can change font sizes the browser displays for readability.

CSS Fonts

font-size Property

▸ A point size value is formed by:
  an optional + or –
    followed by a number
      followed by a two-letter abbreviation
        indicating the unit
(There are no spaces in the middle of thevalue)

Example: **p** {*font-size*: *0.4em*}

Units include px(pixels), em(size of letter M),
  ex(size of letter x), in (inch), cm(centimeter)

CSS Fonts

font-style Property

▸ Allows you to set text to none, `italic` or `oblique`

CSS Text

▸ `text-decoration` property applies decorations to text in an element
`underline`
`overline`
`line-through`
`blink`

CSS Text

▸ `color` property specifies the color of text

```
{color:     keyword |
            #hex hex hex |
            #hex hex hex hex hex hex |
            rgb(int int int) |
            rgb(% % %)}
```

In CSS you can (see above) use three-hex values: "06f" is equal to "0066ff".

Color name	Value	Color name	Value
aqua	#00FFFF	navy	#000080
black	#000000	olive	#808000
blue	#0000FF	purple	#800080
fuchsia	#FF00FF	red	#FF0000
gray	#808080	silver	#C0C0C0
green	#008000	teal	#008080
lime	#00FF00	yellow	#FFFF00
maroon	#800000	white	#FFFFFF

Fig. 4.2 | HTML standard colors and hexadecimal RGB values.

CSS Text

text-align Property

▸ Text in an element can be centered using text-align: center; other values for the text-align property are left and right

text-indent Property

▸ Indents the first line of text in the element by the specified amount

Demo 1: CSS Font and Text