



Web Typography

# Understanding Type Design Principles

# Understanding Type Design Principles

- Choose fewer fonts and sizes
- Choose available fonts
- Design for legibility
- Avoid using text as graphics

# Choose Fewer Fonts and Sizes

- Your pages will look cleaner when you choose fewer fonts and sizes of type
- Decide on a font for each different level of topic importance, such as page headings, section headings, and body text
- Communicate the hierarchy of information with changes in the size, weight, or color of the typeface

Figure 7-1

Effective typographic design

The image shows a screenshot of a web browser window displaying the 'Web Style Guide' page. The browser's address bar shows the URL 'http://webstyleguide.com/type/index.html'. The page has a blue header with the title 'Web Style Guide' and the year '2002-2003-2004'. The main content area is titled 'TYPOGRAPHY' and contains a quote: 'Typography exists to honor content. — Robert Bringhurst, *The Elements of Typographic Style*'. Below this is a paragraph explaining the role of typography. A callout box points to the header with the text 'Distinctive banner typeface'. Another callout box points to a list of links under 'Chapter contents' with the text 'Typeface varies by weight, size, white space, and color'. On the right side, there is a sidebar with a table of contents including 'PROCESS', 'INTERFACE DESIGN', 'SITE DESIGN', 'PAGE DESIGN', and 'TYPOGRAPHY'. The 'TYPOGRAPHY' section is expanded to show links for 'Characteristics of Web type Structure & visual logic', 'Cascading style sheets', 'Legibility', 'Alignment', 'Line length', 'White space', 'Typefaces', 'Type size', 'Case', 'Emphasis', 'Consistency', 'Cross-platform issues', and 'Accessibility'. A callout box also points to the 'Legibility' link in the sidebar.

Web Style Guide: TYPOGRAPHY - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://webstyleguide.com/type/index.html

# Web Style Guide

2002-2003-2004

## TYPOGRAPHY

Typography exists to honor content.  
— Robert Bringhurst, *The Elements of Typographic Style*

TYPOGRAPHY is the balance and interplay of letterforms on the page, a verbal and visual equation that helps the reader understand the form and absorb the substance of the page content. Typography plays a dual role as both verbal and visual communication. As readers scan a page they are subconsciously aware of both functions: first they survey the overall graphic patterns of the page, then they parse the language, or read. Good typography establishes a visual hierarchy for rendering prose on the page by providing visual punctuation and graphic accents that help readers understand relations between prose and pictures, headlines and subordinate blocks of text.

### Chapter contents

- [Characteristics of type on the Web](#)
- [Content structure and visual logic](#)
  - [Cascading style sheets](#)
- [Legibility](#)

Distinctive banner typeface

Typeface varies by weight, size, white space, and color

### PROCESS

### INTERFACE DESIGN

### SITE DESIGN

### PAGE DESIGN

### TYPOGRAPHY

- [Characteristics of Web type Structure & visual logic](#)
- [Cascading style sheets](#)
- [Legibility](#)
- [Alignment](#)
- [Line length](#)
- [White space](#)
- [Typefaces](#)
- [Type size](#)
- [Case](#)
- [Emphasis](#)
- [Consistency](#)
- [Cross-platform issues](#)
- [Accessibility](#)

# Use Available Fonts

- The user's browser and operating system determine how a font is displayed --> Client-based
- To control more effectively how text appears on your pages, think in terms of font families, such as serif and sans-serif typefaces

**Figure 7-2**

Serif and sans-serif  
type



Common PC Fonts	Common UNIX Fonts	Common Macintosh Fonts
Arial	Helvetica	Helvetica
Courier New	Times	Courier
Times New Roman		Palatino
Trebuchet MS		Times
Verdana		Verdana Arial

**Table 7-1** Common installed fonts

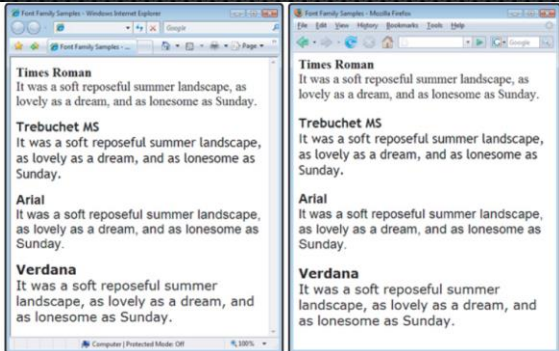


# Design for Legibility

- Figure 7-3 shows the same paragraph in Times, Trebuchet, Arial, and Verdana at the default browser size in both Internet Explorer (on the left) and Mozilla Firefox
- Notice that subtle variations in the weight, spacing, and rendering of the font families affect the way each is displayed to the user

**Figure 7-3**

Common Web font families in Internet Explorer and Firefox



# Avoid Using Text as Graphics

- Save text graphics for important purposes, such as the main logo for your page or as reusable navigation graphics
- Remember that including text as graphics means users cannot search for that text
- Whenever possible, use HTML-styled text on your pages

# Understanding CSS Measurement Units

# Understanding CSS Measurement Units

- CSS offers a variety of measurement units, almost to the point of offering too many choices
- For example, to specify font size, you can use any of the measurement units listed in the following table

Unit	Unit Abbreviation	Description
<b>Absolute Units</b>		
Centimeter	cm	Standard metric centimeter
Inch	in	Standard U.S. inch
Millimeter	mm	Standard metric millimeter
Pica	pc	Standard publishing unit equal to 12 points
Point	pt	Standard publishing unit, with 72 points in an inch
<b>Relative Units</b>		
Em	em	The width of the capital M in the current font, usually the same as the font size
Ex	ex	The height of the letter x in the current font
Pixel	px	The size of a pixel on the current monitor
Percentage	For example: 150%	Sets a font size relative to the base font size; 150% equals 1.5 times the base font size

**Table 7-2** CSS measurement units

# Absolute Units

- Specify a fixed value

```
.p {margin: 1.25in;}
```

- Cannot be scaled to client display
- Should only be used when exact measurements of destination medium are known

# Relative Units

- Enables scalable Web pages that adapt to different display types and sizes
- Recommended method for Web page design
- Relative measurement values such as em and px are designed to let you build scalable Web pages that adapt to different display types and sizes
- The W3C recommends that you always use relative values



# The em Unit

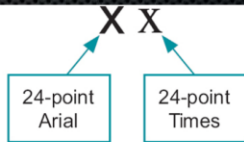
- The em is a printing measurement, traditionally equal to the horizontal length of the capital letter M in any given font size
- In CSS the em unit is equal to the font size of an element
- It can be used for both horizontal and vertical measurement

# The ex Unit

- The ex unit is equal to the height of the lowercase letter x in any given font
- As shown in Figure 7-4, the height of the lowercase letter x varies widely from one typeface to another

**Figure 7-4**

Differences in height in the ex unit



# The px Unit

- Pixels are the basic picture element of a computer display
- The size of the pixel is determined by the display resolution
- Pixel measurements work well for computer displays, but they are not so well suited to other media, such as printing

# Percentages

- Percentage values are always relative to another value
  - For example, the following rule sets the font size for the `<body>` element to 1.5 times the size of the browser default:

```
body {font-size: 150%;}
```

- Child elements inherit the percentage values of their parents
  - For example, the `<b>` text in the following example is 125% larger than the `<p>` that contains it:

```
p {font-size: 12pt;}
```

```
p b {font-size: 125%;}
```

# Using the CSS Font Properties

# Using the CSS Font Properties

- font-family
- font-size
- font-style
- font-variant
- font-weight
- font (shorthand property)

# Specifying Font Family

- Allows specification of generic font family names (e.g., sans-serif) or a specific name (e.g., Arial)

```
p {font-family: sans-serif;}
```

```
p {font-family: arial;}
```

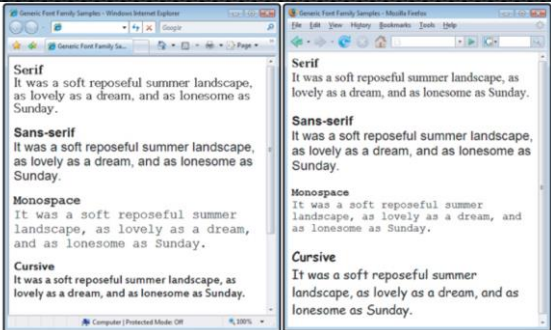
# Using Generic Font Family

- **Serif:** traditional letter form with strokes (or serifs) that finish off the top and the bottom of the letter. Most common: Times New Roman
- **Sans-serif:** have no serifs. Block letters. Most common: Arial and Helvetica
- **Monospace:** fixed-width fonts. Every letter has the same horizontal width. Typically used to mimic typewriter or programming code. Most common: Courier
- **Cursive:** designed to resemble handwriting
- **Fantasy:** primarily decorative



**Figure 7-5**

Generic font families in Internet Explorer and Firefox



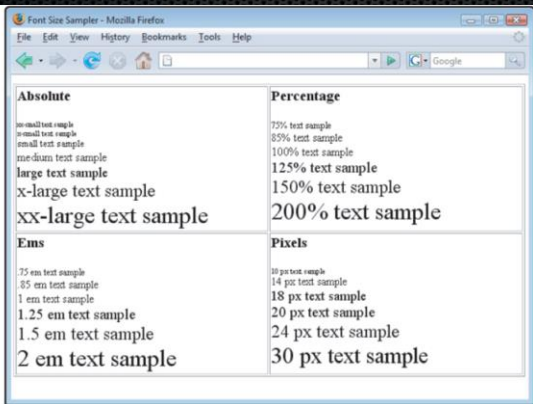
# Specifying Font Size

- The following rule sets the <p> element to 1.5em Arial:

```
p {font-family: arial; font-size: 1.5em;}
```

**Figure 7-6**

Various font sizes



# Specifying Font Style

- The font-style property lets you specify italic or oblique text

```
p {font-style: italic;}
```

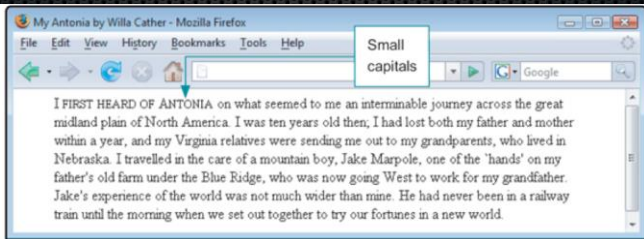
# Specifying Font Variant

- The font-variant property lets you define small capitals, which are often used for chapter openings, acronyms, and other special purposes

```
h1 {font-variant: small-caps;}
```

Figure 7-7

Small capitals



# Specifying Font Weight

- The font-weight property lets you set the weight of the typeface

```
p {font-weight: bold;}
```

# Using the Font Shortcut Property

- The font shortcut property lets you abbreviate the more verbose individual property listings
- The following rules produce the same results

```
p {font-weight: bold; font-size: 18pt; line-height: 24pt; font-family: arial;}
```

```
p {font: bold 18pt/24pt arial;}
```



# Using the CSS Text Spacing Properties

# CSS Text Spacing Properties

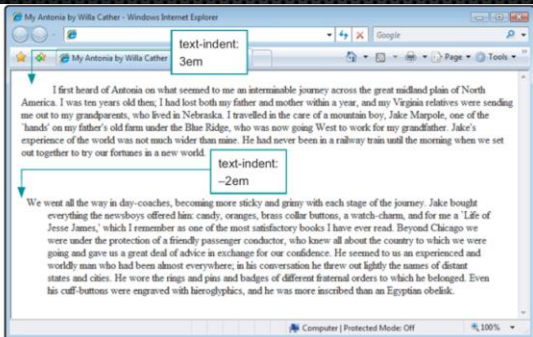
- text-indent
- text-align
- text-decoration
- line-height
- vertical-align
- letter-spacing
- word-spacing

# Specifying Text Indents

- Use the text indent property to set the amount of indentation for the first line of text in an element, such as a paragraph
- The following rule sets an indent of 24 points:  

```
p {font-family: text-indent: 24pt;}
```

**Figure 7-8**  
Text indents

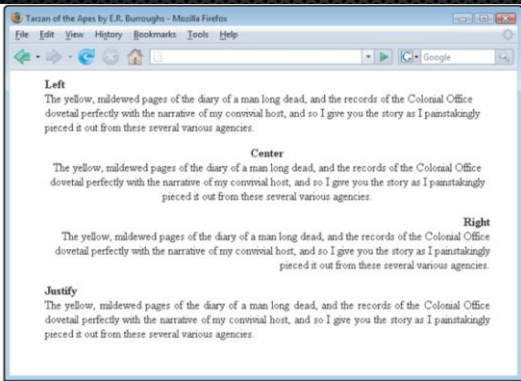


# Specifying Text Alignment

- Use the text-align property to set horizontal alignment for the lines of text in an element

```
p {text-align: justify}
```

**Figure 7-9**  
Text alignments

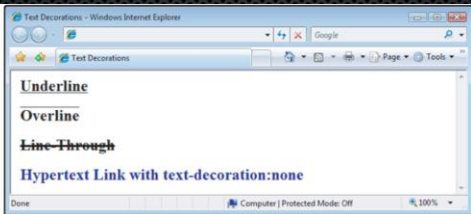


# Specifying Text Decoration

- Use the text-decoration property to add or remove underlining from text
- The following code removes the underlining from hypertext links

```
a {text-decoration: none}
```

**Figure 7-10**  
Text decorations





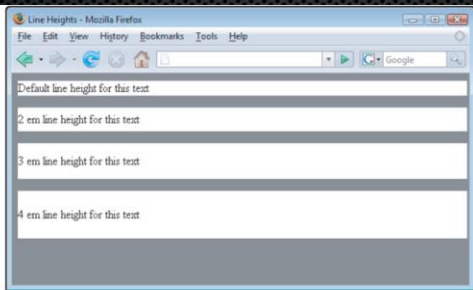
# Specifying Line Height

- CSS allows you to specify either a percentage or absolute value for the line height, which is more commonly called leading
- The following rule sets the line height to 2 em:  

```
p {line-height: 2 em;}
```

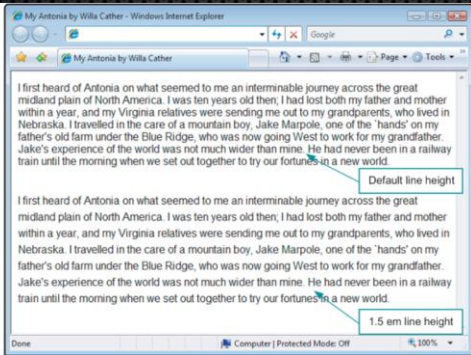
**Figure 7-11**

Line height



**Figure 7-12**

Adjusting line height  
increases legibility



# Specifying Vertical Alignment

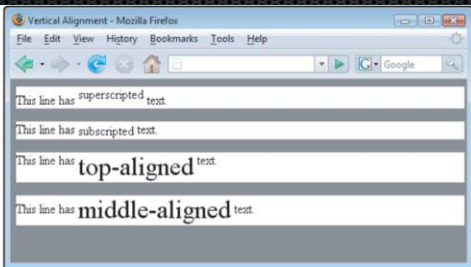
- The vertical-align property lets you adjust the vertical alignment of text within the line box
- Vertical-align works on inline elements only

Value	Definition
baseline	Align the baseline of the text with the baseline of the parent element
sub	Lower the baseline of the box to the proper position for subscripts of the parent's box; this value does not automatically create a smaller font size for the subscripted text
middle	The CSS2 specification defines "middle" as "the vertical midpoint of the box with the baseline of the parent box plus half the x-height of the parent"; realistically, this means the middle-aligned text is aligned to half the height of the lowercase letters
super	Raise the baseline of the box to the proper position for superscripts of the parent's box; this value does not automatically create a smaller font size for the superscripted text
text-top	Align the top of the box with the top of the parent element's font
text-bottom	Align the bottom of the box with the bottom of the parent element's font
top	Align the top of the box with the top of the line box
bottom	Align the bottom of the box with the bottom of the line box

**Table 7-5** Vertical-align property values

**Figure 7-13**

Vertical alignments



# Specifying Vertical Alignment (continued)

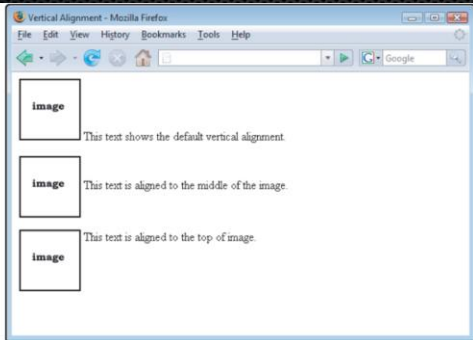
- You can also use vertical alignment to align text with graphics
- The following rule, added to the `<img>` element with the `style` attribute, sets the vertical alignment to top:

```

```

**Figure 7-14**

Vertically aligning text  
and graphics





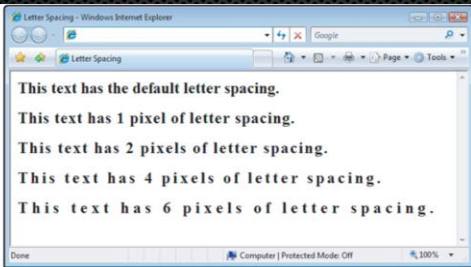
# Specifying Letter Spacing

- To adjust kerning, the printer's term for adjusting the white space between letters, use the letter spacing property
- The following rule sets the letter spacing to 4 points

```
h1 {letter-spacing: 4pt;}
```

**Figure 7-15**

Adjusting letter spacing



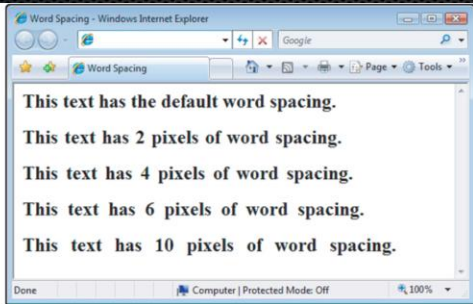
# Specifying Word Spacing

- The word-spacing property lets you adjust the white space between words in the text
- The following code sets the word spacing to 2 em

```
h1 {word-spacing: 2em;}
```

**Figure 7-16**

Adjusting word spacing



# Summary

- Use type to communicate information structure; be sparing with your type choices, and use fonts consistently
- Remember that HTML text downloads faster than graphics-based text; use HTML text whenever possible
- Use browser-safe fonts that will display as consistently as possible across operating systems

# Summary (continued)

- Standardize your styles by building external style sheets and linking them to multiple documents
- Test your work; different browsers and computing platforms render text in different sizes
- Use type effectively by choosing available fonts and sizes; design for legibility and use text to communicate information about the structure of your material

# Summary (continued)

- Choose the correct measurement unit based on the destination medium
  - For the computer screen, ems, pixels, or percentage measurements can scale to the user's preferences
- Use the font properties to control the look of your letter forms
  - Specify font substitution values to ensure that your text is displayed properly across different platforms
- Use the text spacing properties to create more visually interesting and legible text

# Graphics and Colors



# Understanding Graphic Files Formats

# Understanding Graphic Files Formats

- You can currently use only three image file formats on the Web: GIF, JPG, and PNG
  - A new format, SVG, is not yet in common use
- These formats all compress images to create smaller files
  - Knowing which file format to use for which type of image is important
- If you choose the wrong file type, your image won't compress or display properly

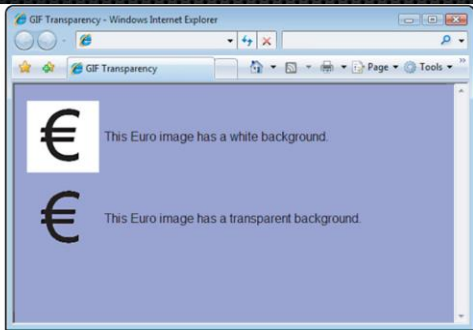
# GIF (Graphics Interchange Format)

- GIF uses a lossless compression technique, meaning that no color information is discarded when the image is compressed
- The color depth of GIF is 8-bit, allowing a palette of no more than 256 colors
- GIF excels at compressing and displaying flat color areas, making it the logical choice for line art and color graphics

# GIF Transparency

- With GIF files, you can choose any one color in an image to appear as transparent in the browser
- The background color or pattern will show through the areas that you have designated as transparent
- Using transparent areas allows you to create graphics that appear to have an irregular outside shape, rather than being bounded by a rectangle

**Figure 8-1**  
Transparent and  
nontransparent GIFs

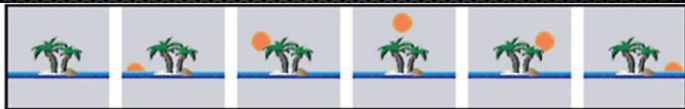


# GIF Animation

- The GIF format lets you store multiple images and timing information about the images in a single file
- This means that you can build animations consisting of multiple static images that play continuously, creating the illusion of motion

**Figure 8-2**

Individual frames of a  
GIF animation



GIF Construction Set Professional	<a href="http://www.mindworkshop.com/alchemy/gifcon.html">www.mindworkshop.com/alchemy/gifcon.html</a>
Ulead GIF Animator	<a href="http://www.ulead.com/ga/runme.htm">www.ulead.com/ga/runme.htm</a>
GIFMation	<a href="http://www.boxtopsoft.com/gifmation.html">www.boxtopsoft.com/gifmation.html</a>

**Table 8-1** GIF animation tools

Or you can use Photoshop to capture video and turn it into GIF animation



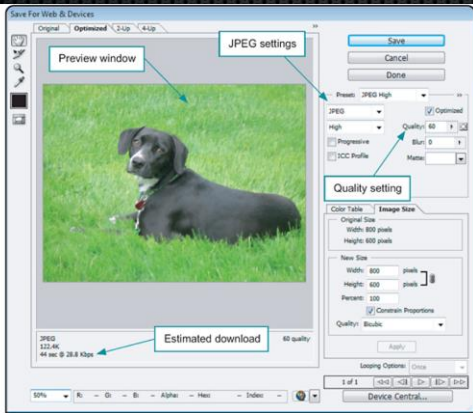
# JPG or JPEG (Joint Photographic Experts Group)

- JPG is best for photographs or continuous tone images
- JPGs are 24-bit RGB images that allow millions of colors
- JPGs use a “lossy” compression routine especially designed for photographic images
- When the image is compressed, some color information is discarded, resulting in a loss of quality from the original image

# JPG (continued)

- When you create the JPG file, you can also manually balance the amount of compression versus the resulting image quality
- The higher the compression, the lower the image quality
  - You can play with this setting to create files that are as small as possible but still look good
- Many photos can sustain quite a bit of compression while still maintaining image integrity

**Figure 8-3**  
Photoshop Save for Web & Devices dialog box



# PNG (Portable Network Graphics)

- A royalty-free file format that is intended to replace GIF
- This lossless format compresses 8-bit images to smaller file sizes than GIF
- PNG supports transparency and interlacing but not animation

# SVG (Scalable Vector Graphics)

- A new standard from the W3C
- A language for describing two-dimensional graphics using XML
- SVG graphics are scalable to different display resolutions and are printable
- Not yet supported by most browsers

# Using Interlacing & Progressive Display

- Most Web-capable graphics editors let you save images in an interlaced or progressive format
- You can choose this display option when creating GIF, PNG, and JPG files
- GIF and PNG files use interlacing, while JPGs use progression
- Interlacing and progressive display are generally the same thing—the gradual display of a graphic in a series of passes as the data arrives in the browser

# Where You Can Find Images

- Stock photo collections
- Digital cameras
- Scanner
- Public-domain Web sites
- Clip art
- Create your own
- Remember to respect copyright laws!

# Choosing the Right Format

- GIF: The everyday file format for all types of simple colored graphics and line art
  - Use GIF sparingly for its animation capabilities to add visual interest to your pages
  - GIF's transparency feature lets you seamlessly integrate graphics into your Web site
- JPG: Use JPG for all 24-bit full color photographic images, as well as more complicated graphics that contain color gradients, shadows, and feathering



# Choosing the Right Format (continued)

- PNG: If the browsers are supporting it, use PNG as a substitute for GIF
- Because PNG doesn't compress your 24-bit images as well as JPG, don't use it for photos

# Choosing a Graphics Tool

# Choosing a Graphics Tool

- You use graphics software to create or manipulate graphics

Graphic tool	URL
Adobe Photoshop and Illustrator	<a href="http://www.adobe.com">www.adobe.com</a>
Adobe Fireworks	<a href="http://www.adobe.com">www.adobe.com</a>
Paint Shop Pro	<a href="http://www.jasc.com">www.jasc.com</a>
Ulead PhotoImpact	<a href="http://www.ulead.com">www.ulead.com</a>

**Table 8-2** Graphic tools Web sites

Using the `<img>` element

# Using the `<img>` element

- By definition, `<img>` is a replaced element, meaning that the browser replaces the `<img>` element with the image file referenced in the SRC attribute
- `<img>` is an empty element, so never use a closing tag with it
- The browser treats the image as it treats a character: normal image alignment is to the baseline of the text
- Images that are within a line of text must have spaces on both sides, or the text will touch the image

# <img> Element Attributes

Attribute	Use
alt	Displays an alternate string of text instead of an image if the user has a text-only browser or has graphics turned off
height	Specifies the height of the image in pixels
src	The only required attribute, src specifies the URL of the graphic file you want to display. As with any URL, the path must be relative to the HTML file.
title	A string of text that provides information about the image. Visual browsers display the contents of the title attribute as a ToolTip or ScreenTip (a pop-up window that appears when the user pauses the pointing device over an object). An audio browser could speak the title information.
width	Specifies the width of the image in pixels

**Table 8-3** <img> element attributes

# Replacing img Attributes with Style Sheet Properties

Deprecated img Attribute	Equivalent CSS Property
align	The float property allows you to flow text around an image or other object; for example, <code>img {float: left;}</code>
border	The border property lets you set a border on an image or remove the border from a linked image
vspace and hspace	The padding or margin properties set white space around an image. You can control individual sides of the image, or apply white space around the entire image.

**Table 8-4** CSS properties that replace img attributes

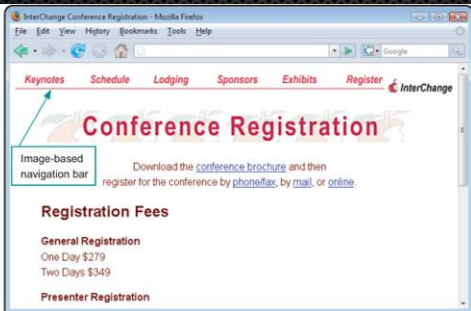
# Specifying alt and title Attribute Text

- The alt text is displayed if the image does not appear, providing a description of the image
- The title text appears as a pop-up when the user places the cursor over the image



**Figure 8-5**

Image-based navigation

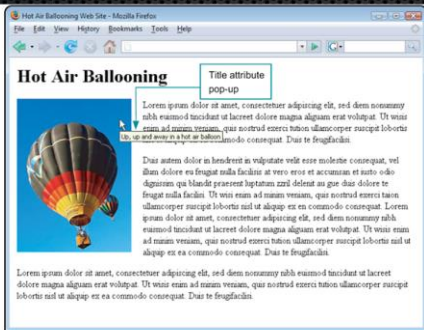


**Figure 8-6**

Navigation bar with  
images turned off



**Figure 8-7**  
Using the title attribute



```

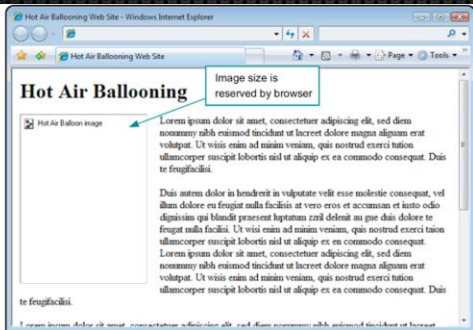
```

# Specifying Image Width and Height

- If every `<img>` element on your site contains width and height attributes
  - These attributes provide important information to the browser by specifying the amount of space to reserve for the image
- This information dramatically affects the way your pages download to the user, especially at slower connection speeds

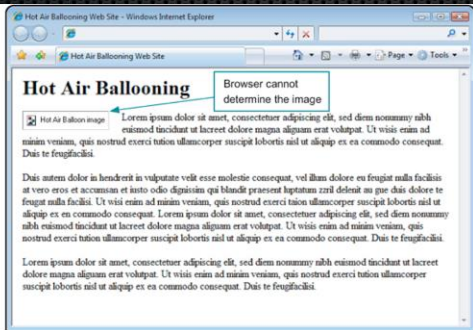
**Figure 8-8**

Image size reserved in the browser



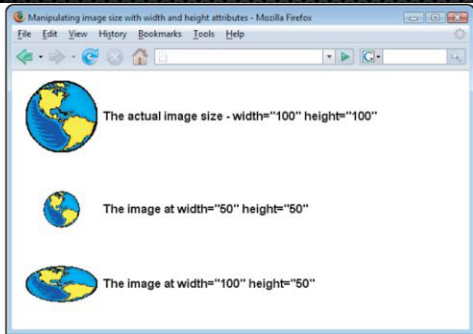
**Figure 8-9**

Browser unable to reserve  
image size



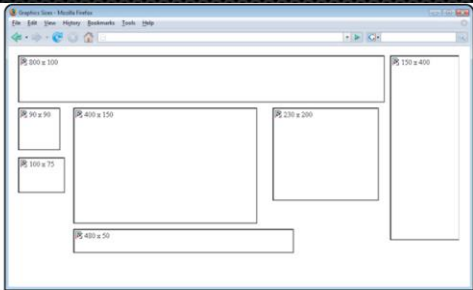
**Figure 8-10**

Manipulating images with width and height attributes



**Figure 8-11**

Sample image sizes at  
1024 × 768 screen  
resolution





# Controlling Image Properties with CSS

- Removing the hypertext border
- Aligning text and images
- Floating images
- Adding white space around images

# Removing the Hypertext Border from an Image

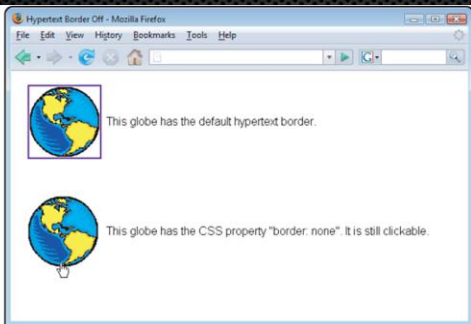
- When you create a hypertext image, the browser's default behavior is to display the hypertext border around the image
- This border is often unnecessary as users often use their mouse to point to each image to see if the hypertext cursor displays

```

```

**Figure 8-12**

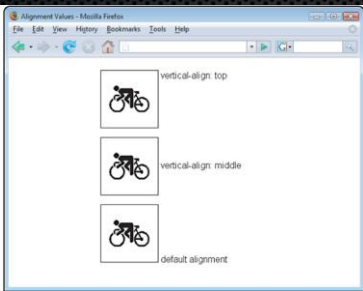
Removing the hypertext border from an image



# Aligning Text and Images

- You can align text along an image border using the align attribute
- Text and image alignment defaults to bottom alignment, which means the bottom of the text aligns with the bottom edge of the image
- Valid values are: top, middle, bottom, left, right

**Figure 8-13**  
Text alignment



```
  
  

```

# Floating Images

- The float property can be used to float an image to the left or right of text
- The following style rules create two classes of `<img>` elements, one of which floats to the left of text; the other floats to the right

```
img.left {float:left;}
```

```
img.right {float:right;}
```

**Figure 8-14**  
Floating images

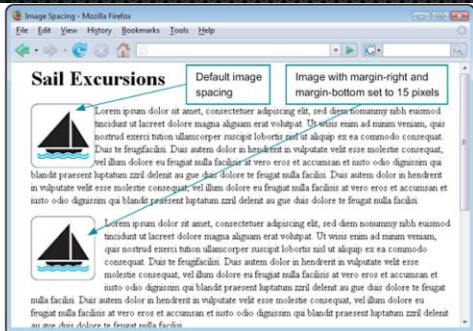


# Adding White Space Around Images

- Add white space around your images to reduce clutter and improve readability
  - As shown in Figure 8-15, the default spacing is very close to the image
- Use the CSS margin property to increase the white space around an image



**Figure 8-15**  
Image spacing



# Adding White Space Around Images (continued)

- The following style rule adds 15 pixels of white space on all four sides of an image

```

```

# Understanding Computer Color Basics

- Monitors display colors by mixing three basic colors of light: Red, Green, and Blue
  - Intensity ranges from:
    - 0% (complete absence of color) to 100% (complete presence of color)
- Color depth
  - Amount of data used to create the color
    - 8-bit (256 colors), 16-bit, and 24-bit (16.7M colors)
- Browser-safe palette (216 colors)
  - Displays properly on Win & Mac at lowest depth

# Color Depth

- The amount of data used to create color on a display is called the color depth
- If your users have a 24-bit color display, they can appreciate the full-color depth of your images
  - But many monitors cannot display 24-bit images
- If your monitor doesn't support the full color depth of an image, the browser must resort to mixing colors that attempt to match the original colors in the image

# Specifying CSS Color Values

- Color names
- RGB color values
- Hexadecimal color values

# Using Color Names

- Sets color values using common color names
  - Aqua, Fuchsia, Lime, Red, etc.
- Limited to small range of colors
- Not a very specific representation of color

Color Name	Hex	Color Name	Hex
<b>Aqua</b>	<b>00FFFF</b>	Navy	000080
<b>Black</b>	<b>000000</b>	Olive	808000
<b>Blue</b>	<b>0000FF</b>	Purple	800080
<b>Fuchsia</b>	<b>FF00FF</b>	<b>Red</b>	<b>FF0000</b>
Gray	808080	Silver	C0C0C0
Green	008000	Teal	008080
<b>Lime</b>	<b>00FF00</b>	<b>White</b>	<b>FFFFFF</b>
Maroon	800000	<b>Yellow</b>	<b>FFFF00</b>

**Table 8-5** Color names recognized by most browsers (colors in boldface are browser-safe)

# Using RGB Color Values

- Numerical values that specify the blending of the red, green, and blue color channels
- Range: 0-100% (zero color to max color)
  - Also: 0-255 (integer)
- Can be expressed as percentage or integer:

```
p {color: rgb(0, 100%, 100%);}
```

or

```
p {color: rgb(0, 255, 255);}
```



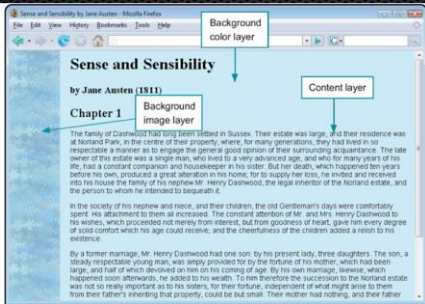
# Using Hexadecimal Color Values

- Numerical values that specify the blending of the Red, Green, and Blue color channels
  - Base 16 number system (0-9, A-F)
    - Range: 00-FF (zero color to max color)
      - Example: Red --> FF 00 00
- The following rules specify the same color:
  - P {color: #00FFFF;}
  - P {color: rgb(0, 100%, 100%);}
  - P {color: rgb(0, 255, 255);}

# Understanding Element Layers

- Background color layer—The backmost layer, specified by the background-color property
- Background image layer—The middle layer, specified by the background-image property
- Content layer—The frontmost layer; this is the color of the text content; specified by the color property

**Figure 8-17**  
Element layers



# Controlling Color Properties with CSS

- Specifying color values
- Setting default text color
- Changing link colors
- Specifying background color
- Setting the page background color
- Creating a text reverse
- Using background color in tables

# Specifying Color Values

- The following style rules show the different methods of specifying a color:

```
/* color name */
```

```
p {color: blue;}
```

```
/* hexadecimal value */
```

```
p {color: #0000ff;}
```

```
/* RGB numbers */
```

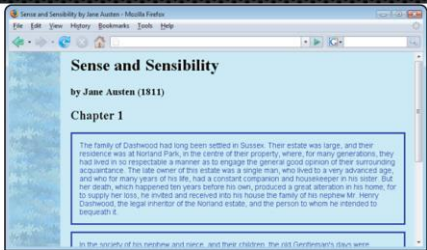
```
p {color: rgb(0,0,255);}
```

```
/* RGB percentages */
```

```
p {color: rgb(0%,0%,100%);}
```

**Figure 8-18**

The element border defaults to the text color



# Changing Link Colors

- You can change the colors of hypertext links by using the following special CSS classes
- link—The unvisited link color; the default is blue
- active—The active link color; this is the color displayed when the user points to a link and holds down the mouse button
  - The default is red
- visited—The visited link color; the default is purple

# Changing Link Colors (continued)

- You can use these special classes only with the `<a>` tag
- The syntax uses a colon (:) flag character as shown in the following examples:

```
a:link {color: #000000;} /* new links are black */
```

```
a:active {color: #FF0000;} /* active links are red */
```

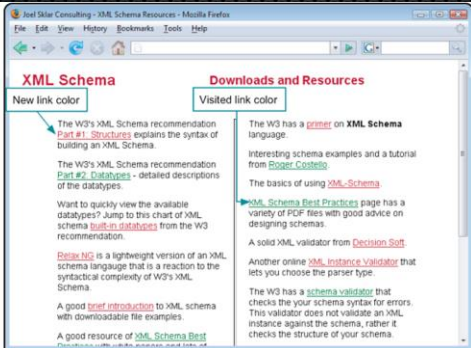
```
a:visited {color: #CCCCCC;} /* visited links are gray  
*/
```



# Specifying Background Colors

- Background-color
- Sets the background color of any element on a Web page (including padding area)
- By default, background color of any element is transparent

**Figure 8-19**  
Changing link colors



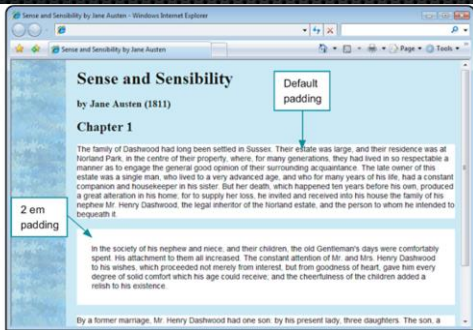
# Specifying Background Colors (continued)

- Background-color (continued)
- Setting the page background color
- Use body as the selector

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

Figure 8-20

Background color and padding



**Figure 8-21**

An inline element with a background color

# Sense and Sensibility

by Jane Austen (1811)

Chapter 1

Inline element with background color

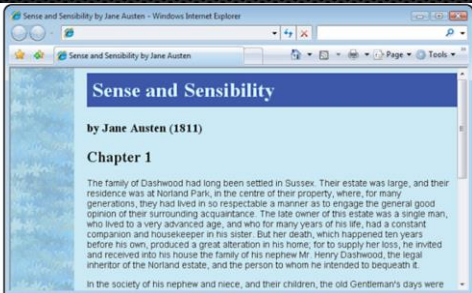
# Creating a Text Reverse

- The background and foreground colors are reversed
- The following rule sets the text color to white and the background color to blue

```
h1 {color: #ffffff; background-color:  
blue; padding:.25em;}
```

**Figure 8-22**

Reverse text in a heading



# Using Background Color in Tables

- The table `<table>`, table row `<tr>`, table header `<th>`, and table data `<td>` elements all accept background colors
- Use the table elements as selectors when you use the `background-color` property
- You may also need to use class identifiers to uniquely identify which cells or rows have background colors applied



**Figure 8-23**

Background color  
in tables



# Controlling Background Images with CSS

# Specifying the Background Image URL

- Allows addition of a background image to an entire Web page or to a single element

**Figure 8-28**  
Default background  
image behavior



**Figure 8-29**  
The individual  
background image



**Figure 8-30**

URL value syntax

```
body {background-image: url (paper.gif);}
```

Property

URL keyword

URL value

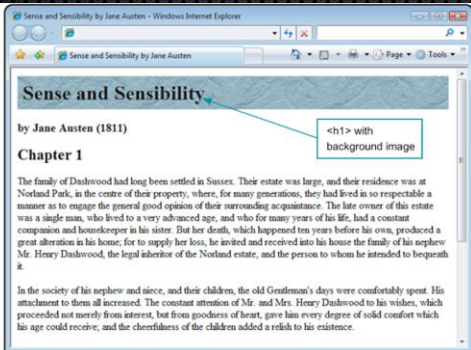
# Creating an Element Background

- Images can be applied to background of any element
- The following rule applies an image to the background of the H1 element:

```
h1 {background-image: url(bluetex.jpg); padding:  
.25em;}
```

**Figure 8-31**

Background image applied to an element



# Specifying Background Repeat

- Controls tiling of background images

```
body {background-image: url(grayivy.jpg);  
background-repeat: repeat-y;}
```



Value	Background Image Behavior
repeat	The image is repeated across the entire background of the element; this is the default behavior.
repeat-x	The image is repeated across the horizontal (x) axis of the document only.
repeat-y	The image is repeated across the vertical (y) axis of the document only.
no-repeat	The image is not repeated; only one instance of the image is shown in the background.

**Table 8-6** Background-repeat property values

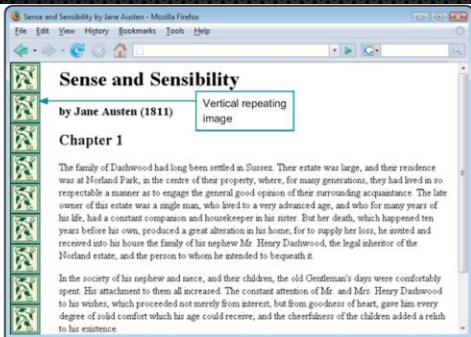
# Creating a Vertical Repeat

- Allows creation of a vertically repeating background graphic

```
body {background-image: url(grayivy.jpg);  
background-repeat: repeat-y;}
```

**Figure 8-32**

Vertical repeating background image



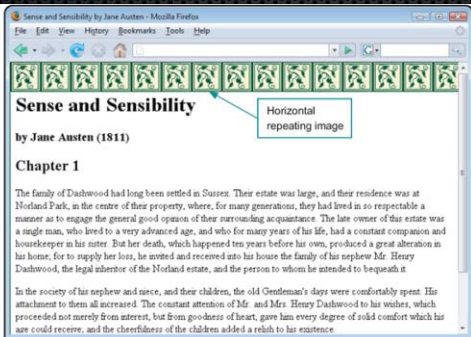
# Creating a Horizontal Repeat

- Allows creation of a horizontally repeating background graphic

```
body {background-image: url(grayivy.jpg);  
background-repeat: repeat-x;}
```

**Figure 8-33**

Horizontal repeating background image



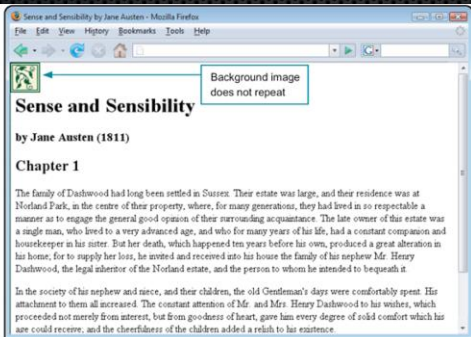
# Creating a Nonrepeating Background Image

- Allows creation of a single instance of an image in the background
- The following style rule shows the use of the no-repeat value:

```
body {background-image: url(grayivy.jpg);  
background-repeat: no-repeat;}
```

**Figure 8-34**

Nonrepeating  
background image



# Specifying Background Position

- The background-position property lets you use three types of values: percentage, length, or keywords

```
body {background-image: url(grayivy.jpg);  
background-repeat: repeat-y; background-position:  
center;}
```



**Figure 8-35**

Keyword and percentage  
background positions

left top  
0% 0%

center top  
50% 0%

right top  
100% 0%

left center  
0% 50%

center  
50% 50%

right center  
100% 50%

left bottom  
0% 100%

center bottom  
50% 100%

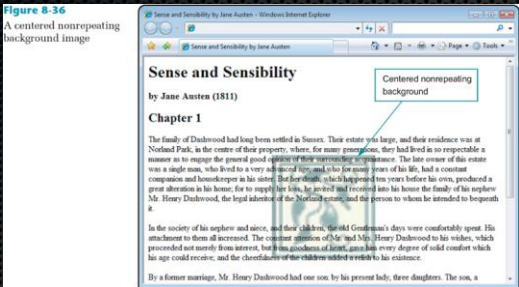
right bottom  
100% 100%

Value	Background Image Behavior
percentage	The percentage values are based on the starting point of the upper-left corner of the containing element's box. The first percentage value is horizontal; the second is vertical. For example, the value "45% 30%" places the background image 45% from the left edge and 30% from the top edge of the containing box.
length	Length values work in much the same way as percentages, starting from the upper-left corner of the element's containing box. The first length value is horizontal; the second is vertical. For example, the value "100px 200px" places the background image 100 pixels from the left edge and 200 pixels from the top edge of the containing box.
keywords	The keywords are: <ul style="list-style-type: none"> <li>• left</li> <li>• right</li> <li>• center</li> <li>• top</li> <li>• bottom</li> </ul>

**Table 8-7** Background-position property values

Figure 8-36

A centered nonrepeating background image



```
body {background-image: url(lgivy.jpg);  
background-repeat: no-repeat;  
background-position: center; }
```

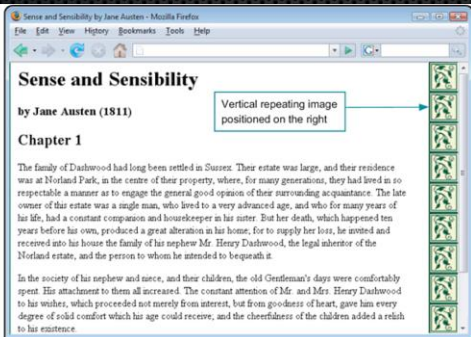
# Positioning Vertical and Horizontal Background Images

- Positions images that repeat on either the horizontal or vertical axis of the Web page
- The following rule positions the vertical repeating background image along the right side of the browser window:

```
body {background-image: url(grayivy.jpg);  
background-repeat: repeat-y; background-position:  
right;}
```

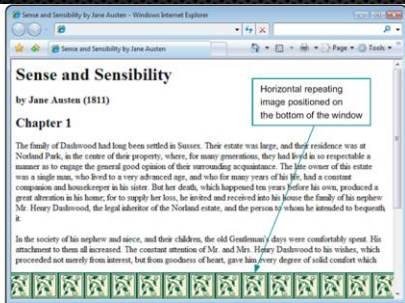
**Figure 8-37**

Positioning a vertical repeating background image



**Figure 8-38**

Positioning a horizontal repeating background image



```
body {background-image: url(grayivy.jpg);  
background-repeat: repeat-x;  
background-position: bottom;}
```

# Summary

- You currently can use only three image file formats on the Web: GIF, JPG, and PNG
  - These formats all compress images to create smaller files
  - Unless you choose the appropriate file format, your image will not compress and appear as you expect
  - SVG is a new file format from the W3C that offers vector-based graphics for the Web

# Summary (continued)

- Your computer monitor displays color by mixing the three basic colors of light: red, green, and blue (RGB)
  - Colors vary widely from one monitor to another, based on both the user's preferences and the exact brand of equipment
- Most monitors have a resolution of 72 dpi
  - When creating, scanning, or importing images, always change the final resolution to 72 dpi



# Summary (continued)

- Reduce image size to the appropriate dimensions for a Web page; if you must use a larger image, let the user view a thumbnail first, and provide the file size information
- Test your colors carefully to make sure that the widest variety of users can access your content; consider restricting your color palette to the colors available in the browser-safe palette to ensure the greatest portability of your Web pages
- Color names are not always the best way to specify color values because of their variable nature; consider using RGB or the more common hexadecimal values instead

# Summary (continued)

- Use the color property to set foreground colors for elements; remember that the element border defaults to the element color unless you specifically state a border color
- Background colors affect any padding areas in the element; they can be applied to both block-level and inline elements
- Choose background images that do not detract from the legibility of your content
- Use the background-repeat and background-position properties to control the appearance of images in the background
- Test your work on different browsers and computing platforms, as they render colors differently; test at different color depths as well