Design for the screen

    1. The shape of computer screen.

    2. Design pages that provide enough contrast.

    3. Computer screens use a much lower resolution than the printed page.
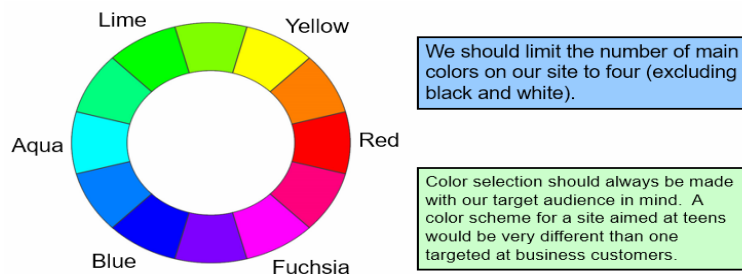
    4. A screen is not a page.

Designing a Website

Standard web design principles offer us some guidance on key aspects, such as:

- Choice of a site color scheme.
- Choice of text font and size.
- Placeholder text.
- Use of white space.
- Location of navigation menus.
- Planning for different browsers and screen resolutions.
- Testing.

Choosing a Color Scheme

The background colors and graphics we use have a tremendous effect on the mood evoked for our visitors. We can use a color wheel to assist us with making selections:


We should limit the number of main colors on our site to four (excluding black and white).

Color selection should always be made with our target audience in mind. A color scheme for a site aimed at teens would be very different than one targeted at business customers.

Complementary Color Scheme

Complementary colors are directly across from each other on the color wheel:

This strong contrast lends a vibrant, energetic feeling to a site.
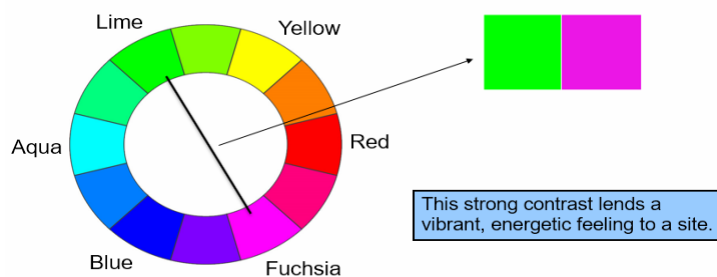
Triad Color Scheme

Triads are three different colors equidistant from one another on the color wheel:

Color triads offer a vibrant feel with a lot of color diversity.
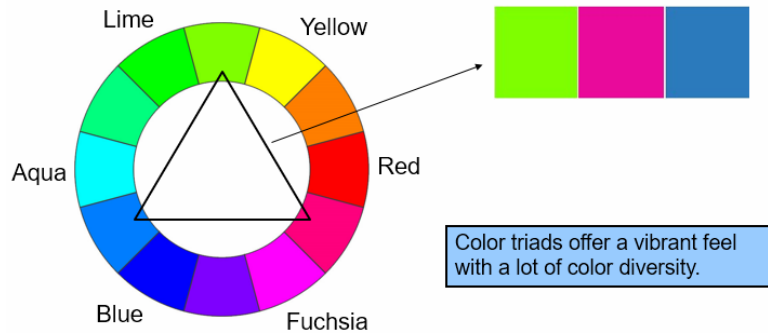
Analogous Color Scheme

Analogous colors are those that are next to each other on the color wheel:

Analogous colors are pleasing to the eye and make for a peaceful, serene design.
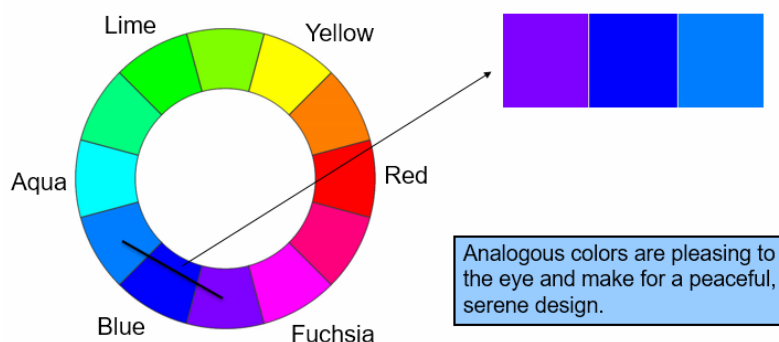
Choosing Fonts and Sizes

When choosing fonts, font sizes, and text colors for our site, we should keep the following tips in mind:

- Many designers use two different fonts for their sites: one for headings and one for regular body text.

- Font size must be large enough to read easily. Consider 12px to be the minimum acceptable size.

- Black text on a white background is the most common. However, any light color text with a dark background or dark color text with a light background can be acceptable, provided there is strong contrast.

- Avoid using bright colors for text.

- Avoid underlining text or making text blue for emphasis, as this can easily be mistaken for link text. Use bold or italics for emphasis instead.

Placeholder Text

Often when designing a web page, we don't have our text content written yet, but we want to see a mock-up of how text will look on the page. In these cases, we can use the "Lorem Ipsum" text temporarily:
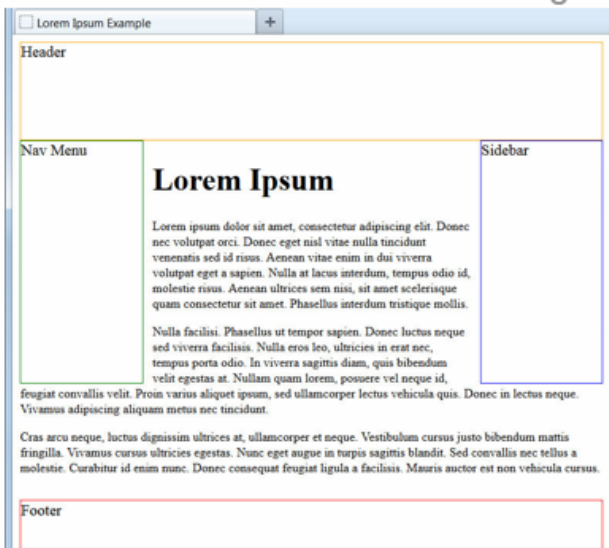
"Lorem Ipsum" is text in Latin that we copy and paste into our pages for testing. A copy is available free at lipsum.com and many other sites.

White Space

White space is the space between the elements of your web page. It does not literally have to be white; it can be the color of your background:
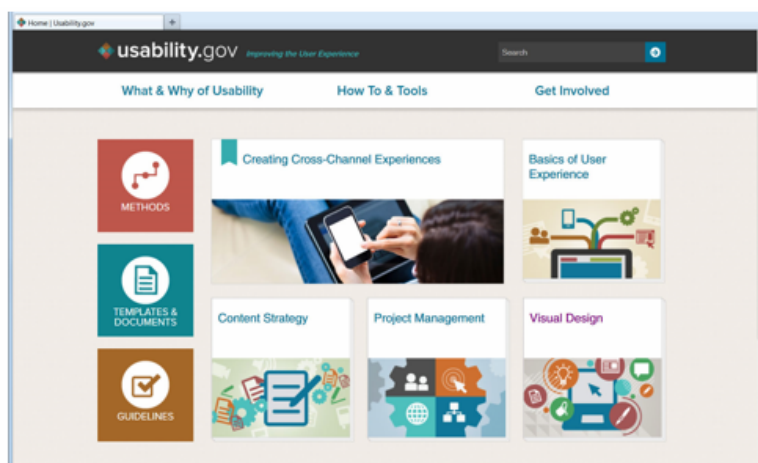
Too many elements crammed onto a page can be overwhelming to the visitor.

Plenty of white space makes for an uncluttered and easy-to-read page.

Saving Images for Web Pages

- **Image Resolution**

    – Bitmap graphics tend to have large file sizes, which makes them take longer to download.

    – Best to size bitmap images in a drawing or photo editing program before saving them.

    – Maximum size for an image should be about 600 × 400.

    – Most monitors have a resolution of 72 or 96 pixels per inch.

- Images should be saved at one of these resolutions.
- Photo editing programs typically use 72 dpi as a default.

- **Compression**
  - The higher the compression, the smaller the file size—and the lower the quality of the image.
  - What you lose in quality, you gain in speed of uploading.
  - For a photograph sized at 640 × 480, that amount of compression produces a file size of 104 KB.
  - The highest compression rate brings the file size down to 68 KB.
  - The maximum quality level puts it at 180 KB.

Navigation Menus

Most websites have their navigation links across the top or down the left side of the screen:

The logo or name of the site in the header is traditionally a link back to the home page.

Navigation menus should be consistent on all pages of a site.

Planning for Screen Resolution

- Over 99% of desktop computers now have a screen resolution of 1024 x 768 pixels or larger. If we set a site to be 960px wide, we know that nearly all visitors will see the page without having to scroll right and left.

- A site that has the width set to a specific number of pixels is said to have a **fixed-width layout**. It's much easier to plan a site with specific dimensions, but visitors with very wide screen resolutions will see excessive white space on their screens.

- By using percentages rather than pixels, a site can be made to automatically adjust its width to fit the available space of the screen. This is known as a **fluid layout**. Though often a better user experience, it's more challenging to the web designer to build and test this type of site.

- Some larger websites have an entirely separate version of their site designed for mobile devices. These sites automatically detect the mobile browser and deliver

trimmed-down content to accommodate smaller screen sizes. These sites usually have an address like "m.yahoo.com" instead of "www.yahoo.com".

Testing

There are several web browsers with major market share, and we must plan for each of them:

- Internet Explorer
- Firefox
- Chrome
- Safari
- Opera

Different web browsers can display the same page very differently. Sometimes, a page will look great in one browser but broken in another.

Good web designers test their pages in multiple browsers and screen resolutions prior to posting content live.

browsershots.org is a free website that will test a page on numerous browsers and screen resolutions and then display the results.

More Design Tips

Here are a few more design tips to bear in mind when setting out to build a website:

- Aim for consistency in the look and feel of the site. Logos, headers, footers, and navigations bars should reside in the same spot from page to page, and site colors and text should remain consistent site-wide.

- Align groups of elements horizontally or vertically on the page. Alignment makes a site both easier to use and more visually appealing.

- Always proofread your site content. There's no excuse to have misspelled words or grammatical errors. Such errors reflect poorly on you as a designer.

Web:

The Web, or World Wide Web, is the area of the Internet that allows you to display text and graphics and play videos, and movies. With appropriate equipment, you can even receive or broadcast live audio and video.

Web site:

A Web site stores information that has been organized into individual hypermedia documents, Web pages, and holds it on a server for distribution across the Internet.

Hyperlink:

A hyperlink, or link, usually appears as colored, underlined text or a graphic on a Web page. A link is a jumping-off point for moving from one subject to another.

Hypermedia document:

A hypermedia document is a document with a format that can be displayed online, in a browser. In practice, hypermedia documents are often called HTML files, although they may contain many other types of files.

Defining HTML

- Using HTML tags.
- Creating files.

HTML:

HTML is a tag-based markup language you use to create Web pages.

Browser:

A browser is a software application that allows you to view HTML documents, whether Web pages or HTML files, on your own computer. Two popular browsers are Internet Explorer and Netscape Navigator.
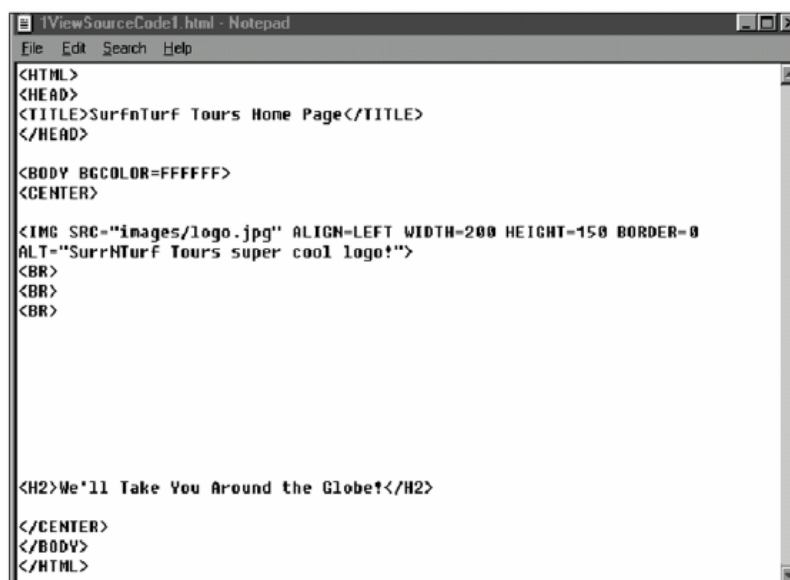
Tags:

Tags are instructions that specify how a browser should display the text and graphics on Web pages.

Source code:

Source code is the tags and text you include in an HTML file.

Source Code

Examining HTML Design Issues

- Different browsers will display the same HTML document in different ways.

Settings that affect the display of Web pages:

Window sizing	The way text flows on a Web page depends on whether a browser is set to maximize or re-size windows as they open.
Desktop display	On monitors set to a 16-color display or a 256-color display, a Web page looks much different. If the page was designed on a computer that is set to 800 x 600 pixels, it will display differently on a computer set to 640 x 480 pixels.
Browser color settings	Browsers may allow the viewer to override the colors of hyperlinks to other Web subjects or pages.

- HTML standards are set and maintained by the World Wide Web Consortium
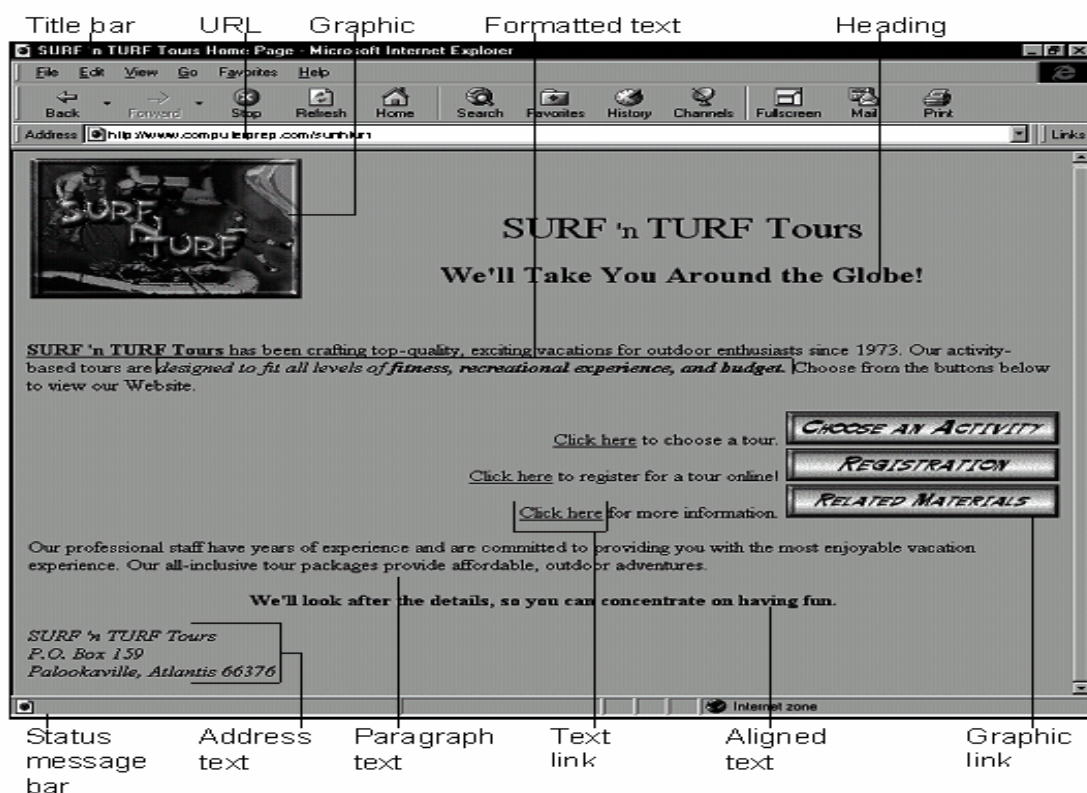
Backward compatibility:

Backward compatibility is the idea that earlier versions of HTML, and the Web pages developed with those versions, should not be made obsolete. Browsers must accommodate several versions.

Key elements of HTML 4.0

- Provisions for accessibility — alternative displays and multimedia formats for persons with special physical needs.

- The use of style sheets, which are collections of tags that can be applied as a group to an HTML document.

- The use of Document Type Definitions (DTDs), which define and apply certain building blocks for similar types of Web documents.

Identifying Web Page Elements

Title bar · URL · Graphic · Formatted text · Heading · Status message bar · Address text · Paragraph text · Text link · Aligned text · Graphic link

Identifying Web Page Elements

Title bar	Indicates the title of the Web document. The title appears in the window border.
URL	Stands for Universal Resource Locator, which is the Internet address of the Web document.
Graphic	Displays a graphic file on a Web page.
Formatted text	Displays text that has been formatted with HTML text attributes, such as bold or italic.
Heading	Displays text that has been formatted as a heading, using HTML Heading tags.
Status message bar	Displays messages pertaining to Web page elements and downloading processes.

Address text	Displays text in a special address font that is associated with the Address tag.
Paragraph text	Displays the body text of a document.
Text link	Displays a word or phrase that can connect the viewer to another document or resource area on the Internet. Text links are also called hypertext links, and they usually appear underlined or in a distinctive color.
Aligned text	Formats text that appears left-, center-, or right-justified, as specified in an alignment attribute.
Graphic links	Displays a graphic element that can connect users to other document resource areas on the Internet. Graphic links are also called hypermedia links.

Writing Source Code

- Gather the tools for writing HTML code.

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- Use tags.
- Create an HTML document.
- View an HTML document in a browser.

Gathering the Tools for Writing HTML Code

- HTML Web page authors require three basic tools:
  - Computer with graphics capabilities
  - Text editor (NotePadd++)
  - Browser software application

Text editor:

A text editor is a software application used to create and manipulate text, such as Notepad and WordPad.

Extensions:

Extensions are tags added to HTML documents to identify certain types of files included in those documents. Examples include .wav for WAV audio files, or .jpg for a certain type of graphics file.

.avi	AVI video
.gif	GIF graphics format
.htm, .html	HTML files
.jpg	JPEG graphics format
.txt	Text file

Using Tags

- Tags serve as the foundation of HTML documents.
- Tags define the elements and characteristics of HTML documents.

Attributes:

Attributes define a specific application of a tag. You associate an attribute with a tag by including it within the tag brackets.

- **Sample tags with attributes:**

`<HR SIZE=40>`	SIZE=40 designates a hard rule (line) to be 40 pixels wide.
`<LI TYPE=I>`	TYPE=I identifies the list (LI) is to have capital Roman numerals.
`<BODY BGCOLOR=YELLOW>`	BGCOLOR=YELLOW sets the background (BG) color to yellow.
`<A HREF="http://www.computerprep.com">`	HREF is an attribute of the tag A. It specifies the target of the link. In this example, the target is the ComputerPREP home page.

Creating Lists

- Bulleted List Tags Include:
  -
    - defines the start and the end of a bulleted list
  -
    - defines the start and end of an item

Design Differences

- Tables

  - Creating columns is not possible in HTML code because text spans the width of the screen

  - **Tables**, however, can be used to create the appearance of columns

  - They also provide spacing options for images.

Tables

- **Table tags include:**
  - **<table> </table>**
    - **creates a table**
  - **<th></th>**
    - creates a table header, which is a cell with bold, centered text in the 1st row of the table
  - **<tr></tr>**
    - **defines the start and end of a table row**
  - **<td></td>**
    - **defines the start and end of a table data cell**
- **Fonts**

  - Font sizes can be set on a numbering system from 1-7. The use of numbers allows the computer to enlarge the font proportionally.

  - When selecting font color you want to select both font & background colors that offer high contrast, making them easy to read.

Hyperlinks

- A hyperlink, also called a link, is text displayed in a browser window that can be clicked to display a different HTML document in the browser window.
- Displayed as blue underlined text in the browser window.
- The anchor tag () is used in an HTML document to mark text that is a link.

Color

- When choosing which category will work best, your choice should be 216 Web-safe colors, even though this is limiting, it helps guarantee that all colors will be seen by all users

- Colors are identified with HTML code

  - The *hexadecimal number* is generally provided by most graphic programs

Basic Color Rules

- **Blue** is relaxing & a popular choice
- **Red** is visible & powerful
- **Purple** gives a sense of importance to a page
- **Yellow & green** are well received
- **Brown** can be used to simulate leather or a wood finish, providing a sense of dignity

Images

- **Images** can include JPEG, GIF graphics, bullets, flash files, & video

- A standard technique when using large images is to create thumbnails

    – **Thumbnails** are smaller versions of a larger image. They can be clicked on to reveal the full-size image.
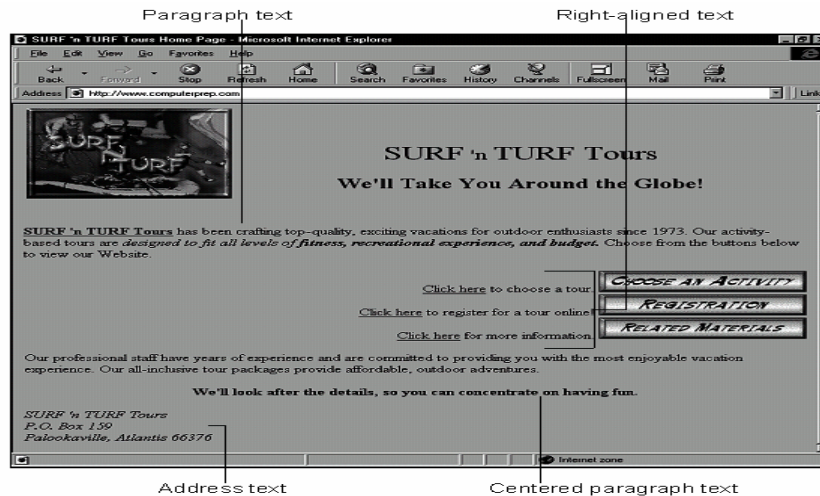
Scrolling Marquees

- **Marquees** run text across the page

- Even though they are text they are treated more like graphics because animation is involved

- **Four sets of standard HTML tags:**

`<HTML> </HTML>`	Starts and ends every HTML document; indicates that the document is formatted for HTML.
`<HEAD> </HEAD>`	Defines the area where you place the document heading. The heading usually appears at the top of the browser window and should describe your document.
`<TITLE> </TITLE>`	Displays the document title. This command is nested within the <HEAD> tag and is used by the Web browser to help locate your page. It does not appear in the browser text display, but in some browsers it appears in the title bar of the browser window. Use only one title per Web page.
`<BODY> </BODY>`	Indicates the content area of the HTML document.

Placing Text on the Page

- Format paragraphs.
- Create line breaks.
- Format addresses.
- Create block quotes.
- Use the Preformat tag.

Web Page Text Formatting

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Paragraph text	Text delimited by the Paragraph tag <P>, with or without its closing tag. Browsers display paragraph text without formatting, unless you specify format attributes.
Address	A line or lines delimited by the <ADDRESS></ADDRESS> tags and recognized by browsers as the address of the Web page author or owner. While all browsers recognize the tag pair, not all display an address in the same way.
Center-, left-, or right-aligned paragraph text	Paragraph text that has been marked with alignment attributes.