

# CGS 3175: Internet Applications Fall 2007

## Web Site Design – Part 1

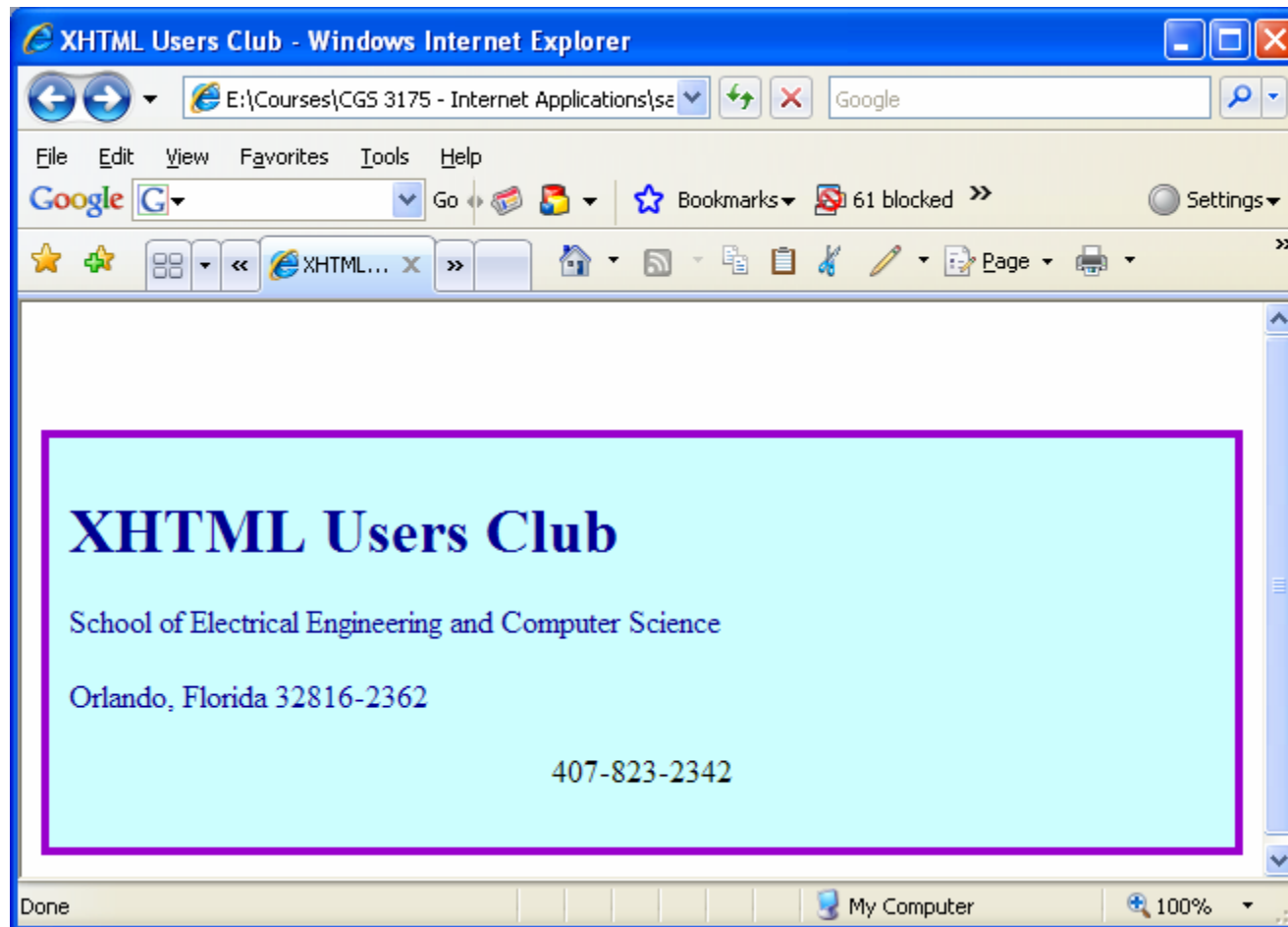
Instructor : Dr. Mark Llewellyn  
markl@cs.ucf.edu  
HEC 236, 407-823-2790  
<http://www.cs.ucf.edu/courses/cgs3175/fall2007>

School of Electrical Engineering and Computer Science  
University of Central Florida



## Some More Practice – From CSS Part 2

7. Create an XHTML document and a linked style sheet that will generate the document shown below when viewed with a browser. Use the color charts on the two previous pages to set the colors.



# Practice Problem #7 – The XHTML File

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>XHTML Users Club</title>
    <link rel="stylesheet" href="prac-prob-7.css" type="text/css" />
  </head>
  <body>
    <div class="box">
      <h1> XHTML Users Club </h1>
      <p></p>
      <p> School of Electrical Engineering and Computer Science
</p>
      <p> Orlando, Florida 32816-2362 </p>
      <p class="right"> 407-823-2342</p>
    </div>
  </body>
</html>
```



# Practice Problem #7 – The Style Sheet

```
/* Cascading Style Sheet For Practice Problem #7 */

/* define a class called box */
div.box {
    margin-top:50px;
    background-color: #CCFFFF;
    color: #000090;
    border-style: solid;
    padding: 10px;
    border-color: #9900CC;
}

/* define styles for <p> element */
p {
    font-size:12pt;
}

/* define a class to align text to the right in paragraphs */
p.right {
    text-align: center;
    color:black;
}
```



# Web Site Design

- Web sites are designed around the needs of its audience. You need to clearly define the audience. Why did they come to your site? What are they looking for?
- A Web site needs a clear and specific list of purposes. The list should include broad long-term goals as well as specific measurable objectives.
- A Web site should take advantage of the technologies that help it serve the needs of the audience, including text, images, sound, video, and interactivity.



# Determining Your Site's Purpose

- Once you know **who** will be using your site, you need to think about **what** they will use your site for, and **why**.
- Part of the site's purpose will be determined from the user's reasons for visiting the site and is thus determined by the audience definition. The rest of the purpose is based on the organization's reasons for publishing the site.
- For example, consider the hypothetical Mark's Bike Web site:
  - The purpose of the Mark's Bike Web site is to increase the direct online sales of high-end bike equipment by 30% over the next three quarters. The site will display sixty key items from our line, with two types of color photos: the piece of equipment itself and the equipment installed on a bike. The site will make it easy for customers to find the equipment that best meets their needs and will make it easy for them to purchase the equipment online with a credit card.



## Determining Your Site's Purpose

- The goals state the desired long-term results, such as “to increase the direct sales of high-end bike equipment by 30% over the next three quarters.”
  - Goals are often organization centered, but they can be user centered as well such as “ to provide a wider range of services to online readers of the newspaper.”
- Objectives include specific means and methods used on the site to accomplish the goals, such as” to display 60 key items from our line....”
  - Objectives are often stated in user-centered terms.



# Web Site Design

- As a web site visitor, you have probably found that certain Web sites are appealing and easy to use while others seem awkward or just plain annoying.
- What separates the good from the bad?
  - Site organization
  - Site navigation
  - Page design
  - Text design
  - Graphic design
  - Accessibility considerations





# www.nasa.gov

NASA - Home - Windows Internet Explorer

http://www.nasa.gov/

File Edit View Favorites Tools Help

Google G Go Bookmarks 61 blocked Check AutoLink AutoFill Send to Settings

NASA - Home

NASA National Aeronautics and Space Administration

- + Text Only Site
- + Non-Flash Version
- + en Español
- + Site Help & Preferences

FIND IT @ NASA :  + GO

+ Advanced Search

+ ABOUT NASA + LATEST NEWS + MULTIMEDIA + MISSIONS + MY NASA + WORK FOR NASA

+ For Kids  
+ For Students  
+ For Educators  
+ For Media & Press  
+ For Researchers  
+ For Industry  
+ For Employees

Subscribe to NASA Imagery for Your Mobile

+ LIFE ON EARTH + HUMANS IN SPACE + EXPLORING THE UNIVERSE

09.17.07 NASA Lecture Series  
+ Read More  
+ Video: The Space Economy

09.19.07 ISS 'Mates' SWAB Deck  
+ Read More

09.18.07 'Magnetic Trilobite' Sunspot  
+ Read More

09.19.07

Internet 100%



Bureau of Labor Statistics Home Page - Windows Internet Explorer

http://www.bls.gov/


File Edit View Favorites Tools Help

Google G Go Bookmarks 61 blocked Check AutoLink AutoFill Send to Settings

Bureau of Labor Statistics Home Page



## U.S. Department of Labor Bureau of Labor Statistics



[www.bls.gov](#) [Advanced Search](#) | [A-Z Index](#)

[About BLS](#) | [Jobs in BLS](#) | [Get Detailed Statistics](#) | [Economic News Releases](#) | [Glossary](#) | [What's New](#) | [Contact Us](#) | [Find It! In DOL](#)

### Inflation & Consumer Spending

[Consumer Price Index](#) • [Inflation Calculator](#) • [Contract Escalation](#) • [Producer Price Indexes](#) • [Import/Export Price Indexes](#) • [Consumer Expenditures](#) • [Price Index Research](#)

### Wages, Earnings, & Benefits


[Wages by Area and Occupation](#) • [Earnings by Industry](#) • [Employee Benefits](#) • [Employment Costs](#) • [State and County Wages](#) • [National Compensation Data](#) • [Collective Bargaining](#) • [Wage Calculator](#) • [Compensation Research](#)

### Productivity

[Productivity and Costs](#) • [Multifactor Productivity](#) • [International Comparisons](#)

### Safety & Health

[Injuries and Illnesses](#) • [Fatalities](#) • [Incidence Rate Calculator](#) • [Profiles](#)



## U.S. Bureau of Labor Statistics

### Latest Numbers

**CPI:**  
▲ -0.1% in Aug 2007

**Unemployment Rate:**  
▲ 4.6% in Aug 2007

**Payroll Employment:**  
▲ -4,000(p) in Aug 2007

**Average Hourly Earnings:**  
▲ +\$0.05(p) in Aug 2007

**PPI:**  
▲ -1.4%(p) in Aug 2007

**ECI:**  
▲ +0.9% in 2nd Qtr of 2007

**Productivity**

### Employment & Unemployment

[National Employment](#) • [National Unemployment Rate](#) • [State and Local Employment](#) • [State and Local Unemployment Rates](#) • [Mass Layoffs](#) • [Employment Projections](#) • [Job Openings and Labor Turnover](#) • [Employment by Occupation](#) • [Longitudinal Studies](#) • [State and County Employment](#) • [Time Use](#) • [Business Employment Dynamics](#) • [Employment Research](#)

### At a Glance Tables

[U.S. Economy at a Glance](#) • [Regions, States, and Areas at a Glance](#) • [Industries at a Glance](#)

### Publications

[Occupational Outlook Handbook](#) • [Monthly Labor Review Online](#) • [Compensation and Working Conditions Online](#) • [Occupational Outlook Quarterly](#) • [The Editor's Desk](#) • [Career Guide to Industries](#) • [Economic News](#)

http://www.bls.gov/bls/contact.htm

Internet 100%



University of Central Florida | (407) 823-2000 - Windows Internet Explorer

http://www.ucf.edu/

File Edit View Favorites Tools Help

Google G Go Bookmarks 61 blocked Check Look for Map AutoFill Send to Settings

University of Central Florida | (407) 823-2000

Home RSS Print Page Tools





## University of Central Florida

Stands For Opportunity

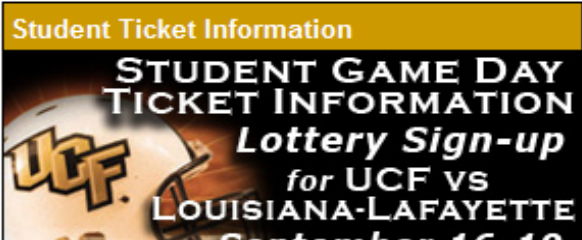
Search  [Advanced Search](#)

**myUCF** | Admissions | Academics | Research | Campuses | About UCF | Directories | Help

Prospective Students		 <p>Laurette Koellner <b>ALUMNI PROFILE</b></p>
Current Students		
Faculty & Staff		
Alumni		
Visitors		
Apply Now		
Libraries		
Athletics		
Giving to UCF		

[About This Photo](#)

### Student Ticket Information



**STUDENT GAME DAY  
TICKET INFORMATION**  
*Lottery Sign-up*  
for UCF vs  
LOUISIANA-LAFAYETTE

### News & Information

- UCF Celebrates Grand Opening of Bright House Networks Stadium  
The Knights nearly pulled off a huge upset to conclude a festive day as UCF played its first-ever football game on campus.

### Campus Events

- 3rd UCF Latin American Cultural Festival of Orlando  
Concert by "La Rondalla de Orlando" with Raíces Folclóricas Dance Group (free)
- Law School Admission Test

Done Internet 100%



University of Florida - Windows Internet Explorer

http://www.ufl.edu/

File Edit View Favorites Tools Help


Google G university of florida Go

Bookmarks 61 blocked Check AutoLink AutoFill Send to Settings

University of Florida

University of Florida UF Web with Google Search

- ❖ **About UF**  
Administration, Maps, Tours, Facts, Giving, Jobs, News, Spotlights, ...
- ❖ **Academics**  
Colleges, Courses, Libraries, ISIS, Advising, Continuing, Distance, ...
- ❖ **Admissions**  
Undergrad, Graduate, Transfer, International, Financial Aid, ...
- ❖ **Campus Life**  
Arts, Community Service, Athletics, Housing, Student Involvement, ...
- ❖ **Research**  
Centers & Institutes, Fellowships, Programs, Undergrad Research, ...
- ❖ **Services**  
Goods & Shopping, Health & Safety, Computing, Transportation, ...



**Special Announcement**

- ❖ President Machen addresses issues related to student arrest. [more...](#)

**Research News** *Breakthroughs & discoveries*

- ❖ UF becomes first university in U.S. to establish EU-funded Jean Monnet Centre. [more...](#)
- ❖ Long-term artificial reef project may break grouper 'bottleneck,' UF researcher says. [more...](#)

Video/Photos	Spotlights
Calendar	Web Site Listing
Directory	Campus Map
MyUFL	WebMail
ISIS	Ask UF (FAQ)

- ❖ Students
- ❖ Faculty & Staff
- ❖ Alumni, Donors & Friends
- ❖ Parents, Patients & Visitors

Internet 100%



Amazon.com: Online Shopping for Electronics, Apparel, Computers, Books, DVDs & more - Windows Internet Explorer

http://www.amazon.com/

File Edit View Favorites Tools Help

Google G university of florida Go 61 blocked Check AutoLink AutoFill Send to Settings

Amazon.com: Online Shopping for Electronics, Appare...

amazon.com Prime Mark's Amazon.com See all 41 Product Categories Your Account Cart Your Lists Help

Gift Certificates/Cards International Hot New Releases Bestsellers Today's Deals Sell Your Stuff


Search Amazon.com GO Gift Certificates Web Search GO

Hello, Mark Llewellyn. We have [recommendations](#) for you. (If you're not Mark Llewellyn, [click here.](#))

**Browse**

- Books, Music & Movies
  - Books
  - Movies & TV
  - Magazines & Newspapers
  - Music
  - Textbooks
  - Unbox Movie & TV Downloads
- Clothing & Accessories
  - Apparel & Accessories
  - Jewelry & Watches
  - Shoes

**New iPods at Amazon.com**



Shop now at Amazon.com

**Amazon Daily BLOG** 10 posts since yesterday Posts for Mark

**Treat Yourself**

**Miniskirts and Muffins**

Get your copy of Mitch Fatel's new Stand-Up comedy CD "miniskirts and muffins." You'll... [Read more](#)

> [See more in your Wish List](#)

**New For You**



ADVERTISEMENT

**FOR \$149.**

HP is your reliable choice for



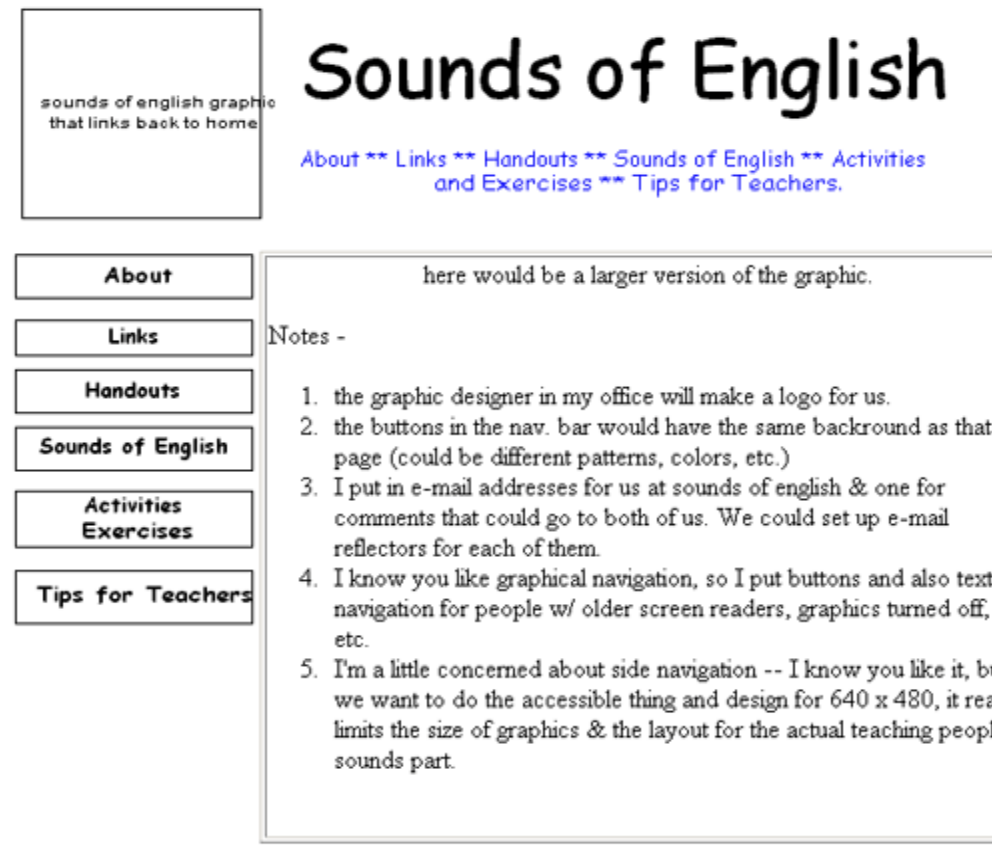
# Web Site Organization

- How will visitors move around your site? How will they find what they need?
- The answers to these questions are largely determined by your Web site's organization or architecture.
- There are three common types of Web site organization:
  - Hierarchical
  - Linear
  - Random (sometime called Web organization)



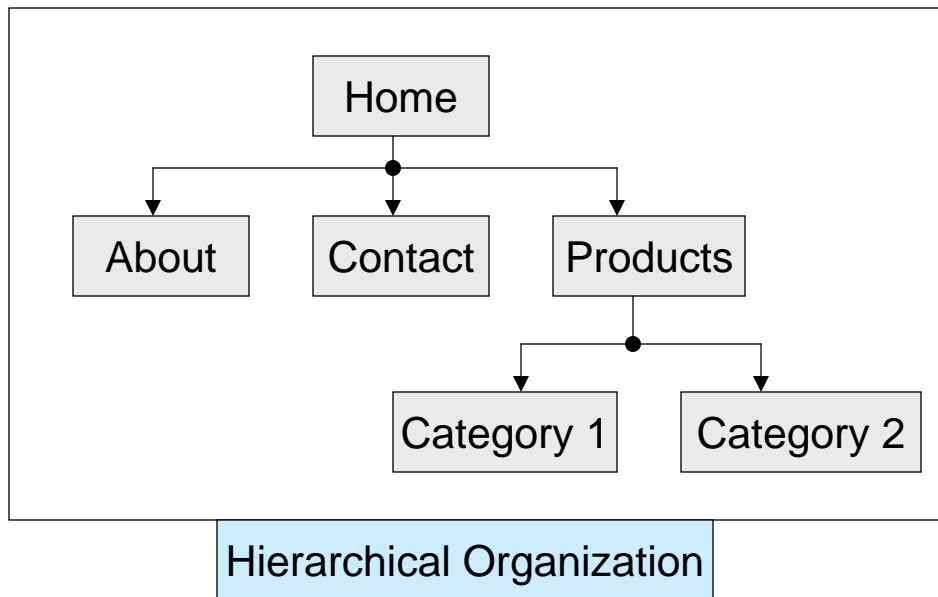
# Web Site Organization

- A diagram of the organization of a Web site is called a site map or storyboard. Creating the site map is one of the initial steps in developing a Web Site. Here is a sample storyboard.



# Hierarchical Organization

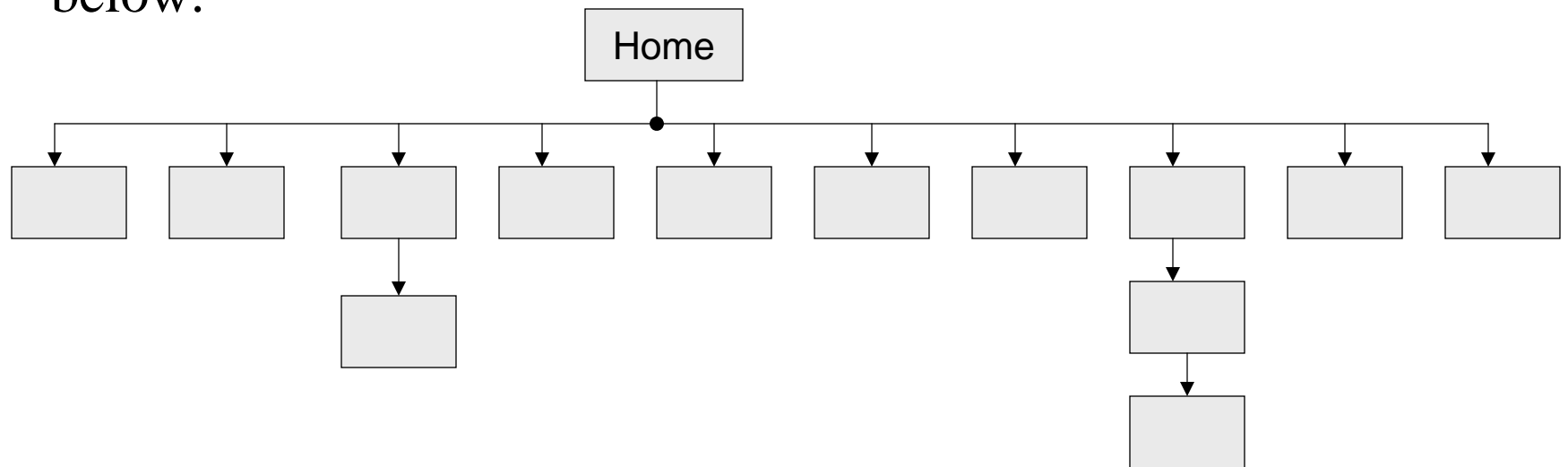
- Most Web sites use hierarchical organization.
- A site map for hierarchical organization is characterized by a clearly defined home page with links to major site sections. Web pages within sections are placed as needed.





# Hierarchical Organization

- Care should be exercised with this design to avoid making the hierarchy too shallow – meaning that there are too many major sections. An example of a very shallow hierarchy is shown below.



- Such a design should be broken down into small, easily managed topics or units, a process called **chunking**. For most Web page designs, each unit of information is a page.



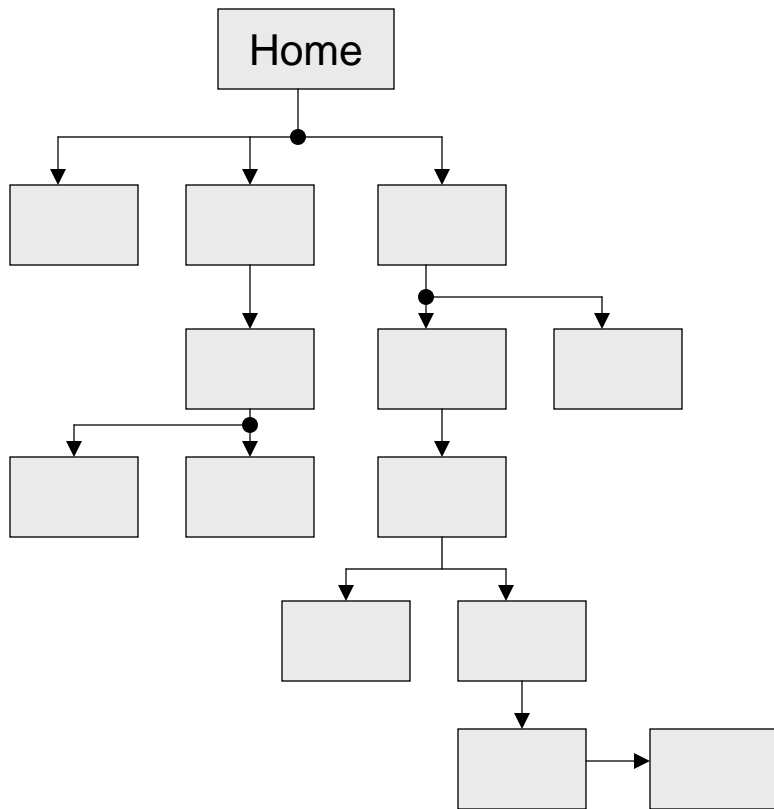
# Hierarchical Organization

- Research psychology has determined that most humans can store only five to nine chunks of information at a time in short-term memory. This is often referred to in HCI (and other disciplines) as the “7 plus or minus 2 principle”.
- Web designers adhering to this principle will try not to place more than nine major navigation links on a page, unless they are creating a very large site. Even then, they may try to chunk the navigation links into visually separate sections on the page with each group having no more than nine links.



# Hierarchical Organization

- Care should also be exercised with hierarchical designs to avoid making the hierarchy too deep – meaning that there are too many links to follow to get to various major sections. An example of a too deep hierarchy is shown below.



- The interface design “three click rule” says that a Web page visitor would be able to get from any page on your Web site to any other page on your Web site with a maximum of three hyperlinks. In other words, a visitor who cannot get what they want in three mouse clicks will begin to feel frustrated and may leave your site.
- This rule may be very difficult to satisfy on a large site, but in general the goal is to organize the site so that your visitor can easily navigate from page to page within the site structure.



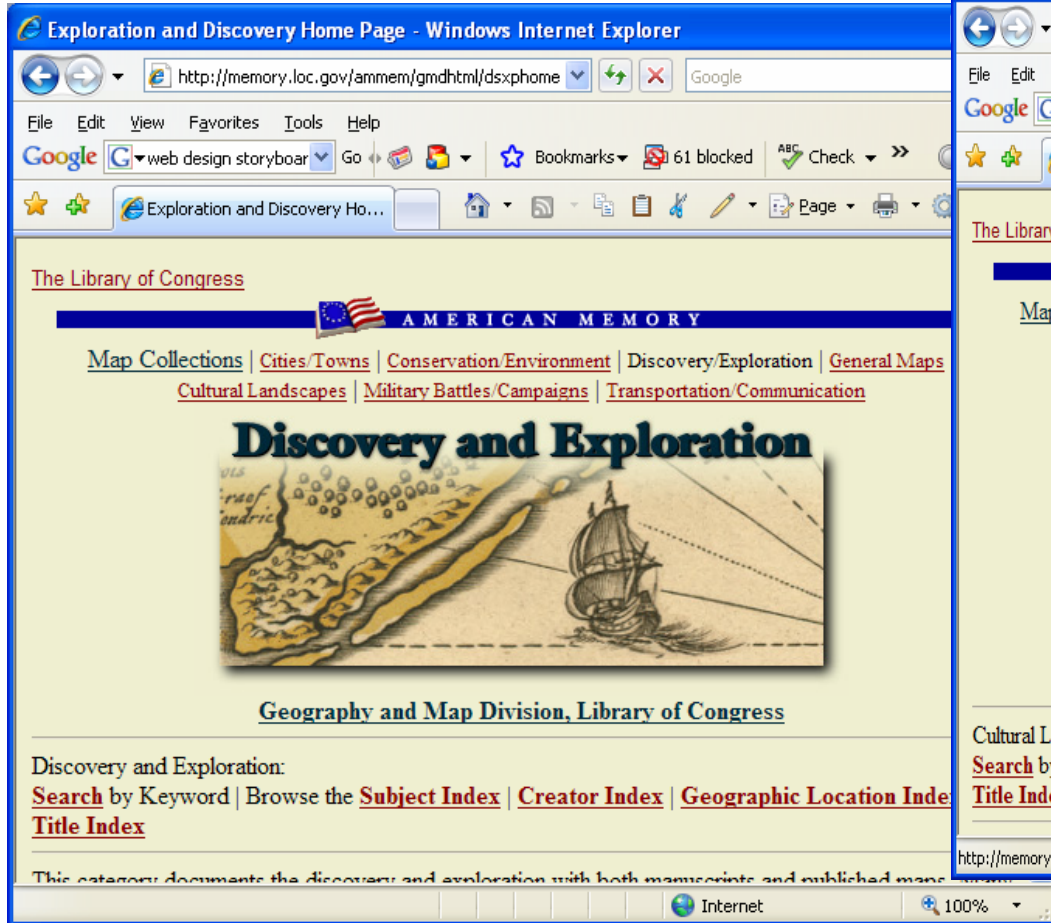
# Hierarchical Organization

- An example of hierarchical organization is the Map Collections area of the Library of Congress site at:  
<http://memory.loc.gov/ammem/gmdhtml/grndhome.html>.
- The Map Collections Home Page contains the navigation to the main map areas. It functions as a map to the site and it is intentionally different from the content pages (see next page).



# Hierarchical Organization

- The main content pages of a site usually have a similar look and feel. Two content pages from the Map Collections are shown below. Notice how similar the pages look.



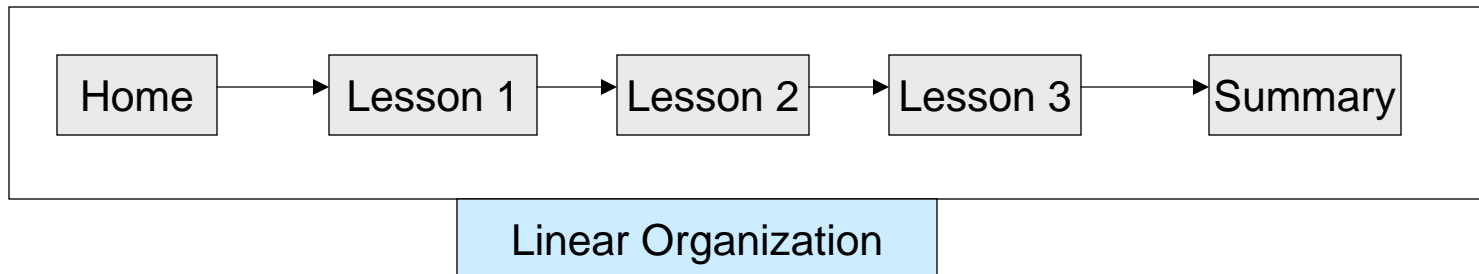
## Hierarchical Organization

- Each main section may have one or more subpages.
- Some sites with hierarchical organization may use a consistent design for the home page and the content pages (unlike the Map Collections case). Either method is acceptable practice.
- Most commercial sites, such as Amazon and eBay use hierarchical organization.



# Linear Organization

- When the purpose of a site or series of pages on a site is to provide a tutorial, tour, or presentation that needs to be viewed in a sequential fashion, linear organization is most useful.



## Linear Organization

- Some Web sites use hierarchical organization in general, but with linear organization in a few small areas.
- An example of this type of organization is the National Library of Medicine site at: <http://www.nlm.nih.gov>. The main site organization is hierarchical with linear organization used for tutorials.





# Linear Organization

The screenshot shows the National Library of Medicine website in a Windows Internet Explorer browser window. The address bar displays <http://www.nlm.nih.gov/>. The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The toolbar contains various icons for navigation and utility, including a search bar with the Google logo. The website header features the NLM logo and the text "United States National Library of Medicine National Institutes of Health". A prominent banner for "Human Genome Exploration" is visible. The main content area is organized into several sections: a left-hand navigation menu with categories like "Health Information", "Library Catalog & Services", and "Human Genome Resources"; a central "Especially for:" section listing target audiences such as "The Public" and "Health Care Professionals"; a "Current Health News" section with links to articles like "Aerobic, Weight Training Combo Best Against Diabetes"; and a right-hand sidebar with a search bar, a "List of NLM Databases and Resources" link, and a "PubMed" advertisement. The status bar at the bottom of the browser shows "Done" and "Internet" with a 100% zoom level.



# Linear Organization

PubMed Tutorial - Overview - Windows Internet Explorer

http://www.nlm.nih.gov/bsd/disted/pubmedtutorial/index.html

File Edit View Favorites Tools Help

Google web design storyboar Go Bookmarks 61 blocked Check AutoLink AutoFill Send to web Settings

PubMed Tutorial - Overview

NLM National Library of Medicine

## PubMed Tutorial

Introduction PubMed Overview MeSH Vocabulary

### Welcome!

Welcome to the "PubMed Tutorial", the Web-based learning program that will show you how to use the National Library of Medicine's (NLM®) journal literature search system.

**NOTE:** The PubMed Tutorial has moved to <http://www.nlm.nih.gov/bsd/disted/pubmedtutorial/>. Please update your links. We apologize for the inconvenience.

For brief tutorials on specific topics, see also the [PubMed Quick Tours](#)

This tutorial was last updated in August 2007 and reflects changes to PubMed through July 2007. To see a list of recent PubMed changes, go to PubMed's [New/Noteworthy](#).

### Using the Tutorial

The tutorial was designed to work on Windows® Operating Systems with Microsoft Internet Explorer® version 6+ or with Netscape™ version 7+, and works best on Macintosh® computers using Mozilla Firefox™ or Opera™ 8+. It contains animated demonstrations of procedures, for which you will need the Adobe® Flash™ player. The Flash player can be [downloaded](#) and installed at no cost from

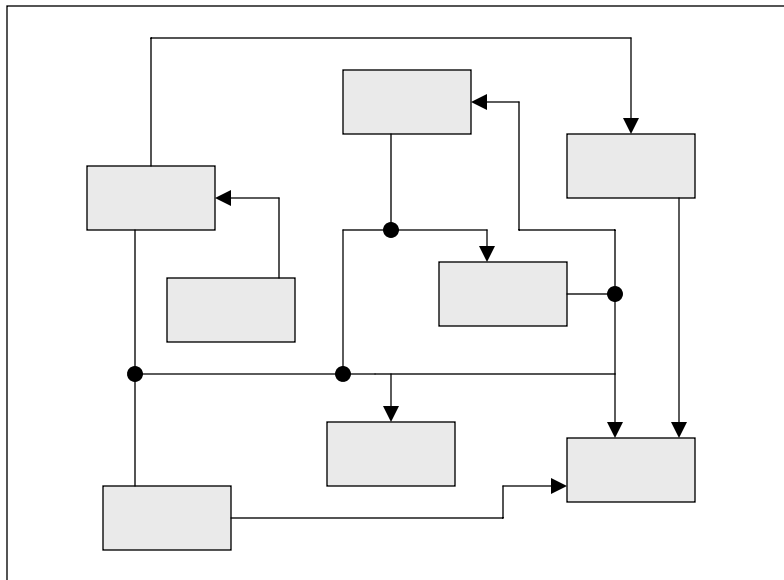
Overview  
Using PubMed  
Working with Search Results  
Feature Tabs  
My NCBI  
Links  
PubMed Services  
Search Field Descriptions  
Final Review  
Previous Next  
Glossary

Done Internet 100%



# Random Organization

- Random organization (also sometimes referred to as Web organization) offers no clear path through the site. There is often no clear home page and no discernable structure.
- Random organization is not as common as hierarchical or linear organization and typically found only on artistic sites or sites that strive to be especially different.
- This type of organization is typically not used for commercial Web sites.



Random Organization



# Web Site Navigation

- Sometimes Web developers are so close to their sites that they can't see the forest for the trees. A new visitor will wander into the site and not know what to click or how to find out what it offers.
- Clearly labeled navigation on each page is helpful and it should be in the same location on each page for maximum visibility. You don't want the visitor to feel lost in the site.
- Larger sites will often provide breadcrumb trails which are personalized to show each visitor where they currently are in the site and how they got to that location. You've probably seen these at some sites you've visited before, but a good example of this can be found at <http://www.fdic.gov> (see next page).



# Web Site Navigation

The screenshot shows a Windows Internet Explorer browser window titled "FDIC: Consumer Alerts - Windows Internet Explorer". The address bar displays the URL "http://www.fdic.gov/consumers/consumer/alerts/index.html". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The toolbar contains various icons for navigation and utility. The main content area features the FDIC logo and a navigation menu with the following items: HOME, DEPOSIT INSURANCE, CONSUMER PROTECTION, INDUSTRY ANALYSIS, and REGULATION & EXAMINATION. Below the menu, a breadcrumb trail is displayed: "Home > Consumer Protection > Consumer Resources > Consumer Alerts". A red arrow points to the "Consumer Alerts" link. The page content includes a section titled "E-Mails Claiming to Be From the FDIC" with a sub-header "E-Mails Claiming to Be From the FDIC". The text below the sub-header reads: "Con artists know that people trust the FDIC name. That's why they may use fraudulent e-mails trying to obtain valuable information from consumers and b... scams are commonly referred to as 'phishing.' Con artists use fake Web sit... valuable personal information from consumers." Below this, a paragraph states: "The FDIC does not send out unsolicited e-mails or ask for detailed per... Additionally, the FDIC does not ask people for the PIN numbers, passwords... information for their credit card, bank or other financial accounts. If you get this sort of e-mail appearing to be from the FDIC, you should assume that it is fraudulent." At the bottom of the page, it says: "To report a fraud, send an e-mail to the FDIC financial crimes unit at [alert@fdic.gov](mailto:alert@fdic.gov) or call the FDIC toll-free at 1-877-ASK-FDIC (1-877-275-3342)". The browser's status bar at the bottom shows "Internet" and "100%".

This "breadcrumb trail" shows that the visitor has arrived at this page by coming from the home page to the consumer protection page followed by the consumer resources page and are currently at the consumer alerts page. These are hyperlinks which allow the user to rapidly return to any page along the trail.



# Navigation Bars

- Navigation bars, either graphic or text-based, make it obvious to your users where they are and where they can go next.
- The U.S. Department of Justice site uses a vertical text-based navigation bare down the left side of the page. You can see this at: <http://www.usdoj.gov>. This is shown on the next page after clicking the Jobs link. Notice that the “Current Vacancies” link is shown on a contrasting background to provide a visual cue that the visitor is at that location. The page header and page title also display the text “Current Vacancies”. The navigation bar indicates other choices available to the Web site visitor.



# Navigation Bars

Note the title bar indicates location

Contrasting background to indicate location

USDOJ: Employment: Current Vacancies - Windows Internet Explorer

http://www.usdoj.gov/06employment/06\_1.html

File Edit View Favorites Tools Help

Google department of justice Go

USDOJ: Employment: Current Vacancies

SEARCH

- ▶ ABOUT DOJ
- ▶ WHAT WE DO
- ▶ PRESS ROOM
- ▼ **JOBS**
  - Current Vacancies**
  - Career Information
  - Legal Job Information
  - Student Opportunities
  - Employer Support of the Guard and Reserve
  - No Fear Act Summary Data
- ▶ WORKING WITH DOJ
- ▶ RESOURCES

### Current Vacancies

- [Department of Justice Career Opportunities](#)  
**Note:** Department of Justice agencies post vacancy announcements directly on the U.S. Office of Personnel Management's USAJobs Web site. This link goes to current Department of Justice vacancies at this address:  
<http://jobsearch.usajobs.opm.gov/a9dj.asp>
- [Attorney Vacancies](#)
- [Apply for a Job at the FBI](#)
- [Bureau of Alcohol, Tobacco, Firearms, and Explosives Vacancy Announcements](#)
- [Civil Rights Division](#)
- [Criminal Division Vacancy Announcements](#)
- [Deputy Attorney General Internship Opportunities](#)
- [Environment and Natural Resources Division Employment Opportunities](#)



# Navigation Bars

- Sometimes graphics are used to convey navigation, as is the case in the Web site for the U.S. Department of Transportation at <http://www.dot.gov>.
- The tabs provide horizontal graphics-based navigation on this site. The “text” for the navigation is actually stored in image files. This technique of placing text in navigation images is used to create interactive Web pages. In this case, Javascript (we’ll learn this later in the semester), is used to detect when the visitor has placed the mouse over an image of text which then displays an alternate image.





# Navigation Bars

The screenshot shows a Windows Internet Explorer browser window displaying the U.S. Department of Transportation website. The address bar shows <http://www.dot.gov/>. The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The toolbar contains various icons for navigation and utility, including a search box with the text "Google" and "department of justice". The website header features the U.S. Department of Transportation logo and a navigation bar with links for HOME, CITIZEN SERVICES, BUSINESS SERVICES, GOVERNMENT SERVICES, and CONTACT US. A "Quick Search" box is also present. The main content area includes a "LATEST NEWS!" section with a headline about BTS releases July Passenger Airline Employment Data, a photo of an airplane, and a portrait of U.S. Transportation Secretary Mary E. Peters. Below this are sections for "Information from the U.S. DOT on the Minneapolis Bridge Collapse", "Top Requests" (including Airline Issues and Drug and Alcohol Testing Rules), and "Special Features" (including DOT's Congestion Initiative and "MOVING THE AMERICAN ECONOMY"). The status bar at the bottom shows the current page URL as [http://www.dot.gov/citizen\\_services/index.html](http://www.dot.gov/citizen_services/index.html) and the zoom level at 100%.



# Part of the HTML file for the DOT Site

```
www.dot[1] - Notepad
File Edit Format View Help

    if ((x=MM_findObj(a[i]))!=null){document.MM_sr[j++]=x; if(!x.oSrc) x.oSrc=x.src; x.src=a[i+2];}
}
//-->
</script>
<meta http-equiv="Content-Style-Type" content="text/css">
<base href="http://www.dot.gov/index.cfm">
<link href="dotstyles.css" rel="stylesheet" type="text/css">
</head>
<body leftmargin="2" topmargin="0" onLoad="MM_preloadImages('buttons/homeR.gif','buttons/citizenServicesR.gif','buttons/bus

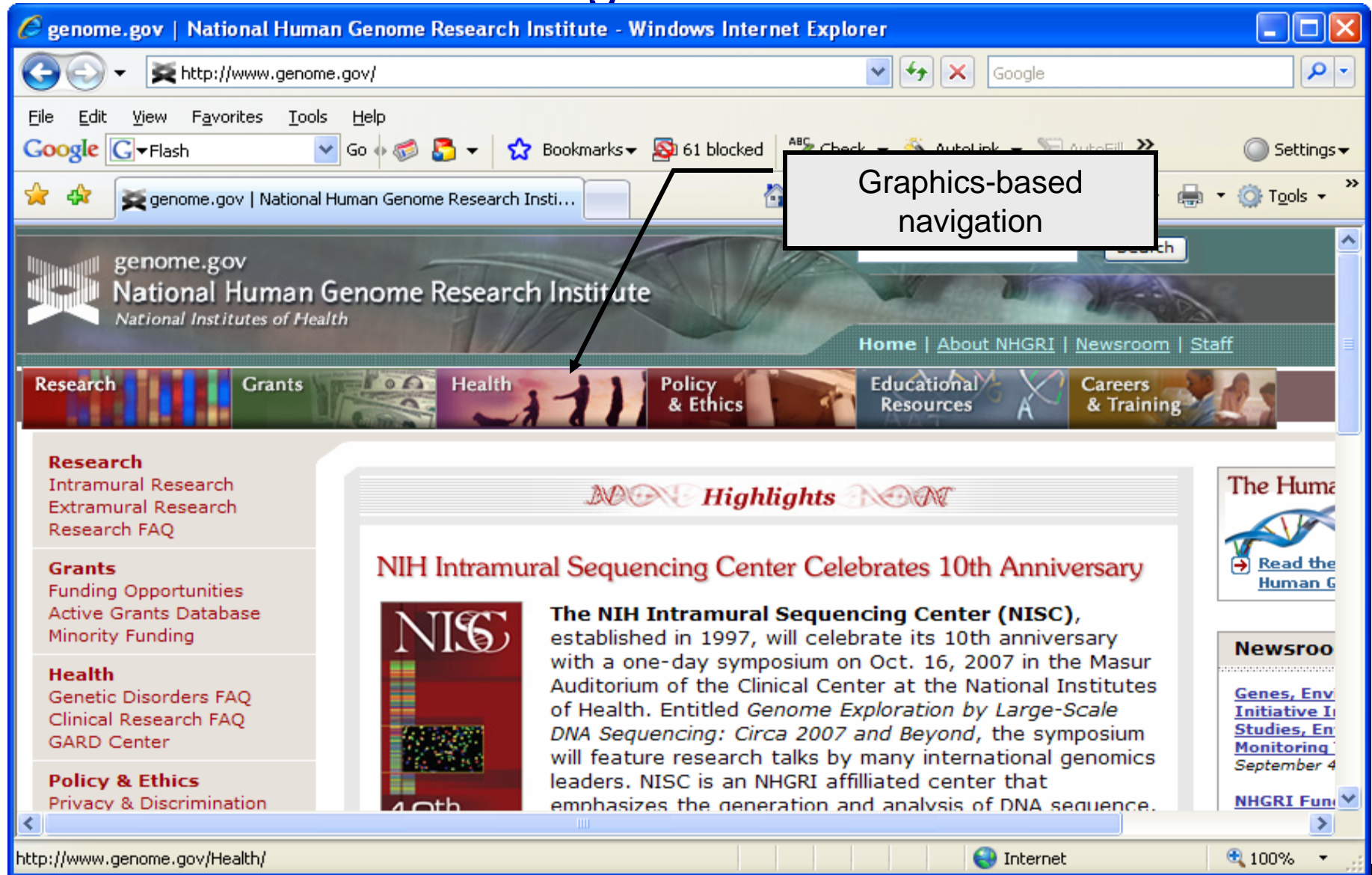
<table width="622" height="73" border="0" align="center" cellpadding="0" cellspacing="0" background="images/header.jpg">
<tr><td><a href="#content"></a></td>
<form name="cn" action="http://search.google.dot.gov/dot/DOTSearchProcess.asp">
<div align="right">
<input type="hidden" name="ie" value="">
<input type="hidden" name="site" value="DOT_Pages">
<input type="hidden" name="output" value="xml_no_dtd">
<input type="hidden" name="client" value="DOT_Pages">
<input type="hidden" name="lr" value="">
<input type="hidden" name="proxystylesheet" value="DOT_Pages">
```

The external (linked) style sheet reference

Graphic-based navigation button definitions



# Navigation Bars

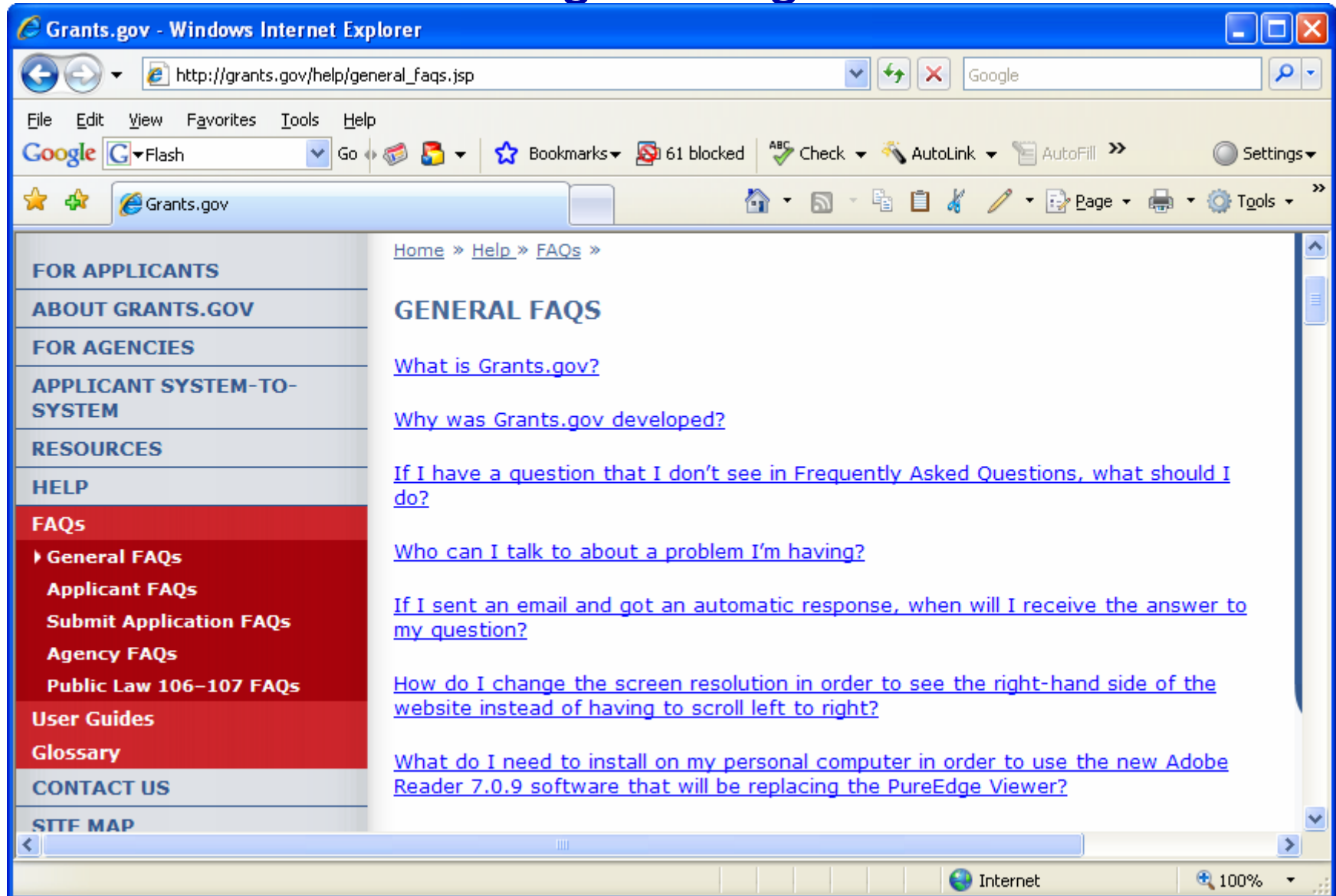


# Page Design

- **Short Pages** – A Web page is considered long if it is three or more screen lengths. Long pages are usually slower to load. Most visitors will only be interested in portions of a long page, so consider breaking a long page into multiple short pages – possibly using linear organization to link the ideas.
- **Table of Contents** – When a long Web page must be kept in a single file, a table of contents or bulleted list at the top of the page can provide links to specific parts of the page (we saw some of this capability with our footnote example in XHTML – Part 2). This helps the visitor find exactly what they need. Lots of examples of this abound, but you can see one at [http://grants.gov.help.general\\_faqs.jsp](http://grants.gov.help.general_faqs.jsp) that's pretty representative of this technique.



# Page Design



# Design Principles

- There are four visual design principles that you can apply to the design of just about anything: **repetition**, **contrast**, **proximity**, and **alignment**. These design principles help to create the “look and feel” of your project, whether it be designing a Web page, a button, a logo, a CD cover, a brochure, or a software interface.
- Using these principles properly will ensure that your message is effectively communicated.



# Repetition

- When applying the principle of repetition, the designer repeats one or more elements throughout the product.
- The repeating aspect ties the work together.
- Take a look at the homepage of National Pro Fastpitch Softball at <http://www.profastpitch.com>. The repetition of the “tab” icons helps to unify the navigation areas. Page content areas are divided using a number of similar shapes – again repeating the shape.



# Repetition

The screenshot shows the National Pro Fastpitch website in Internet Explorer. The browser window title is "National Pro Fastpitch - - Windows Internet Explorer". The address bar shows "http://profastpitch.com/". The search bar contains "Google". The main navigation menu includes "TICKETS", "SHOP ONLINE", "OWN A TEAM", "SCHEDULE", and "ARCHIVE". The page features a banner with the text "A whole new ballgame." and a sidebar with a menu of links: "NPF HOME", "NEWS", "Sponsors/Partners", "ABOUT NPF", "FAN ZONE", "KID'S ZONE", "STATISTICS", "TEAMS", "CONTACT US", "LINKS", and "SITE MAP". The main content area has a "TOP STORIES" section with a "PREV. STORY" and "NEXT STORY" link. The featured story is titled "REGIONAL COVERAGE OF SEMIFINALS & FINALS" and is dated "08/26/2007". The text of the story reads: "08/26/2007 - Time Warner Milwaukee has announced that NPF Championship Series games #5 and #6 (played on August 26th) will be broadcast on a tape delayed basis." Below the story is a "MORE" link. To the right of the story is a "NPF HIGHLIGHTS" section with a search icon and a tooltip that says "Press SPACEBAR or ENTER to activate and use this control". Below the highlights is a "STANDINGS" table.

Team	W	L	%
Washington Glory	34	10	.773
Akron Racers	26	17	.605



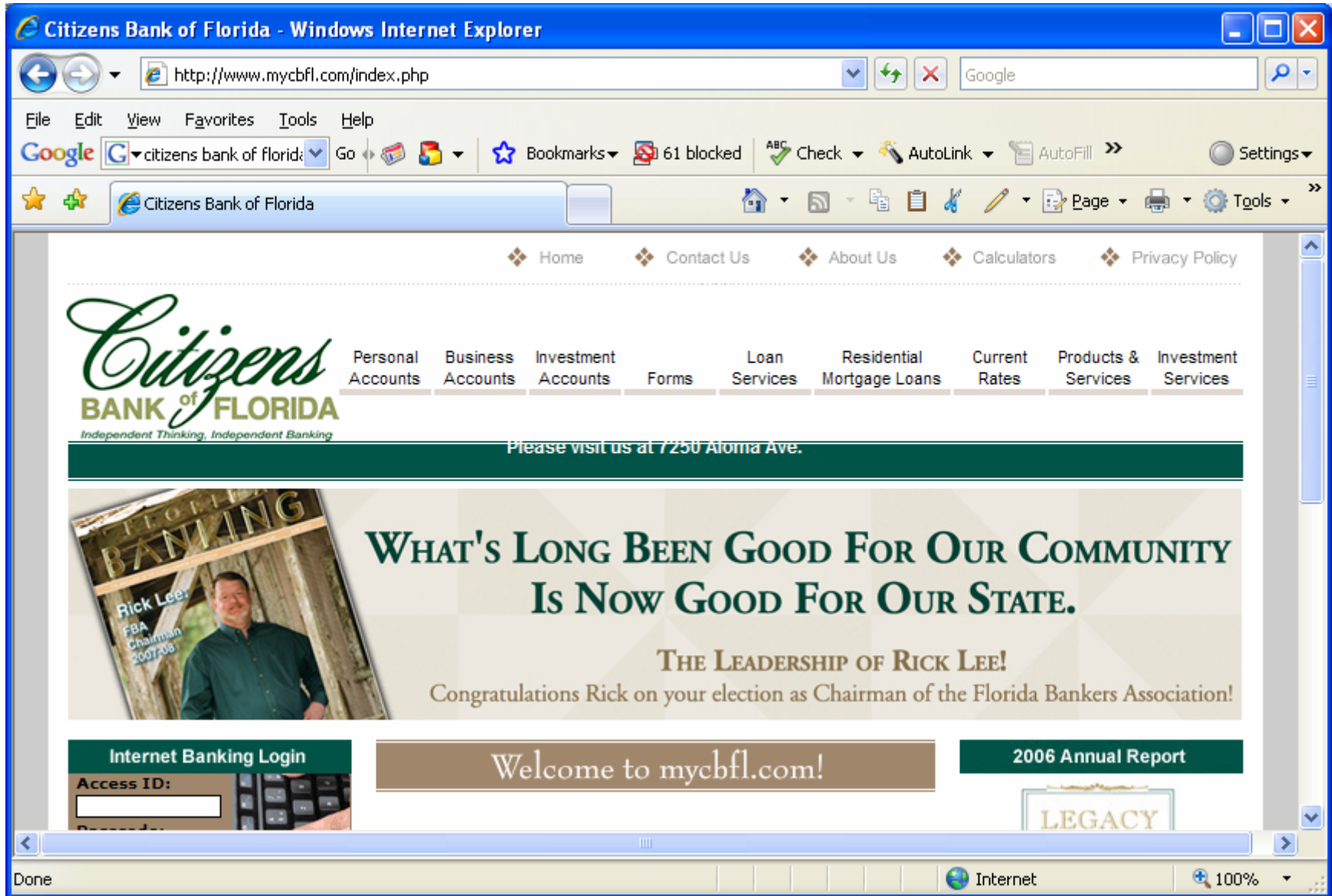


# Contrast

- When applying the principle of contrast, the designer should make elements very different (add contrast) in order to make the design interesting and direct attention.
- When designing Web pages, good contrast should be present between the background color and the text. Notice how the navigation bars pop out on the previous page due primarily to the contrast change in background color. In general, this site uses dark text on a light background. This provides good contrast and makes for easier reading for the visitor.
- As a point of comparison consider the site shown on the next page. Which has better contrast? Look particularly at the navigation links on the next page.



# Contrast



# Proximity

- When applying the principle of proximity, the designer should place related element physically close together. Unrelated items should have space separating them.
- The placing of interface items together gives visual clues to the logical organization of the information or functionality.
- Notice how the navigation links in the profastpitch site (shown on page 40) are close together on the left hand side of the page. This creates a visual group on the page and makes navigation easier to use.



# Alignment

- When applying the principle of proximity, the designer should organize the page so that each element placed has some alignment (vertical or horizontal) with another element on the page.
- Looking again at the profastpitch site on page 40, notice how both vertical and horizontal alignment have been used on the site.



## Things to Try Yourself

8. Visit some of your favorite Web sites and determine if they use hierarchical, linear, or random organization. Do any of these sites provide a site map?
9. Pick three of your favorite sites and list for each of them three things you really like about the design and three things that you either don't like or feel could use some improvement.

