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State Medical University

**MODERN DEVELOPMENT TOOLS OF
DYNAMIC CONTENT OF THE WEBSITES**

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Group: 110A.

Checked by: Umirzakova ZH.B.

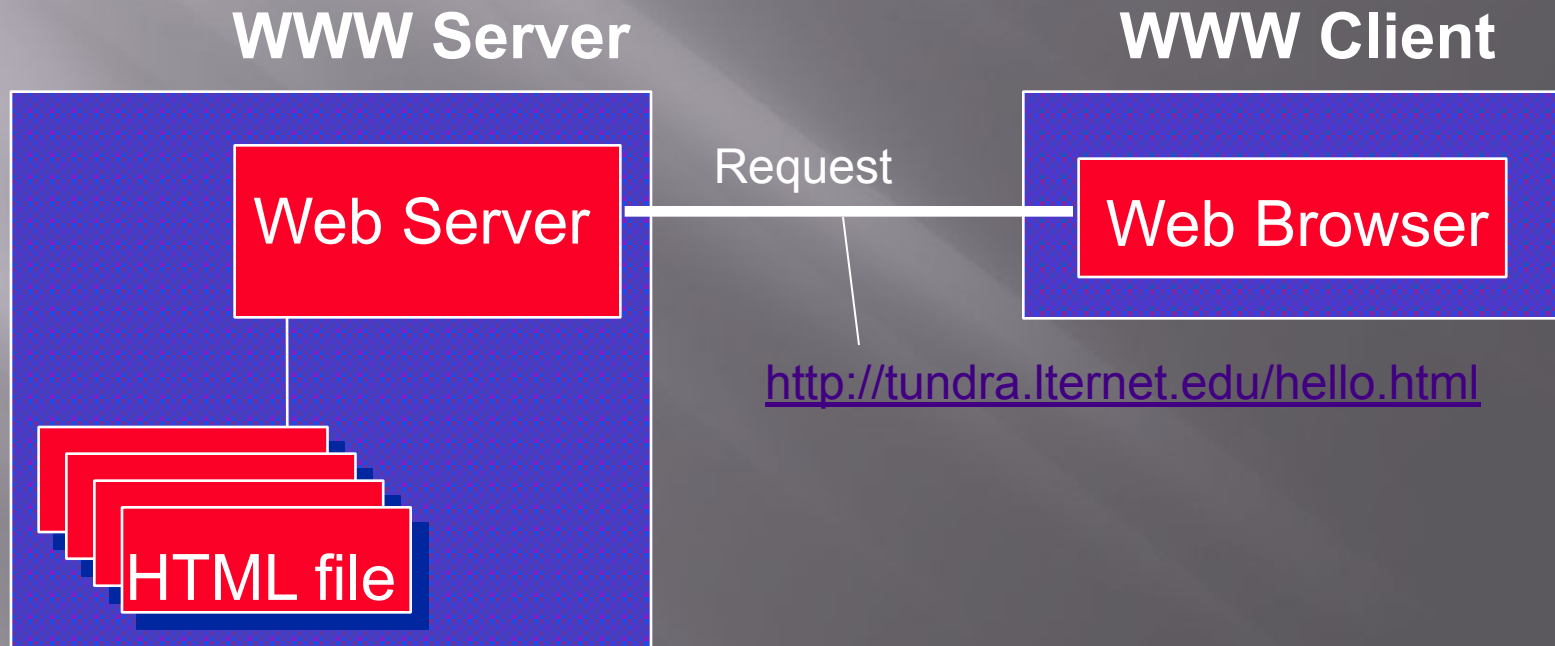
What is HTML?

- ▣ HTML Stands for Hypertext Markup Language
- ▣ Markup language means that a specific parts of a document have marks around them, giving them special meaning
- ▣ An HTML Document is a text document that uses tags for markup.
- ▣ Tags fall between angel brackets and have an open tag and a close tag
`<p>this is paragrapgh text</p>`

How Does the WWW Work?

- ▣ HTML Documents (pages) stored on a server
- ▣ The page is requested by browser from a client using a browser
- ▣ The page is fetched and returned to the client by the web server using the Hypertext Transfer Protocol (http)
- ▣ Note that a page is identified by a Uniform Resource Locator (URL)

How Does the WWW Work?



Standards For the WWW

- ▣ The World Wide Web Consortium (W3C <http://www.w3c.org>) is chief standards body for HTTP and HTML
- ▣ An international consortium of companies involved with the Internet and the Web.
- ▣ W3C was founded in 1994 by Tim Berners-Lee, the original architect of the World Wide Web
- ▣ Develop open standards so that the Web evolves in a single direction rather than being splintered among competing factions

Browsers

- ▣ Netscape and MSIE are the big two.
- ▣ They contributed to browser wars, non standard html tags (), substandard browsers (Netscape 4)
- ▣ Browser Alternatives
 - Mozilla Fire Fox – Open Source, Standards Based
 - Opera - Standards Based, lots of features
- ▣ Alternatives are better browsers, fast, and they Kick butt!

What is HTML?

- Important to remember HTML tags were originally designed to define the content of a document
 <p>means this is a paragraph</p>
- Examples of tags

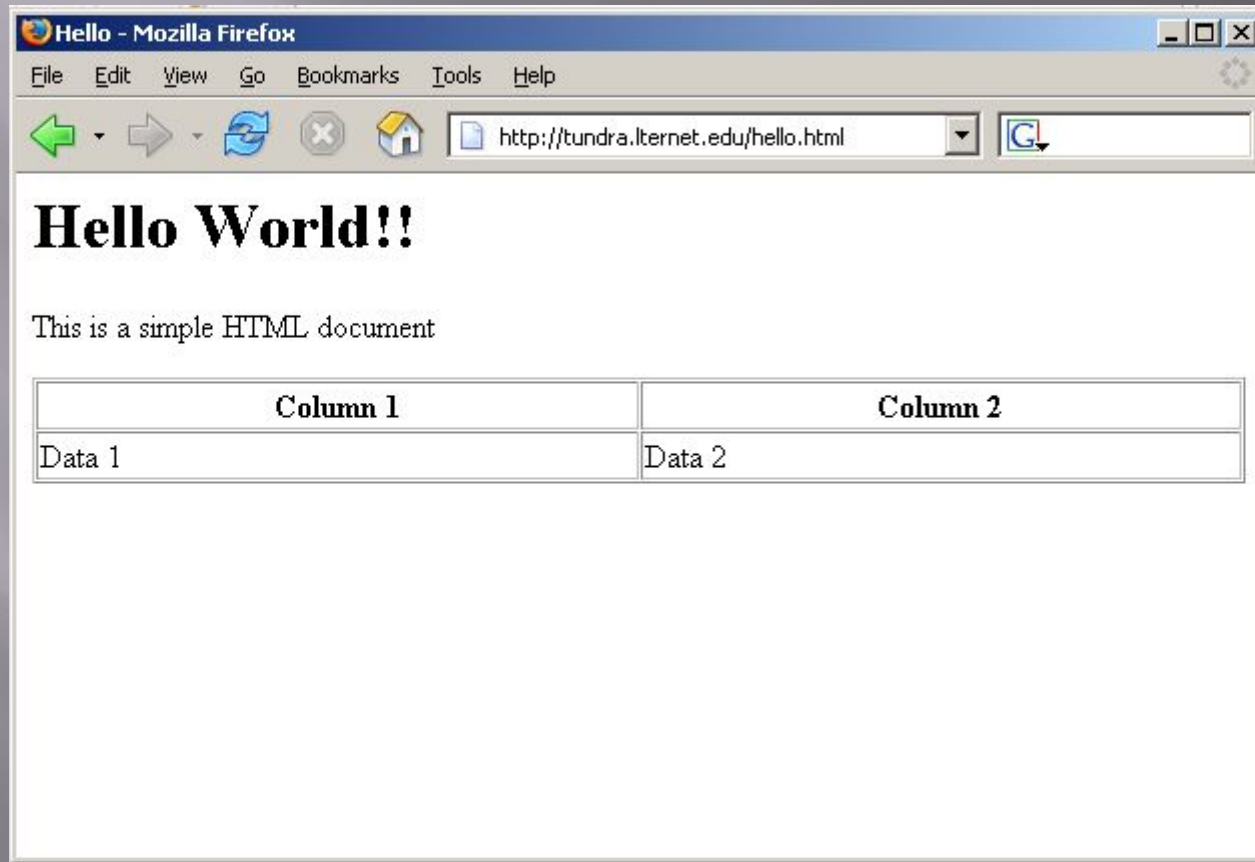
<html> Defines an HTML document
<body> Defines the document's body
<h1> to <h6> Defines header 1 to header 6
<p> Defines a paragraph

 Inserts a single line break
<hr> Defines a horizontal rule
<!--> Defines a comment

Example HTML Document

```
<html>
<head>
<title>Hello</title>
</head>
<body>
<h1>Hello World!!</h1>
<p>this is a simple HTML document</p>
<table width="100%" border="1" cellspacing="1" cellpadding="1">
  <tr>
    <th>Column 1 </th>
    <th>Column 1 </th>
  </tr>
  <tr>
    <td>data 1 </td>
    <td>data 1 </td>
  </tr>
</table>
</body>
</html>
```


Example HTML Document



Adding Style to our pages

- ▣ Cascading Style Sheets (CSS) is a W3C Recommendation
- ▣ Styles define how to display html
- ▣ Styles can be attached to or imbedded within HTML documents
- ▣ A single HTML document may use one or more stylesheets that are then applied according to specified priorities

HTML with styles embedded

```
<html>
<head>
<title>Untitled Document</title>
<style type="text/css">
<!--
h1 {font-family: Georgia, "Times New Roman", Times, serif; font-size: 24px;
    color: #FFFFFF;background-color: #0000FF; padding: 10px;}
h2 {font-family: Georgia, "Times New Roman", Times, serif; font-size: 24px;
    color: #FFFFFF; background-color: #990033; text-align: right; border: thin dashed #FFFF00;}
h3 {font-family: Geneva, Arial, Helvetica, sans-serif; font-size: 36px;
    background-color: #999999; text-align: center; width: 300px; border: dashed #0033FF;}
-->
</style>
</head>
<body>
<h1>Simple CSS Example </h1>
<h2>heading 2</h2>
<h3>heading 3</h3>
<p>&nbsp;</p>
<p>&nbsp;</p>
</body>
</html>
```

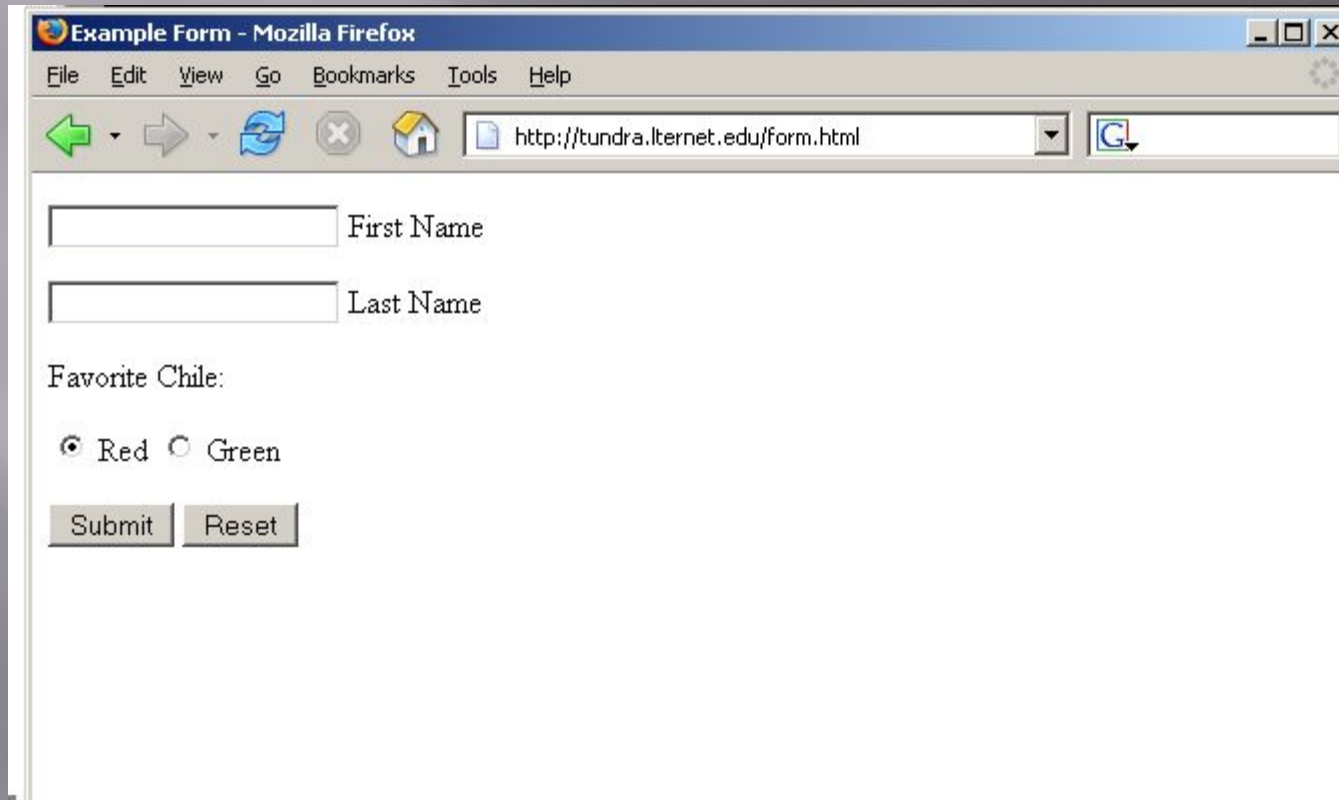
Web Forms

- ▣ Forms are used to collect input from the client.
- ▣ A form is an area that can contain form elements.
- ▣ Form elements are elements that allow the user to enter information (like text fields, textarea fields, drop-down menus, radio buttons, checkboxes, etc.) in a form.
- ▣ A form is defined with the `<form>` tag.

Example Form

```
<form action="example.php" method="post" name="example" id="example">
  <p>
    <input type="text" name="lastname">
    First Name</p>
  <p>
<input type="text" name="lastname">
  Last Name
</p>
<p>Favorite Chile:  </p>
<p>
  <input name="fav_chile" type="radio" value="red" checked>
  Red
  <input name="fav_chile" type="radio" value="green">
  Green</p>
<p>
  <input type="submit" name="Submit" value="Submit">
  <input type="reset" name="Reset" value="Reset">
</p>
</form>
```

Example Form



The image shows a screenshot of a Mozilla Firefox browser window. The title bar reads "Example Form - Mozilla Firefox". The menu bar includes "File", "Edit", "View", "Go", "Bookmarks", "Tools", and "Help". The address bar shows the URL "http://tundra.ltnet.net.edu/form.html". The form content includes two text input fields labeled "First Name" and "Last Name". Below these is a section titled "Favorite Chile:" with two radio button options: "Red" (which is selected) and "Green". At the bottom of the form are two buttons: "Submit" and "Reset".

Example Form - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://tundra.ltnet.net.edu/form.html

First Name

Last Name

Favorite Chile:

Red Green

Webpage Layout and Website Design

- ▣ Technical definitions:
 - A webpage is a single HTML document
 - A website is a collection of related webpages
- ▣ Designing a good website requires more than just putting together a few pages

Web Page Layout

- ▣ Layout of web pages is very important
- ▣ Poor layout makes for -
 - Difficult navigation
 - Hard to locate information on page
 - Visually unappealing

A 2 x 2 Layout



**Project
Description**

**Background
Information**

**Research
Stations**

**The Puffin
Burrow**

**The Seabird
Center**

**Suggested
Readings**

**Education
Programs**

**Project
Staff**

**All About
Puffins**

Project Puffin

What is Project Puffin?

The National Audubon Society started Project Puffin in 1973 in an effort to learn how to restore puffins to historic nesting islands in the Gulf of Maine. At that time, literally all the puffin eggs in Maine were in two baskets - [Matinicus Rock](#) and Machias Seal Island. Although puffins are not an endangered species (they are abundant in Newfoundland, Iceland, and Britain), they are rare in Maine. The two surviving colonies were very vulnerable to a disaster such as an oil spill, or accidental establishment of predators such as rats or mink.

The Project began with an attempt to restore puffins to [Eastern Egg Rock](#) in Muscongus Bay, about six miles east of Pemaquid Point. [Puffins had nested there until the early 1880's when hunters took the last survivors of this once-flourishing colony.](#) The restoration of puffins to [Eastern Egg Rock](#) is based on the fact that young puffins usually return to breed on the same island where they hatched.



Young puffins from Great Island, Newfoundland (where about 160,000 pairs nest) were transplanted to Eastern Egg Rock when they were about 10 - 14 days old. The young puffins were then reared in artificial sod burrows for about one month. Audubon biologists placed handfuls of vitamin-fortified fish in their burrows each day and, in effect, took the place of parent puffins. As the young puffins reached fledging age (the time when birds leave the nest), they

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- Business Solutions
- Servers
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- Games and Xbox
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- All Products

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<p>Search for</p> <input type="text"/> <input type="button" value="Go"/>	 <h2>TechEd 2003 is almost here</h2> <p>Build your skills at Microsoft's premier training conference for technology professionals. Register by April 11 and save.</p>	<h3>today's news</h3> <ul style="list-style-type: none">• Join a chat April 10: InfoPath solutions• Spread out your software payments annually with Open Value License• Microsoft security training offer: Enroll now and save• Attend a free Windows Server 2003 launch event <p>More News ...</p>
<p>Advanced Search</p> <h3>Product Families</h3> <ul style="list-style-type: none">WindowsOfficeBusiness SolutionsServersDeveloper ToolsGames and XboxMSN ServicesAll Products	 <h3>home & entertainment</h3> <ul style="list-style-type: none">• Get breaking MSNBC news updates on your computer• Turn your photos into a coffee-table book• Download spring clip art to add to cards and banners	<h3>downloads</h3> <ul style="list-style-type: none">• Windows XP Bliss screen saver• Internet Explorer 6, latest version (SP1)• Software Update Services with Service Pack 1
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<h3>Information For</h3> <ul style="list-style-type: none">Home UsersIT Professionals (TechNet)	 <h3>business agility</h3> <ul style="list-style-type: none">• Upgrading to Windows Server 2003 from Windows NT Server• Want a winning distribution strategy? Try these 3 steps• Competitive analysis: Save \$3.2 million with SQL Server	

Centered with three columns



Enriching MSU's Future

CAMPAIGN FOR MSU UNIVERSITY DEVELOPMENT

MAKING A GIFT GIVE NOW

MSU Donor Societies
Guide to Making Your Gift
Reasons for Giving
Bequest Language
Donor Bill of Rights

FUNDRAISING CAMPAIGNS

The Campaign for MSU
The Annual Fund
The Big Ten Challenge
Corporate In-House
Faculty/Staff Giving
Senior Class Gift
Parents Fund

THE CAMPAIGN FOR MSU



CAMPAIGN GOAL: \$1.2 Billion
STATUS TO GOAL: \$679.5 Million

The Campaign for MSU News

Make
a Gift!

- [Levels of On-line Giving Rise Dramatically](#)
- [Major Donors Honored and Endowed Positions Filled](#)
- [Foundations Join Forces To Improve Teacher Education](#)

MSU headlines provided by **MSU today**

[MSU programs get high marks](#)
[Students and administration upset with behavior of a few](#)
[FACT Coalition announces grant awards](#)
[Students receive awards for making a difference in diversity](#)
[WKAR auction features unique tables by local artists](#)



CURRENT NEWS

Developments Newsletter
Partners Newsletter
Annual Fund Newsletter
Faculty/Staff Newsletter
MSU Press Releases
MSU Facts in Brief

CONTACT US

Organizational Chart
E-Mail Listing

UNIVERSITY LINKS

College/Unit Links
MSU Homepage
MSU Alumni Association
Athletics
MSU Today

Event Pictures

UNIVERSITY
DEVELOPMENT
HOMEPAGE

MICHIGAN STATE
UNIVERSITY

Really complicated design!

The screenshot shows the ESPN.com website as it appeared in 2003, viewed in Microsoft Internet Explorer. The browser window title is "ESPN.com - Microsoft Internet Explorer" and the address bar shows "http://espn.go.com/main.html".

The website layout is highly complex and multi-column:

- Top Navigation:** Includes "MSN Home", "My MSN", "Hotmail", "Search", "Shopping", "Money", "People & Chat", and a "Sign In" button.
- Banner:** A large green banner for the "ESPN TRAILBLAZER GOLF CHALLENGE 2003" featuring a Chevrolet Trailblazer and the text "GET YOUR TEAM TODAY!".
- Navigation Bar:** A red bar with links for "NBA.COM", "NHL.COM", "ABC", "ESPN RADIO", "EXPN", "PAGE 2", "INSIDER", and "FANTASY".
- ESPN Logo:** A large, prominent ESPN logo in the center.
- Main Content Area:**
 - Left Column:** Includes a search bar, "ESPN INTELLIGENCE" logo, and a vertical menu with links for "NBA Scores", "NHL | Playoffs Scores", "NFL | NFL Draft", "MLB Scores | GameCast", "Men's BB | Toumey Scores", and "Women's BB | Toumey Scores".
 - Center Column:** Features a "TOP STORY" section with the headline "Budding Di-Nasty" and a photo of basketball player Diana Taurasi. Below the photo is the text "Diana Taurasi sparked UConn to its fourth title." To the right of the photo is a "SAMSUNG" logo.
 - Right Column:** Contains "ESPNNEWS HEADLINES" with a list of sports news items, including "MJ not interested in replacing Krause", "Playoff preview? Mavs overtaken by Lakers", and "LeBron toasted by Gatorade". Below this is a "Where are all the seniors?" section with a "LinkedIn" logo.
- Right Sidebar:** Includes a "Search the Web" box, a "Cup Race Begins Now" section with an NHL player photo, and a "KEYS TO THE CUP" section with a "PLAYOFF SCHEDULE" link.

The bottom of the browser window shows the Windows taskbar with the Start button, several open applications (Chapter IV Seed..., Eudora - [In], Website Design, Stocks may reac..., ESPN.com - Mi..., University Devel..., Microsoft Excel...), and the system clock showing "10:56 AM".

Site Map

- ▣ A site map is designed to show the connections between pages
- ▣ A graphical site map uses lines to connect linked pages

Site Map

- Interior
or
- Internal
□ Pages



Get vs Post

- ▣ With the Get method, the browser appends the data onto the URL
- ▣ With the Post method, the data is sent as "standard input." (as part of the header in the request)

Get vs Post

▣ Get example

```
<form action="example.php" method="POST" name="example" id="example"><form  
  action="example.php" method="post" name="example" id="example">
```

▣ Post Example

```
<form action="example.php" method="GET" name="example" id="example"><form  
  action="example.php" method="post" name="example" id="example">
```

CSS Document

```
h1 {
  font-family: Georgia, "Times New Roman", Times, serif;
  font-size: 24px;
  color: #FFFFFF;
  background-color: #0000FF;
  padding: 10px;
}
h2 {
  font-family: Georgia, "Times New Roman", Times, serif;
  font-size: 24px;
  color: #FFFFFF;
  background-color: #990033;
  text-align: right;
  border: thin dashed #FFFF00;
}
h3 {
  font-family: Geneva, Arial, Helvetica, sans-serif;
  font-size: 36px;
  background-color: #999999;
  text-align: center;
  width: 300px;
  border: dashed #0033FF;
}
```

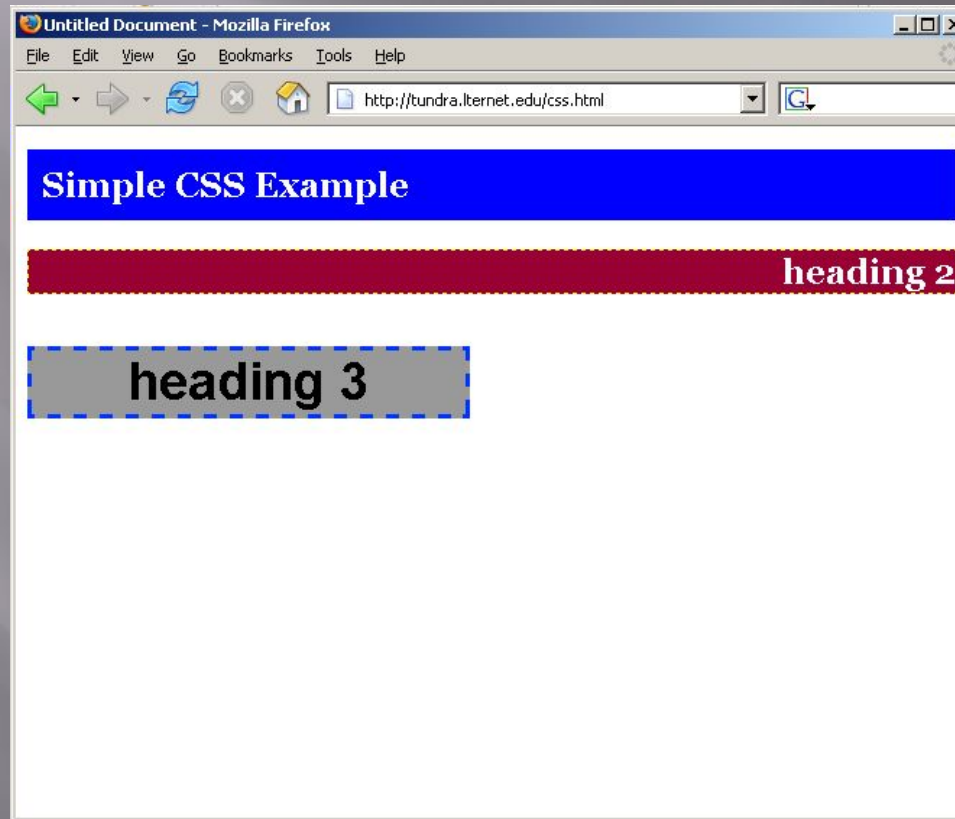
HTML With CSS attached

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
<title>Untitled Document</title>

<link href="css.css" rel="stylesheet" type="text/css">
</head>

<body>
<h1>Simple CSS Example </h1>
<h2>heading 2</h2>
<h3>heading 3</h3>
<p>&nbsp;</p>
<p>&nbsp;</p>
</body>
</html>
```

HTML with CSS attached



Advantages of stylesheets

- ▣ Stylesheets separate content from presentation
- ▣ Greatly decrease the amount work required when changing the look of a website.

Conclusion

- ▣ Web pages are served to clients by web servers when a client requests a URL
- ▣ Requests are handled using HTTP
- ▣ HTML provides structure to web pages through the use of tags.
- ▣ CSS provides style to web pages. Style can be attached in separated documents or can be imbedded into an html document

WEBSITE DESIGN

Information Arcitecture

What is a website

- ▣ A site (location) on the World Wide Web. Each Web site contains a home page, which is the first document users see when they enter the site. The site might also contain additional documents and files. Each site is owned and managed by an individual, company or organization.
 - webopedia.com

Web site development essentials

- ▣ Web site development is a mix of various disciplines.
- ▣ Well designed websites are a combination art, science, and practicality

What is Information Architecture?

“Information architecture is the science of figuring out what you want your site to do and then constructing a blueprint before you dive in and put the thing together.”

- webmonkey.com

IA – Site Structure

Develop a site structure listing

Section 1

Section 1.1

Section 1.2

Section 2

Section 2.1

Section 2.2

Section 2.2.1

Section 2.2.2

Section 2.2.3

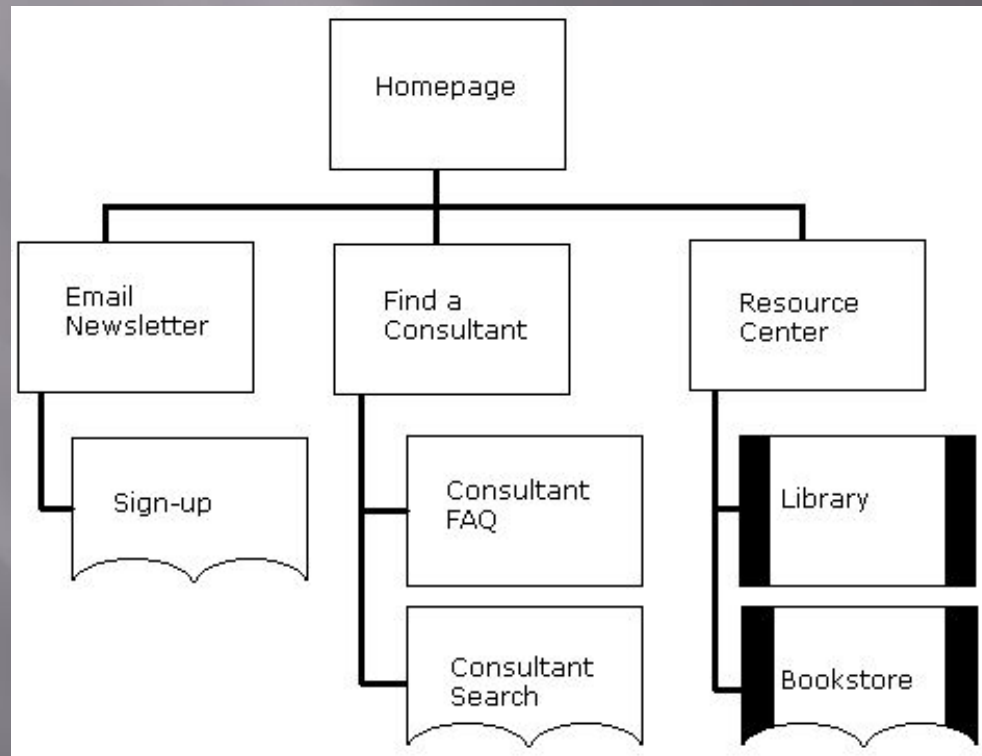
Section 2.3

Section 2.4

Section 3

IA – Site Structure

- Develop Architectural Blueprint



IA tutorial:

http://webmonkey.wired.com/webmonkey/design/site_building/tutorials/tutorial1.html

The screenshot shows a Mozilla Firefox browser window titled "Information Architecture Tutorial - Mozilla Firefox". The address bar displays the URL "http://webmonkey.wired.com/webmonkey/design/site_building/tutorials/tutorial1.html". The page content includes a navigation bar with "LYCOS" and "monster" logos, a search bar, and a main content area with a job search banner and a "Site Building" section.

LYCOS New Users: Members: **monster**

Lycos Home / Site Map / My Lycos / Lycos Mail / October 21, 2004

webmonkey The Web Developer's Resource

SEARCH: webmonkey the web

[home](#) / [design](#) / [site_building](#) /

POSITIONS AVAILABLE IN HUNDREDS OF CITIES WITH NEW JOBS POSTED EVERY MINUTE.

Select your category and enter your zip code to start your search

Site Building

Information Architecture Tutorial

Overview
by [John Shiple](#)

• Overview

• Lesson 1
Defining your goals

• Lesson 2
Audience and

John Shiple is the leader of Squishy Designs, an Internet consulting company in Venice, California, specializing in information architecture, collaborative system strategies, and advanced user interfaces for Internet-based content. He also helped found [Biqstep.com](#).

Example Template



Organization of Biological Field Stations

Organizational Activities

- [Join OBFS](#)
- [OBFS News/Jobs](#)
- [Annual Meetings](#)
- [Publications/Reports](#)
- [Bylaws](#)
- [Operations Manual](#)
- [Gallery](#)
- [Newsletters](#)
- [Forums](#)

Directory

- [Stations](#)
- [People](#)

Research

- [Metadata Catalog](#)
- [Methods Bibliography](#)
- [NSF Support](#)

Education

- [Courses](#)
- [FIRST II](#)

{Body}

- Copyright 2003 Organization of Biological Field Stations-

Any opinions, findings, conclusions, or recommendations expressed in the material are those of the author(s).
Please contact stromber@socrates.berkeley.edu with questions, comments, or for technical assistance regarding this web site.

Essential Web Site Components

- ▣ Domain Name
 - Create an identity
- ▣ Search Feature
 - Find content.
- ▣ Timely Content
 - Content is updated regularly.
- ▣ Topic Based-Content
 - News, employment, a particular research project
- ▣ Professional Logo
 - Guiding principles

Web Page Optimization

- ▣ Limit the number of multimedia applications
 - Javascript, java applets, flash, shockwave
- ▣ Use consistent images and style sheets
- ▣ Use consistent navigation (text readers)

Web Technologies

- ▣ Basic Requirements
 - Web server, server side technology, database server
- ▣ Programming Languages
 - CGI, Embedded Languages
- ▣ Architectures
 - LAMP
- ▣ Third Party Solutions
 - Stand alone applications, Portals, Content Management Systems

LAMP

- ▣ LAMP is Open Source – Free
- ▣ There's an extensive support network for all LAMP components.
 - <http://www.onlamp.com>
- ▣ LAMP works well and is secure
 - Its component technologies offer tremendous flexibility, rapid development, high performance, and fewer security and stability problems than many far-costlier proprietary solutions.

How it works

Linux Server

WWW Client

