

SEVENTH EDITION

UWM Web Site Design Manual



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PREFACE

This manual evolved from a team project initiated in the spring of 1997 as part of the coursework for English 436: Writing for Computer Technology at the University of Wisconsin–Milwaukee (UWM). Based on their experience with Web page creation, technical writing students designed, wrote, and revised this document as a task-oriented manual to help any student or faculty member build a personal Web page.

Prior experience with HyperText Mark-up Language (HTML) or the UNIX operating system at UWM is not necessary to use this manual. However, experience with personal computers, the Windows operating system, word processing, and file management is helpful.

Many university students and staff reviewed this manual in draft form, including Margaret Kennedy, Ozzie Castillo, Petra Esterle, and Jackie Vinson. The manual's original authors were Angela Berenz, Michelle Davich, Nicole Graf, and Elizabeth Castro. Important new sections were added by Heather Liban, Christine Piwoni, Manjula Dammanna, Stacy Lowling, Frank Prah, Dorothy Wurster, Mita Mukhopaduyah, and Julie Otto.

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This manual is a public domain document completely free of copyright protection. You may use and reproduce the entire document or any part of it for classroom instruction or personal use. The manual remains a work in progress; therefore, as you use it, you may find ways to improve, correct, or update it. Please send any questions, comments, or suggestions to Associate Professor William V. Van Pelt, English Department, UWM, P.O. Box 413, Milwaukee, WI 53201, or to vanpelt@uwm.edu.

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INTRODUCTION

This manual has been designed for students with little or no Internet experience. However, advanced students, faculty, and others will find it a valuable reference guide as well.

The manual provides instructions for creating a Web page using the UWM Alpha system, UNIX, HTML, and other Web design tools. Beginners, especially those interested in a technical communication career, will find these HTML basics crucial to understanding professional Web page design. Even though you may already have access to other Web-authoring tools such as FrontPage or Dreamweaver, skilled Web page creators must know how HTML codes work. Web-authoring tools such as FrontPage will generate complex codes for you, but not let you alter them easily if you don't get the desired results. Learning HTML will enable you create and maintain Web pages on your own and will provide a solid foundation for using FrontPage and other Web design tools. So it is important to learn the basics of HTML coding first. If you already know how to build a Web page in HTML and simply want help with a particular topic, use the Table of Contents to locate the manual section(s) most appropriate for your needs.

The Introduction briefly describes the Internet and the Web. Chapter One offers guidelines for Web page design. The remaining chapters provide task-oriented instructions for setting up your Web page with the UWM Alpha system and for building a Web site with HTML code. Appendix A identifies basic UNIX commands helpful for editing your Web page source file, called "index.html," and for managing files in your www folder.

MANUAL CONVENTIONS

The following conventions appear throughout the manual:

- Bold** = What you type into the computer
- Courier = What appears on the computer screen
- [ENTER]** = Press enter or return
- [Alt+Tab]** = Hold down the "Alt" key while you press "Tab"
- [Ctrl+X]** = Hold down the "Ctrl" key while you press the "X" key

WHAT IS THE INTERNET?

The Internet is a global interconnection of millions of computer networks. These computer networks exchange digital information using a common set of networking and software standards and rules called protocols. All computers on the UWM campus are connected to these networks, which are in turn connected to network nodes on the global Internet system.

If your computer understands the Internet protocol language, it can decipher information and images on the Web and deliver them to your computer screen. Whether you are searching the Web or checking your email, your computer is communicating with other computers connected to the Internet all over the world.

WHAT IS THE WORLD WIDE WEB & HYPERTEXT?

The Web is a portion of the Internet accessible to anyone with a computer, navigation software (browsers such as Netscape or Internet Explorer), and a modem or other Internet connection. The Web enables people to communicate globally and to transfer information faster than ever.

The Web consists of different components such as Web pages, Web sites, and hyperlinks. A Web page, also called a hypertext document, is a document written in Hyper Text Markup Language (HTML), also called a source document because the HTML provides the source code for Web browsers. Web browsers interpret the HTML codes in these source documents and translate them into the well-formed Web pages that you see on your computer screen. Web pages can also include hyperlinks to other Web pages and to subpages within the same Web site. These hyperlinks allow users to search the Web, jumping from one page to another with the simple click of a mouse.

As the crucial source component of the Web pages, HTML is a "markup" language composed of tags, or markup codes, that shape and define a Web page's content and look. Tags are bracketed letters and words that work as formatting commands. Each HTML tag controls some specific content (text and images displayed on Web pages) in a unique way. (See Figure 2: Example of HTML Codes" in Chapter 2 for examples of basic HTML tags.)

WHY LEARN HTML?

In this manual, you will learn how to create Web pages by writing and editing HTML codes. Many software programs have been developed to "author" or write

HTML code for you, so you might ask “Why learn HTML when Web-authoring tools are commercially available to do the hard work of coding for you?” This is a good question, which can be answered by the following points:

- Web authoring tools automatically write your HTML code for you and that code is often unreadable, filled with junk code, and impossible to edit. If you do not understand why and how an authoring tool has created a certain effect, you will lose control of the page design. If you write pages in HTML, then you will always have control of your source code and can effectively develop and maintain the style, look, and features you want on your Web pages.
- HTML is an industry standard that will not change and is completely reliable on all computers. It provides a common technology that all professional Web developers and technical communicators will know and understand, so by learning HTML, you will have important foundational knowledge that will enable you to confidently communicate with other professionals who create, design, and maintain Web pages.
- Technical writers and editors who know HTML can become expert Web developers and will be respected for their knowledge, especially when they become part of the Web development teams. (Even if they are not coding in HTML on a regular basis.)
- HTML technology is free and open for use by everyone: you can find complete explanations of all HTML codes at the W3C World Wide Web Consortium (W3C) Web site (<http://www.w3.org/MarkUp/>), along with tutorials and many other learning aids for beginners. By contrast, Web authoring software will cost you money and will become outdated.
- Technical writers often use a variety of Web tools to develop pages and sites: they may write pages in HTML, while using Web-authoring tools for special tasks. As a beginner, you should learn HTML first, so that when you start using a Web-authoring tool, you will understand its limits and advantages and be able to fix any design problems the tool creates.
- Once you learn something about HTML, you will have valuable experience with the technology of "Markup-Languages." Markup languages are the foundation of all standardized writing, editing, and information delivery on the Internet. Understanding the concept of markup languages is crucial to understanding the future of WWW communications and information exchange.

CHAPTER ONE: Web Design Guidelines

PLANNING YOUR WEB PAGE

This chapter provides some brief guidelines for you to consider before you start writing HTML. We cannot possibly cover all the design concepts and guidelines that have emerged over the last few years, but we hope to provide a basic overview and then provide links to other sources at the end of this chapter.

Remember that your Web page is not a novel. While text is the heart of a successful Web page, too much text can overwhelm your readers. Strive to balance text, color, links, and graphics on your page, focusing your design around on a specific purpose, theme, or topic that will be meaningful to your audience. Consider the following layout and design suggestions.

- Determine a clear purpose, topic, or theme that will organize and unify your site and appeal to your audience.
- Research your audience needs and determine a hierarchy for what they will want to see first and last. Always keep your audience needs in mind.
- The first page of a Web site, the "home page," serves as an introduction or entry point to the site's other pages. Keep the first page short: minimize text and avoid crowding. A good rule: at least one-third of each page should be blank or filled with white space.
- Include some form of "Welcome!"
- Identify yourself and the purpose of your page early on the site. Information about yourself, your credentials, and how you can be reached lends credibility to your page.
- Create a series of design sketches for your home page and subpages, striving for consistency in look and design, so that users can easily identify the pages as similar and belonging to your site.
- Create a site map that sketches out your conception of how the pages are linked together so that users can easily navigate the site, grasp its organization quickly, and find what they need.
- Use clear and relevant graphics. Avoid distracting animation.
- Include only important information and links on your first page, referred to as your "home page." Design this page so that users don't have to scroll or wait a long time for the page to load. Add detailed information, lists, or links regarding specialized topics to the site's other pages.
- Links are crucial and should look both inward toward your site's pages (internal) and outward toward related sites (external). Clearly identify

your links with short descriptive phrases. Limit the external links you provide, especially on the first page. You worked hard to have people look at your site, so don't send them away too fast.

- Update your Web site when necessary, and check your links. Identify the date of the most recent updates somewhere on the home page.

DESIGNING YOUR WEB SITE AND HOME PAGE

To decide how you want your Web site to look, make a few quick thumbnail sketches. To help you decide which information and graphics you need, create a site design that shows basic site content and link relationships among your pages. Then sketch possible layouts or spatial arrangements for your site's pages, including where to install graphics, text, page breaks, and links.

The first page a user encounters when viewing your site is called your home page. Because it serves as the "doorway" to your site, the design of your home page is crucial. Create a positive first impression by making your home page inviting, clearly identify your site's purpose, provide an overview of the site's major content areas, and include a list of links to them.

Before actually writing HTML code for your site, explore other Web pages and sites for layout ideas. Draw on this wide variety of choices, synthesizing and manipulating their designs to fit your tastes.

NOTE: When you find Web pages that include design elements that appeal to you, look at their HTML source code. In the View menu (located near the top of the screen between Edit and Favorites in Netscape and Internet Explorer) click Source. When you release the mouse button, Notepad or a similar file opens, containing the HTML code for the page you are currently viewing. You may save this Notepad HTML file to your disk for future reference or as a model to revise and extend.

UNIVERSITY GUIDELINES FOR WEB PAGE CONTENT

UWM does not restrict the contents of personal Web pages. However, guidelines can alert Web developers to possible problems. For additional information on UWM home page guidelines, see the following Web sites:

<http://www.uwm.edu/policy/cwis-content.html>
<http://www.uwm.edu/policy/standards.html>

The university administration has the right to suspend your Web privileges if you ignore or abuse university guidelines. You are solely responsible for the content of your page. Keep in mind that each Web page represents not only the author, but also the university.

Obey local, state, and federal laws, including copyright laws, when you create content for your Web site: material on your Web pages should be copyright-free unless you hold the copyright, have permission from the copyright holder, or follow fair use guidelines (see the next section). Copyright is generally implied, so the absence of copyright statements does not mean material you use is copyright-free.

Avoid material that could be deemed libelous, slanderous, patently false, or otherwise malicious and could result in legal liability. Include the UWM logo or a link to UWM's home page somewhere on your home page to identify your affiliation with the University.

NOTE: You can download UWM logos from this Web site:
<http://www.uwm.edu/news/logos.html>

Do not use university computers or your Web site for commercial purposes; penalties include revocation of all of your University privileges.

WEB SITE DESIGN RESOURCES

For additional resources and guidelines on Web page style and site development, consult the Lynch and Horton Style Guide:
<http://www.webstyleguide.com/>

Professor Van Pelt's Web site also provides links to some useful tools:
<http://www.uwm.edu/~vanpelt/webtools.html>

CHAPTER TWO: Getting Started

THE UWM ALPHA SYSTEM

When you connect your local computer to the UWM Alpha computer system, you can access many utilities, programs, and files. The Alpha system acts as a “server” through which connects your personal computer with email (Panthermail), the UWM Web server, and other programs. Your Alpha account enables you to store files on the Alpha server and to create your own “www” folder, where you can keep your Web page source file and image files. In this section, you will learn how to setup your www folder and “index.html” source file for your Web page on the Alpha system.

The Alpha system uses the UNIX operating system, which will help you create, revise and publish your Web pages. Just like the Windows operating system allows you to use a PC, the UNIX operating system allows you to use the Alpha system. After you learn a few basic UNIX commands, you can work with the Alpha system to create your Web pages.

NOTE: See Appendix A for further information about UNIX and a list of basic UNIX commands.

Before you can set up a Web page, you must know your Alpha system account login, and password. When you are accepted as a UWM student, you receive an email address, a login, and a password that you use to access Panthermail and to log in to campus computers. You must know this address, login and password to use the Alpha system.

If you do not remember yours:

- Visit one of the Campus Computer Labs with a photo ID (for hours and locations of open labs, see:
<http://www.uwm.edu/IMT/Computing/Labsoft/labsoft.html>
- Call the Information and Media Technologies (I&MT) 24-hour Help Desk:
(414) 229-4040
- Email help@uwm.edu

For more information about the UWM Alpha computer system and about UNIX, see <http://www.uwm.edu/IMT/TechRes/AlphaConfig.html> or attend an I&MT short course: <http://www.uwm.edu/IMT/Happenings/sc.html>.

DETERMINE YOUR ALPHA SYSTEM DOMAIN NAME

The following sections explain how to use the UWM Alpha system to set up a personal home page on the Web for the first time. Logging in to the Alpha system is easy, but first you must know your Alpha computer domain name. Your Alpha domain name takes the form “alphax.csd.uwm.edu” where “x” in “alphax” is the first letter of your login name. For example, a person with the login name “greg2” has the domain name “alphag.csd.uwm.edu”.

FIRST-TIME WEB PAGE SETUP

To set up your home page for the first time, you will use the UNIX **wwwsetup** command in the Alpha system. After this initial procedure, you can edit your homepage source file (called “index.html”) without using the **wwwsetup** command again.

To set up your home page, you will use your Alpha system account and domain name, UNIX, and the PICO editor.

This section includes instructions for the following procedures:

- Log in to the Alpha System from a Campus Computer Lab
- Connect to the Alpha System from Home or Work (Windows Telnet)
- Connect to the Alpha System from Home or Work (Web Browser)
- Use the **wwwsetup** Command at the Alpha Prompt
- Edit and View Your First Web Page

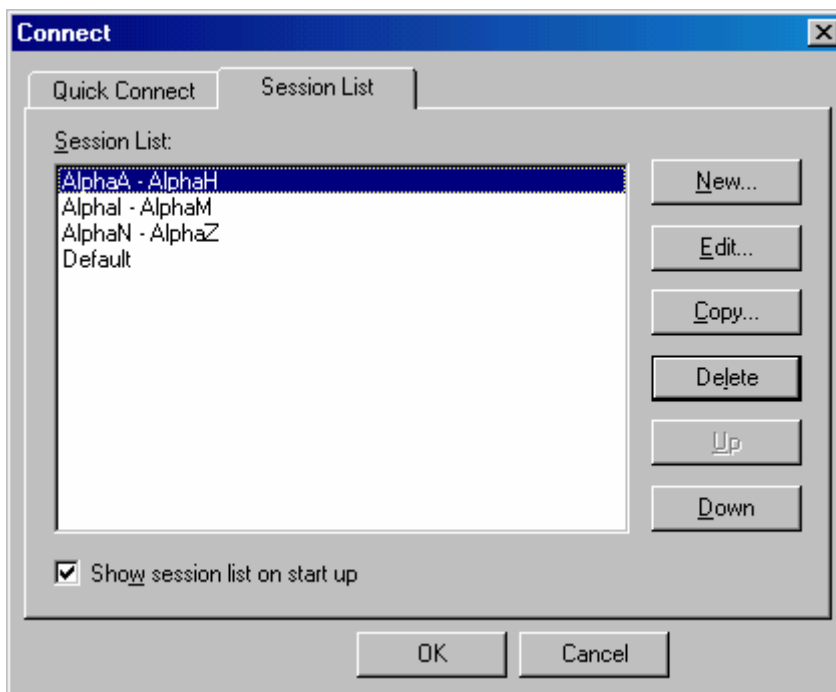
NOTE: The UWM Alpha system is not mouse-driven, but instead uses a command-prompt system. Users type short commands in response to prompts that appear on the screen. You can't use the mouse in this system to point and click. Instead, correctly type each command listed in the instructions in response to each Alpha system prompt, then press **[ENTER]**.

CAUTION: If you type a command incorrectly at the Alpha prompt, the backspace or delete key may not work. Instead, use the UNIX command **[Ctrl+h]** to backspace or delete errors (while holding down the **Ctrl** key, press the **h** key.) For a list of other UNIX commands, see Appendix A].

LOG IN TO THE ALPHA SYSTEM FROM A CAMPUS LAB

This section explains how to logon to the Alpha system using computers in the Campus Computer Labs. If you use a computer at home or work, you may go directly to the next section.

1. Click the Start button in the lower left corner of the Windows desktop screen
2. In the menu click Internet Applications.
3. In the new menu click Telnet.
4. If the PuTTY Configuration window opens, click Load, then Open.
5. In the Connect window, in the Session List tab, click on the Alpha folder or directory that matches the first letter of your login name. For example, if your login name is greg2, choose alphaA – alphaH to find alphag.



6. In the black screen, type your login name and press **[ENTER]**
7. Then type in your password and press **[ENTER]**
8. At TERM=(vt100) press **[ENTER]**
9. Continue with the section called “Use the wwwsetup command at the Alpha Prompt.”

LOG IN TO THE ALPHA SYSTEM FROM HOME OR WORK

Users with a Windows 95 or later and Internet access can connect to the Alpha system via the Telnet command in the Start menu in the lower left corner of the Windows desktop screen. The Telnet command will establish the Internet connection if you are not already connected.

To log in to the Alpha system from your Windows screen:

1. Click the Start button in the lower left corner of the Windows desktop screen.
2. In the menu click Run.
3. In the Run window, type **telnet alphax.csd.uwm.edu** where **x** stands for the first letter of your alpha or Panthermail login name.

NOTE: Substitute the first letter of your login name for the “x” in “alphax.csd.uwm.edu”. So if your alpha login or Panthermail name is “smith,” you would type: “alphas.csd.uwm.edu”.

4. Click OK.
5. In the Telnet window, at login type your login name and press **[ENTER]**
6. At password: type your password and press **[ENTER]**
7. At TERM=(vt100) (or a similar message) press **[ENTER]**
8. Continue with the section called “Use the wwwsetup Command at the Alpha Prompt.”

USE THE “WWWSETUP” COMMAND AT THE ALPHA PROMPT

The “wwwsetup” command will create a “www” folder and homepage source file in your Alpha account area.

Because the UWM Alpha system includes an EZ menu, you will not immediately see the Alpha system prompt, which looks like this:

(alpha) 1:

The number changes each time you press Enter:

(alpha) 2:

(alpha) 3:

and so on..

To suspend the EZ menu and go directly to the Alpha prompt, follow these steps:

1. At Select choice type **62** and press **[ENTER]**
2. At "Do you wish to continue?" type **Y** and press **[ENTER]**
3. At the Alpha prompt (alpha) 1: type **clear** and press **[ENTER]**

NOTE: The **clear** command clears the screen and places the Alpha prompt at the top of the screen. If you do not see the Alpha prompt or if it appears at the bottom of the screen, type **clear** and press **[ENTER]**

When the Alpha prompt appears at the top of the screen, use the following steps to use the `wwwsetup` command:

NOTE: Use the `wwwsetup` command only ONCE, the first time you set up your home page.

1. At the Alpha prompt type **wwwsetup** and press **[ENTER]**
2. At the next Alpha prompt type **1** to create a `www` folder and a basic home page.

If you see the “(alpha)” prompt with no error messages after the colon on your screen then your setup was successful and you now have a “www” folder on your Alpha account with an “index.html” source file. The setup command automatically inserts basic HTML codes into your source file so that you now have a rudimentary homepage on the UWM Web server. You may now edit the HTML codes to revise and develop your homepage.

Follow the recommendations in the next few sections for using the Pico editor to view your source code for the first time and experiment a little by editing the HTML tags and text content to see how it changes your Web page on the Alpha system. The last section of this chapter explains how to use the Windows Notepad editor to edit your source files, which will enable you to do more extensive revision and Web page development on your personal computer.

EDIT AND VIEW YOUR FIRST WEBPAGE

After you have set up your `www` folder, you may edit your basic home page and even build other pages. Several tools will assist you in this process: the PICO editor, Notepad, and other Web design tools such as Microsoft FrontPage. However, we strongly recommend learning HTML code before using other Web design tools. Why? Tools such as FrontPage automatically generate and modify HTML code; if you do not understand the code, you cannot control the look and content of your own Web pages.

THE PICO EDITOR & YOUR “index.html” Source File

PICO is a text editor for the UNIX system, like Notepad for Windows. Although Notepad is easier to learn and use than PICO, PICO allows you to quickly edit and save your index.html source file directly to your www folder on Alpha. PICO uses control-key commands to insert and edit HTML code and Web page text. To access PICO, connect to the Alpha system as you did when you set up your www folder for the first time.

If you have just set up your www folder, you are still connected to the Alpha system. To access PICO, follow these steps:

1. At the next Alpha prompt type **cd www** and press **[ENTER]**
2. At the next Alpha prompt type **pico index.html** and press **[ENTER]**. Here you can enter HTML code to build and edit your home page.

When the following screen appears, notice that wwwsetup already create several basic tags for you. Understanding HTML tags is important because the tags are codes that tell the browser what and how items will be displayed on your Web page. Being able to visualize the Web page as you are typing the code will make creating your page less confusing.

Here is an example UNIX screen that appears the first time you setup your UWM Web page.

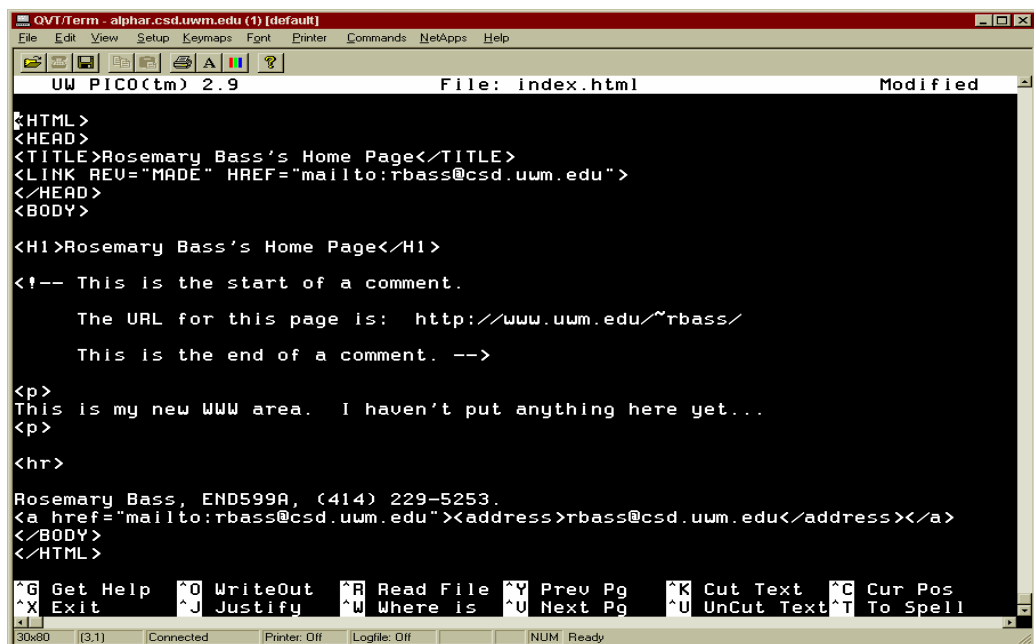
The image shows a terminal window titled "QVT/Term - alphas.csd.uwm.edu (1) [default]". The window contains the PICO editor interface. At the top, it says "UW PICO(tm) 2.9" and "File: index.html". The main area displays HTML code for a home page. The code includes a head section with a title "Rosemary Bass's Home Page" and a link to "mailto:rbass@csd.uwm.edu". The body section contains a heading "Rosemary Bass's Home Page", a comment about the URL "http://www.uwm.edu/~rbass/", and a paragraph "This is my new WWW area. I haven't put anything here yet...". At the bottom, there is contact information for Rosemary Bass, including her address and phone number, and a link to "mailto:rbass@csd.uwm.edu". The bottom of the window shows a keyboard shortcut menu with options like "Get Help", "WriteOut", "Read File", "Prevu Pg", "Cut Text", "Cur Pos", "Exit", "Justify", "Where is", "Next Pg", "UnCut Text", and "To Spell".

Figure 2: Example of an “index.html” source file shown in the PICO editor

The following explanations correspond with the tags as they appear top to bottom on the screen pictured above. Study these tags and compare them to your own “index.html” file.

- <HTML> tells the browser to start interpreting HTML; it is always the first tag because it tells the browser how to interpret your Web page
- <HEAD> tells the browser to include a heading for the title bar located at the top of the screen
- <TITLE> tells the browser that the following text is the heading of the title bar at the top of the screen
- <LINK REV= tells the browser that this page has a relationship with this email address and to link the page to that email address
- </HEAD> tells the browser that this is the end of the title bar content
- <BODY> tells the browser to place the following text or graphics in the Web page's body
- <H1> sets the size of the following text
- <!-- tells the browser not to display the following text on the screen because it is a comment from the web creator to themselves or others reading the source code

NOTE: The text following this comment tag is for your reference only and will not appear on the Web page. Comments can be notes that you leave for yourself about the page or for others when collaborating on page construction. The initial comment created by the `wwwsetup` command tells you your Web address. Use this address later to view your page through a browser.

- <P> tells the browser to start a new paragraph on your Web page

NOTE: This tag automatically moves the text that follows it to a new line. Also notice that the HTML tags are not case sensitive; `<p>` is the same as `<P>`.

- <HR> tells the browser to create a horizontal rule or line across the Web page.
- <A HREF= tells the browser to create a link to another page or in this case to your e-mail

NOTE: The link equals (=) a link to an address. "mail to:" identifies the link. Then the address is labeled in between address tags (`<address>` `</address>`) and the link command ends with `` because a backslash (/) closes or ends a tag command.

- </BODY> tells the browser to close the body of your page; notice the (/)

`</HTML>` tells the browser to stop interpreting the HTML code; it is always the last tag you use

Look at your new Web page with a browser such as Internet Explorer or Netscape. Use the address listed in the comment section of the code. Your page's address is `http://www.uwm.edu/~yourloginname` Knowing how HTML tags create Web page content helps you to visualize what will appear on each page as you type the code.

NOTE: You can type or edit the tags and information between the `<BODY>` and `</BODY>` tags. See Chapter Four for more information on HTML codes and tags.

To save your home page, follow these steps:

1. Press **[Ctrl+O]** (the UNIX Write Out command) to save the changes made to your home page source file (called "index.html").
2. Press **[ENTER]**
3. When your home page file (index.html) is saved, the screen displays: Wrote X lines -- where X is the number of HTML lines you wrote.
4. To view your home page with an Internet browser, leave the Alpha system window open and see the following section called "View Your Home Page."

As you continue to edit your "index.html" source code and view your changes in the Web browser, the following table of commands will help you use the PICO editor more efficiently.

In addition, a menu at the bottom of the PICO editor screen provides a list of some useful commands. To use a command, hold down the control key and press the key of the command you wish to execute.

NOTE: In the on-screen PICO Help menu, a caret ^ denotes the control key marked **[Ctrl]** on the keyboard. For example, for **^Q** hold down the **[Ctrl]** key and press the **[q]** key.

Here are some helpful PICO editing commands:

PICO Command:	Result:
[Ctrl+f]	Moves the cursor forward one character
[Ctrl+b]	Moves the cursor backward one character
[Ctrl+p]	Moves the cursor up one line
[Ctrl+n]	Moves the cursor to the next line of text
[Ctrl+a]	Moves the cursor to the beginning of the current line of text

[Ctrl+e]	Moves the cursor to the end of the current line of text
[Ctrl+v]	Displays the next page of text on your screen
[Ctrl+y]	Displays the previous page of text on your screen
[Ctrl+d]	Deletes the character to the right of the cursor
[Ctrl+\]	Marks a block of text for deletion
[Ctrl+k]	Cuts a marked section of text or cuts the current line
[Ctrl+u]	Uncuts last cut text or pastes cut text at current cursor position
[Ctrl+-h]	Deletes the previous character
[Ctrl+-c]	Interrupts and terminates current process or application
[Ctrl+-o]	Writes or save the current file to your alpha directory
[Ctrl+-x]	Saves current file and exits Pico, returning to the EZ Menu

To exit the Alpha system when you have finished editing your index.html file, follow these steps:

1. Press **[Ctrl+X]** to save and exit your current PICO editing session.
2. Type **exit** and press **[ENTER]** to return to the EZ menu.
3. At Select choice type **bye** to exit the Alpha system.

NOTE: When you want to edit your index.html source code file with PICO, connect to the UNIX Alpha system, then follow the directions in the section called “The PICO Editor.”

VIEW YOUR WEB PAGE

After you set up your Web page, you can view it at any time with a Web browser. Remember that browsers such as Internet Explorer and Netscape Navigator won't let you edit your Web page, but you can make changes with the PICO editor. You can actually switch back and forth between the PICO editor window and the Web browser window to change your HTML code and then view the changes.

Follow these steps to view your Web page with a Web browser:

1. Connect to the Alpha system PICO editor and access your index.html file (follow the instructions in the previous section called “The PICO Editor”).
2. Open your Internet browser by clicking (or double-clicking) on its icon.
3. Find the browser's Address box (where the current page's address is listed: for example, http://www.google.com).
4. Clear the Location box by highlighting the complete address and pressing **[Delete]**.

5. In the empty Address box, type the UWM address followed by ~ and your login name: **http://www.uwm.edu/~yourloginname** For example, if your login name is smith, the location text box should read:
http://www.uwm.edu/~smith
6. Press **[Enter]**.
7. To switch between the Internet browser and the Alpha system window, press **[alt-Tab]**. Or use the mouse to click on the window you wish to view.

REFRESH OR RELOAD YOUR WEB PAGE TO VIEW CHANGES

When you edit your Web page with PICO, the changes do not automatically appear on your home page in Web browser window. To view the changes, click the Refresh button in the Internet Explorer toolbar or the Reload button in the Netscape toolbar. Each time you edit your index.html file with PICO, save the file to your www folder by pressing **[Ctrl+o]**. Then click Refresh or Reload in your browser to view the changes.

MAKE YOUR www FOLDER FILES PUBLIC

If an error message appears when you attempt to view your Web page saying your Web page is not accessible, check whether you have typed the correct address (see the section called “View Your Web Page”). If you have typed the correct address and your Web page is still not accessible, the index.html file in your www folder may not be “made public.”

To correct this problem and make your files public, follow these steps:

1. Connect to the Alpha system.
2. At Select choice type **62** and press **[ENTER]**
3. At Do you wish to continue? type **Y** and press **[ENTER]**
4. At the Alpha prompt type **clear** and press **[ENTER]**
5. At the next Alpha prompt, type **cd www**
6. At the next Alpha prompt, type **mkpub index.html** and press **[ENTER]**.

NOTE: If you wish to make all of the files in your www folder public, type the command **mkpub *.***

7. At the following screen, type **1**:

Please specify whether you want your directory's permissions changed such that in order for users to access the file(s), the files and directories are changed to allow: 1. file names in respective directories to be seen and accessed. 2. file names unseen but access granted. Enter 1 or 2.

8. Click on the Web browser window.
9. Click Reload or Refresh in the toolbar.

Now your Web page should display the changes. If the changes still don't appear, check again whether you have typed the correct address in the browser's location box.

USING NOTEPAD TO EDIT YOUR SOURCE FILE

You will probably find using the PICO editor difficult, but it may come in handy when you need to make quick, small changes directly to your source files stored in the Alpha www folder. To develop your homepage and subpages will require substantial revision and experiment, however. Therefore, you should learn to use Windows Notepad to save your index.html file to your local computer, where you can duplicate it and experiment with multiple revisions without being connected to the Alpha server. You use Notepad to create an entire Web site on your local computer (homepage, linked subpages, image files, etc.) on your local computer and then later transfer everything up to your www Alpha folder using one of the File Transfer Protocol (FTP) programs described in Chapter 3.

Warning: When editing and saving your source files on your local computer, use only Notepad--**DO NOT** use Microsoft Word or any other word processing program because your index.html file (in fact, all HTML files) must be saved as plain text. Microsoft Word and other word processors will insert hidden codes that are not HTML compatible. Only Notepad always saves files as plain text.

To save and edit your index.html file with Notepad on your local computer, follow these steps:

1. Open your Web page with Internet Explorer (if you may use another browser, the specific buttons or steps listed here may differ slightly).
2. Click View in the top menu bar.
3. In the View menu click Source. The Notepad editor window opens, showing your source code.
4. Click File in the Notepad editor window.
5. In the File menu click Save As.
6. In the "Save in" text box near the top of the window click the drive and the folder where you want to save your index.html file.

NOTE: If you are on campus, you may be able to simply save your index.html or other HTML files to your www folder.

1. Retype your file name as index.html or rename the file as you wish; however, you must keep the .html suffix, called a file “extension”. In other words, you must name your file “something.html”. (Notepad normally saves files with a “.txt”, so you replace “.txt” by typing “.html” extension at the end of the filename instead.)
2. To the right of “Save as File Type” menu, select “All files”. Then, click the “Save” button to save your file.
3. Now you may edit and save the file in Notepad it to your local computer drive. Refer to Chapter Four to learn more about HTML. You must use HTML tags to write and edit your Web page in Notepad. Save your editing changes as instructed in steps 4 – 7 above.

Saving your index.html to your local computer will enable you to view it locally with your Internet browser, but locally saved and revised files will not become available for public viewing on the UWM Alpha Web server until you transfer them from your local computer to your Alpha www area.

To view the changes you made to your Web page in Notepad on your local computer, follow these steps:

1. After you save your editing changes, open your Internet browser.
2. Click file.
3. Click Open.
4. Click Browse.
5. Click the down arrow in the “Look in” address box at the top of the screen and find the folder you saved your index.html or source file.
6. Double-click on the source file you want to view.
7. Click Open.
8. Click OK and your Web page should appear in the browser window.

You can now edit your source file and save it in Notepad, then switch to your open browser and click refresh or reload button to see how editing the source file has changed the appearance of your Web page. You can switch back and forth between Notepad and the local browser view of your Web page as you develop your pages.

After developing have edited your .html source file on your local computer, you must use a File Transfer Protocol (FTP) program to transfer the most recent version of your .html file to your www folder and replace the earlier version saved there. Transferring source files to your www folder on the Alpha system will make them available for public viewing by anyone on the Web.

For information on using File Transfer Protocol (FTP) and how to transfer files from your local computer to your Alpha www folder, see the next chapter titled “Uploading Files to the Web.”

CHAPTER THREE: Uploading Files to the Web

INTRODUCTION

In the last chapter, you learned how to save your source file to the your local personal computer and use Notepad to edit it. Web designers often design a web site on their local computer before posting that page on the Internet to make it publicly available. To “upload” or move a web page created or modified on a local machine to a public Internet server, designers take advantage of special programs that simplify the process. These programs use a standard technical protocol, called “File Transfer Protocol” or FTP, to digitally transfer files from one computer to another across the Internet.

NOTE: In this section, “remote computer” refers to your UWM www server directory. “Local computer” refers to your computer at home or work. Files on this computer are usually saved on the “c:” drive.

After you finish creating or modifying your web page on your local computer, you will need to use an FTP program to transfer those web pages to your UWM www directly, thereby making those pages viewable to anyone browsing the Internet. This chapter provides instructions for using the three different types of FTP programs. We recommend that you read the entire chapter and then decide which will work best for you. You may want to use different FTP programs at different times and for different purposes. Listed in order of complexity from simplest to most complex, the following three FTP programs are explained in this chapter:

1. **Novell’s Netdrive Utility** – this program creates a direct link to your UWM www directory, accessible through a drive letter (such as “a:”) on your local computer. This takes a little time to install, but once installed, it is easy to use and can save files directly to your www area.
2. **Microsoft’s Internet Explorer** – this section explains how to transfer files to your UWM www directory using a program already on your computer. This method is simple and you can start using it immediately.
3. **Other Stand-alone FTP Programs** – the programs discussed in this section are available on the Internet and provide many advanced capabilities and options. These programs take a little more time to install, but are very rich in functionality.

USING NOVELL NETDRIVE TO UPLOAD YOUR WEB PAGE

Novell Netdrive is a program that creates a direct link to your UWM account, accessible through a drive letter on your local computer. Once you have set up Netdrive on your computer, you will be able to save files to your UWM account the same that you save files to a floppy disk or to your hard drive's "My Documents" folder.

[Students in English 436 and English 709 should have the Netdrive installation file available on their course CD and therefore do not need to download it from the Web. Check with your instructor if you are uncertain.]

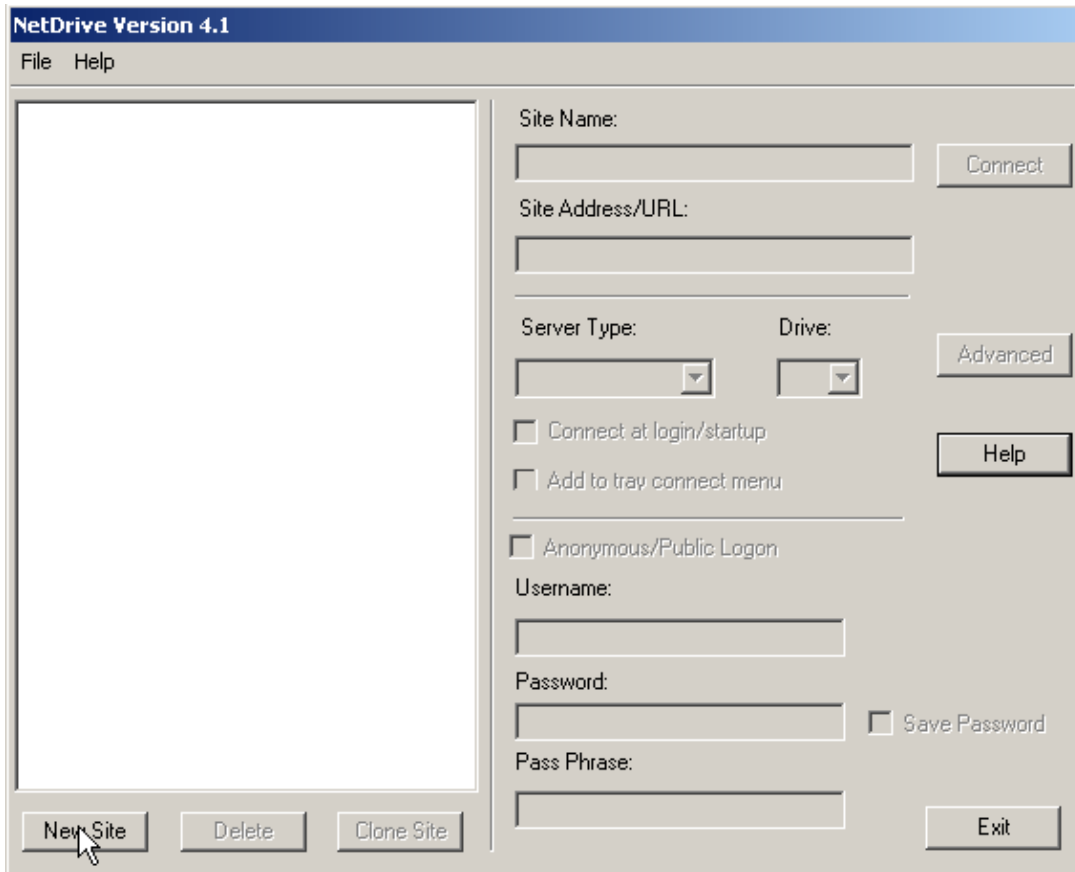
You must download and install Netdrive for it to work on your computer. Once installed, Netdrive will automatically connect to your UWM account every time that you turn on your computer and connect to the Internet. Because of this, Netdrive is very easy to use after being initially installed.

To install Netdrive, follow the instructions below:

1. Open Internet Explorer and go to the following webpage:
<http://supportfiles.novell.com/support/pub/allupdates/ndrv41862.exe>
2. When a pop-up window appears, click on "Run". Then, follow the on-screen instructions to install Netdrive. If prompted to restart your computer, do so.

NOTE: Novell Netdrive is approximately 5.5MB in size. It will take approximately 15 minutes to download (or to complete step 2 above) if you connect to the Internet using a dial-up connection. If you connect to the Internet using a DSL or Cable connection, it will take approximately two minutes to download the program.

3. Once Netdrive has completed the installation process, click on the "Start" button on your computer. Then, click on "Programs" and then "Netdrive". Finally, click on the word "Netdrive" to start the Netdrive program.



4. Click on the “New Site” button located in the bottom left corner of the Netdrive main screen.
5. In the popup window that appears, type “**UWM Alpha Account**” in the “Site name” blank, and type “**alphax.csd.uwm.edu**” in the “Site Address/URL” blank. Note that you should replace the “x” in “alphax” with the first letter of your UWM e-mail login name. Finally, click “Finish.”
6. Uncheck the box to the left of “Anonymous/Public Logon”. Then, put your UWM e-mail login name in the “Username” box, and put your UWM e-mail password in the “Password” box.
7. Make sure that the “Server Type” is set to “FTP” and that the “Drive” is set to “Z:”. Finally, check the box to the left of “Save Password”.
8. Click the “Connect” button located at the top right of the screen. Your UWM account will now appear on your computer as drive “Z:”. Any files that you save to drive “Z” will be saved to your UWM account.

Now that you have used Netdrive to establish a direct connection to your UWM account, you can save your webpages directly to the “www” directory on your “Z:” drive. To save your index.html file to your “www” directory, follow the following steps:

1. Click on “Start” and then on “My Computer”. Then, double click on the

“Z:” drive, and then on the “www” directory. You will now be viewing the directory that contains your webpage on the UWM server.

2. Click on “Start” and then on “My Computer”. Then, click on the icon at the top of the window that looks like a folder with an up arrow over it. You will now be viewing your computer “desktop”. If you followed the directions in the previous chapter, you should see the “index.html” file that you modified.

NOTE: Completing the next step will replace the index.html file on the UWM server.

3. To move a file, such as “index.html” from your local computer to the UWM server, simply click on that file with your left mouse button, and hold down the button. Then, drag the file to the first window that you opened.
4. Once you have finished, close the windows by clicking on the “x” in the top right corner of each window. To transfer more files to the UWM server, repeat steps 1 through 4.

USING INTERNET EXPLORER TO UPLOAD YOUR WEB PAGE

As mentioned at the beginning of the chapter, there are many different ways that you can transfer your files from your local computer to the UWM server. However, because *IE* is automatically built-in to all Windows operating systems, the following benefits make it a particularly advantageous FTP program for a student user:

- You are not required to download any programs.
- You do not have to pay to use the FTP program.
- IE has a built-in “Understanding FTP” resource and “Help” menu available for you to explore prior to use.

To use Internet Explorer to access your files on the UWM server, follow the following instructions:

1. Open Internet Explorer by clicking on “Start”, and then “Programs”, and then “Internet Explorer”.
2. To connect to your UWM “www” folder, type the following FTP address in the address bar of your “*Microsoft Internet Explorer*” window:
ftp://username@alphax.csd.uwm.edu/www/

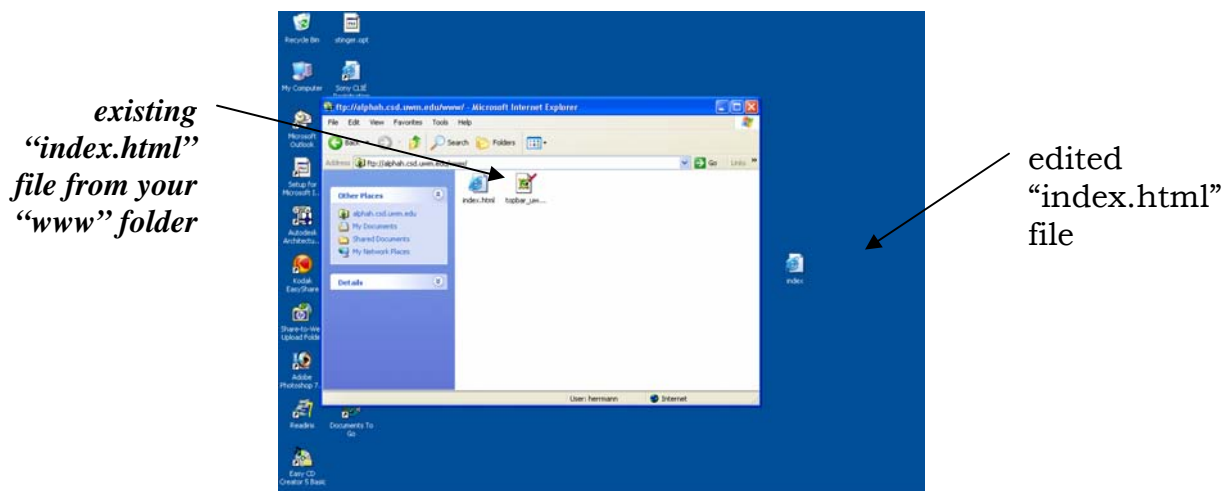
NOTE: “Username” is your UWM username and “x” in “alphax” is the first letter of your username.

3. Strike the **“Enter”** key on your keyboard. The *“Login As”* window should automatically appear on your screen.
4. In the *“User Name:”* entry box, enter your UWM **username**.
5. In the *“Password:”* entry box, enter your UWM **password**.
6. If you would like *Windows* to automatically save your password for the next time you access your UWM FTP folder, click the **“Save Password”** box to place a checkmark.
7. Once you are logged-in, a window titled: **“ftp://username@alphax.csd.uwm.edu/www/ - Microsoft Internet Explorer”** will appear (see Figure 5). This window will contain your existing *“index.html”* file, as well as any additional files you may have put in your *“www”* folder when you originally set up your UWM Web page.

You are now ready to transfer files by following steps 1-3 below:

NOTE: Be careful! The following operation will include deleting your existing *“index.html”* file. Before transferring files, make sure that your new *“index.html”* file contains exactly what you intend it to. If you would like to save a copy of your existing *“index.html”* file, you must first copy and past it to another location on a disk or a drive on your off-campus computer.

1. Single-click on the edited *“index.html”* file (either on your Windows *“Desktop”* or your selected drive on your off-campus computer) to select it.



2. Either copy/paste or drag/drop the file into the “ftp://username@alphax.csd.uwm.edu/www/ - Microsoft Internet Explorer” window.
3. Because your objective is to replace your existing “index.html” file with your edited “index.html,” a “*Confirm File Replace*” dialog box will appear, verifying that you want to replace the existing file. If you are sure you will no longer need your existing “index.html” file, click the “Yes to All” button at the bottom of the “Confirm File Replace” window to proceed with transferring your file.

You have now successfully transferred your edited “index.html” file into your UWM “www” folder and the changes will be immediately available for viewing.

You may view your edited Web page by choosing one of the following options:

- Double-click the “index.html” file in the “ftp://username@alphax.csd.uwm.edu/www/ - Microsoft Internet Explorer” window.
- Close out of the “ftp://username@alphax.csd.uwm.edu/www/ - Microsoft Internet Explorer” window, open *IE*, and type in the URL for your UWM Web page.

If you wish to transfer additional files, such as images (“JPG” or “GIF” format) to your UWM “www” folder, simply use the copy/paste or drag/drop method to transfer the selected file from its current location into the “**ftp://username@alphax.csd.uwm.edu/www/ - Microsoft Internet Explorer**” window exactly as you did with the “index.html” file. If the transferred image is already written into your “index.html” file, it will be embedded into your Web page and immediately available for viewing (using either of the options noted above).

USING AN FTP PROGRAM TO UPLOAD YOUR WEB PAGE

Stand-alone FTP programs give you a wide variety of options and special features not available with the Internet Explorer FTP or the Netdrive program. Most of the features, though, are only useful to advanced web designers and programmers. Therefore, if you are working on your first webpage, we strongly suggest that you try Internet Explorer FTP or Netdrive before turning to these applications.

Many FTP Programs are available for free or trial use on the Internet. Although some features differ, they all follow basically the same protocol for transferring files. Three of the most popular programs are available below:

AceFTP is freeware, which is software that is available for unlimited use at no cost. It is user-friendly and is available at:

<http://software.visicommedia.com/en/products/aceftpfreeware/>

Absolute FTP is user-friendly for beginners, providing a tutorial and an extensive Help section. Vandyke Software allows you to download a 30-day, free evaluation copy:

<http://www.vandyke.com/products/absoluteftp>

WS-FTP is also user friendly for beginners. It has an excellent Help section and is available as a 30-day evaluation copy from FTP Planet:

<http://www.ftpplanet.com/download.htm>

If you don't have a Microsoft Windows operating system, go to www.download.com to find a suitable FTP program.

You must download one of these FTP programs and follow the installation instructions before you can proceed with the following directions.

NOTE: The examples used in this chapter are from AceFTP, but the procedures will be similar regardless of which FTP program you use.

To set up your FTP program, you need to know the following:

1. Username/Login name

Your username is your UWM Panthermail address without the "@uwm.edu". If your email address is "greg2@uwm.edu", then your username will be "greg2".

2. Password

Your password is the same as your Panthermail password.

3. Remote Host Address or Server Name

The Remote Host Address or Server Name is your UWM Alpha domain name. Your Alpha domain name is:

“alphax.csd.uwm.edu” where “x” in “alphax” is the first letter of your login name. For example, a person with the login name “greg2” has the domain name “alphag.csd.uwm.edu”.

4. Profile Name

The program will ask you to name your profile, so you can recall this information next time you use your FTP program. Name it “UWM Web Page” or something similar.

When you use your FTP program for the first time, you will be asked to provide the above information in a series of profile screens.

To apply what you’ve learned so far and begin using your FTP program, follow these steps:

1. Connect to the Internet using your Web browser.
2. Find and download a suitable FTP program on your local computer.
3. Open and setup the FTP program by entering the above information in the profile screens.
4. If your FTP program is not already connected to your www area, choose “Connect” from the file menu to connect to your Alpha server domain name, where you should see your www area folder listed.

After you have completed these steps successfully, you should be prepared to transfer files using the instructions in the next section.

Most FTP programs open a window displaying local computer files on the left side of the screen and a second window displaying remote computer files on the right side of the screen.

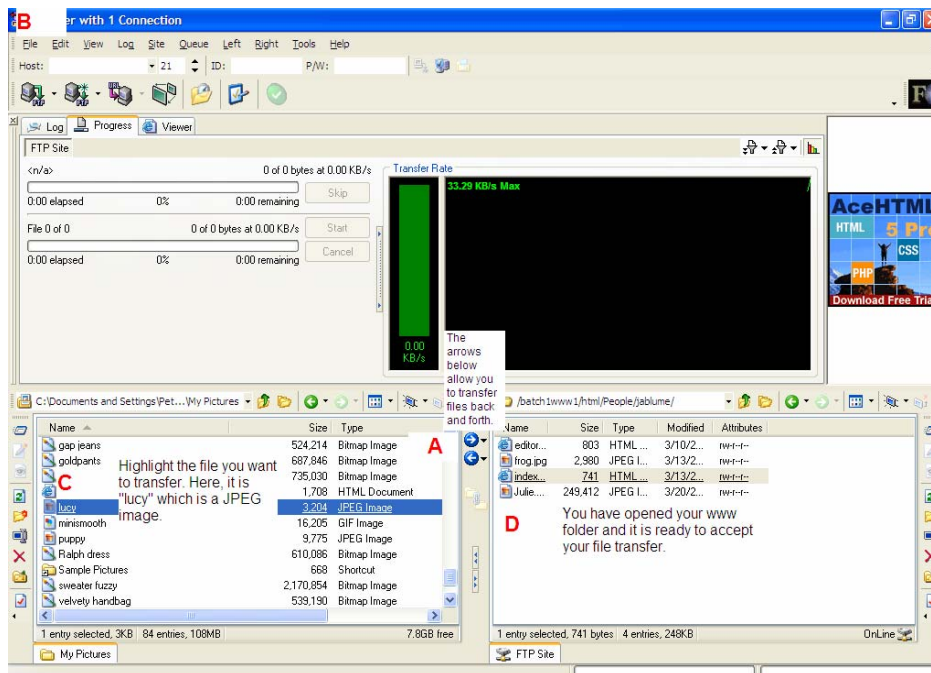
You can transfer images and files to your www folder or you can transfer a Notepad or Wordpad file directly to your “index.html” file.

To transfer images or other files, open your www folder from the list of files from the remote computer by double clicking it. It should already contain your index.html file where your HTML code is kept for your Web home page.

The following steps provide an example of how to transfer an image file.

1. First, you need an image to transfer. Go to www.barrysclipart.com and find a JPEG image of a dog. You will save this image to your local computer. Use your mouse to right click on the image and save it on your local C: drive as “lucy.jpg”.
2. Make sure that your FTP program is connected.
3. On the FTP program screen, find the file “lucy.jpg” on your local C: drive, located on the left side of the screen. Highlight it.

4. Open your “www” folder on the Alpha system, usually located on the right side of your FTP program screen, by double-clicking on the www folder icon.
5. Find the transfer arrows between the two display windows: On most FTP programs, there are arrows located between the local computer files and the remote computer files. See Figure 5. You can also use the “File” menu to transfer images or files.



6. Click the

right arrow (A), or use the “File” (B) menu to transfer “lucy” or “lucy.jpg”(C) to your www folder (D). It will show up on the right side in the www folder as “lucy.jpg”. See Figure 6.

7. You will now be able to reference the file, “lucy.jpg”, in your HTML code using the `` tag, and it should show up on your Web page.

MOVING ON

Now that you know how to create and transfer files, you can build your Web Page. For more information about using HTML, see the following chapter, “Learning More about HTML”.

CHAPTER FOUR: Learning More about HTML

Developing Your Page with HTML

Web pages are formatted with HTML (Hypertext Markup Language). Web browsers on different operating systems (Mac, PC, UNIX, and so on) all use this common language. Computers interpret Web page elements such as tables, paragraphs, lists and images only if they are encoded in HTML. In this chapter, you will learn more HTML codes and should experiment by trying out the codes described in the following sections. The best way to learn HTML is to experiment with the codes and see how they change the look of your page.

If you type in HTML codes and text using the PICO editor, use [**Ctrl+o**] to save the changes to your index.html source file, then return to a browser window and click on Reload or Refresh to see the changes on your home page. If you edit your source file with Notepad, follow the File Transfer Protocol (FTP) directions to update your source file in your www folder and then view the changes to your Web pages (see the previous section called “Transfer Files with FTP”).

If you need a good starter template for your own HTML code, you may want to view the sample, generic home page available at the following web address:
<http://www.uwm.edu/~vanpelt/jimsmith/jim-smiths-homepage.html>.

Open the source code file from this page (View -- Source) in Notepad, save it to your local disk, adapt the code to your site design, and insert your text information and image links in the appropriate places. Once you get the homepage design the way you want it, you can save your new homepage source code as a template for all your subpages (internal site links), and edit those pages as well. When the homepage, subpages, and images are all linked properly, you can use FTP to transfer the files and images to your www area (make sure your new homepage is called index.html so it writes over your old index.html in the www area). See the previous chapter for more information.

FORMAT YOUR HOME PAGE

The HTML language tells Web browsers how to display a Web page’s specific text and images. The language is made up of HTML tags. These tags are

created with a left angle bracket (<), a tag name, and a right angle bracket (>). Tags usually come in pairs. For example, <p> starts a paragraph section and </p> ends it. The start tag appears in triangular brackets, as does the end tag, except a slash (/) precedes the end tag name.

NOTE: HTML is not case sensitive. For example, <title> is equivalent to <TITLE> and <TiTle>. However, using all capitals or all lower case letters makes HTML files easier to read when editing,

When you establish your www folder with the wwwsetup command, the following basic tags are automatically created:

Tag	Command
<HTML>	"begin interpreting HTML code"
<HEAD>	"create a blue welcome banner"
<TITLE>	"create banner title"
</TITLE>	"end title"
</HEAD>	"close head"
<BODY>	"begin body of text and images" (the main content of you Web page.)
<P> text </P>	"begin a paragraph" your text "end a paragraph"
</BODY>	"end of body"
</HTML>	"stop interpreting HTML code"

Table 2: Some basic HTML tags created by wwwsetup

For a more complete list of basic HTML tags, see the Quick Reference Guide at the end of this chapter. For more advanced HTML codes, refer to this on-line manual, [A Beginner's Guide to HTML](http://archive.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimerAll.html):

<http://archive.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimerAll.html>

For a complete list of HTML tags see:

<http://www.w3.org/TR/1999/REC-html401-19991224/>

PARAGRAPH TAGS

Paragraphs of text, which can be as brief as one phrase, are enclosed in paragraph tags. Paragraphs begin with <P> and end with </P>. The opening <P> tag creates a blank line above the paragraph text. Type the paragraph text between the opening and closing paragraph tags. The closing </P> tag ends

the paragraph. You can combine paragraph tags with other tags as shown in the next section.

ALIGNMENT TAGS

Often used in combination with paragraph tags, alignment tags enable you to center text or align text to the left or the right of the page. Alignment tags can also function independently. For example, this code:

```
<P ALIGN=CENTER>This is centered paragraph.</P>
```

will appear like this on a Web page:

This is a centered paragraph.

```
<P ALIGN=RIGHT>This is a right-justified paragraph. </P>
```

will appear on the homepage as:

This is a right-justified paragraph.

ALIGN=LEFT is the default alignment, so if no alignment is specified, text or images will appear like this on a Web page:

This is a left-justified paragraph.

To center or justify a large portion of text and/or images, use a start alignment tag `<ALIGN=CENTER>` and an end alignment tag `</ALIGN>`.

HEADING TAGS

HTML allows six type sizes: 1 is the largest; 6 is the smallest.

Heading	Appearance
<code><H1>This is Heading 1</H1></code>	This is Heading 1
<code><H2>This is Heading 2</H2></code>	This is Heading 2
<code><H3>This is Heading 3</H3></code>	This is Heading 3

<pre><H4>This is Heading 4 </H4> <H5>This is Heading 5 </H5> <H6>This is Heading 6 </H6></pre>	<pre>This is Heading 4 This is Heading 5 This is Heading 6</pre>
--	--

Table 3: Heading Levels 1-6

TYPE STYLE TAGS

Another tag, called the Forced Style tag, alters the format of the type. These tags are most often used to emphasize words in text. For example:

```
<B> This line is bold-faced </B> <BR>      This line is bold-faced
<I> This line is italicized </I> <BR>      This line is italicized
<U> This line is underlined </U> <BR>      This line is underlined.
```

The HTML codes shown on the left look like the text on the right when viewed as a Web page.

NOTE: The
 or line break tag ends a line without beginning a new paragraph. The
 tag causes the cursor to jump to the beginning of the next line. To create an informal list, place
 at the end of each line in a particular section of text.

HORIZONTAL RULE TAGS

The <HR> or horizontal rule tag inserts a horizontal line. This line can function as a page divider between major sections of your homepage. The following example of HTML code uses a horizontal rule tag to divide sections of information:

```
<HTML>
<HEAD>
<TITLE> An HTML Document </TITLE>
</HEAD>
<BODY>
<H1> HTML is Easy to Learn! </H1>
<HR>
<H2> See how easy that was? </H2>
</BODY>
```

</HTML>

This HTML code causes the browser to create a horizontal rule between the two lines of text "HTML is Easy to Learn!" and "See how easy that was?" Try it out! You can add information to the <HR> tag to vary the width, size, and shading of a horizontal rule.

For example: <HR WIDTH=100% SIZE=3 NOSHADE>

creates a horizontal rule that runs the full length of the Web page, has size 3 thickness, and is unshaded.

Follow these simple guidelines to add information to the <HR> tag:

- WIDTH percentages control the rule's length based on a percentage of the screen's width.
- SIZE controls the rule's thickness.
- SHADE controls how the horizontal rule looks as a three-dimensional bar. Shading gives depth. NOSHADE removes the shading.

Experiment with different <HR> attributes to create a variety of horizontal rules.

ADD BACKGROUND COLORS TO WEB PAGES

With the <BODY> tag, adding color to your Web page is simple. In the following HTML code:

```
<BODY BGCOLOR="name of color">
```

replace "name of color" with basic color names, including "black," "red," "azure," "beige," "ghostwhite," "gold," "blue," "brown," "purple," "gray" and "green". The name of the color should be enclosed by quotation marks.

Try any basic color name (as well as some obscure ones). Some browsers, including Netscape, recognize many color names.

You may also change the color of the text and links on your page by inserting attributes such as "TEXT=purple" and "LINK=gold" into the <BODY> tag. For example: <BODY BGCOLOR="red" TEXT="purple" LINK="gold"> yields a Web page with a red background, purple text, and gold highlighted links. Experiment with your own color choices.

To learn more about using colors, visit The Color Spot home page at <http://www.december.com/html/spec/colorspot.html>, an excellent page to test out color combinations for text, links, and backgrounds. Here you can learn to use hexadecimal codes to more exactly define the colors, shades and brightness of your page.

LIST TAGS

You can use these tags to make both unnumbered and numbered lists for your Web pages.

To create an unnumbered list, start with a tag. Then enter your list items. For each list item, start with the tag and then type in the list data. Finish the list with the tag. Here is an example:

```
<UL>
<LI> Cat
<LI> Dog
<LI> Rabbit
<LI> Dragon
</UL>
```

When you use the example HTML code for an unnumbered list, the following list appears on your Web page with bullets to the left of each item:

- Cat
- Dog
- Rabbit
- Dragon

To create a numbered list, start with the tag and end with the tag. List the data with tags as before. Here is an example of a numbered list:

```
<OL>
<LI> Cat
<LI> Dog
<LI> Rabbit
</OL>
```

This list appears on your Web page with each item numbered in order:

1. Cat
2. Dog

3. Rabbit

PREFORMATTED TEXT TAGS

Use the <PRE> tag to force text to appear on your Web page in exactly the same format that you laid it out in HTML. For example, to insert spaces that HTML normally ignores, use the <PRE> code like this:

```
<PRE>
  Th is
      is    an      E X A M P L E!
</PRE>
```

This HTML code creates a page that appears on the Web like this:

```
  Th is
      is    an      E X A M P L E!
```

This tag gives you more control over your text's appearance in terms of spacing and how it is arranged on the page.

CREATE MORE WEB PAGES FOR YOUR WEB SITE

To build a new Web page in addition to your home page (index.html), you must create a new .html file in your www folder. The simplest procedure follows these steps:

1. Save your index.html file to your www folder with a new name (but keep the .html suffix, like this: newfilename.html).
2. Delete the existing HTML code in your new file.
3. Finally, add these basic HTML codes to begin building your new Web page:

```
<HTML>
<HEAD>
<TITLE> [create a name for this page] </TITLE>
<BODY>
    [add more code here to format your new page]
</BODY>
</HTML>
```

In order to see this page on the Web:

its name must include the .html suffix,
it must be saved to your www folder,
it must be made public,
and in most cases it must be linked to your index.html file.

See the section in Chapter Two called “Make your www Folder Files Public” for more information about making files public. The next section explains how to create links to the new pages you’ve created for your site.

LINK PAGES AND SITES WITH HYPERLINKS

Important components of every Web document, hyperlinks add another dimension to your home page. While appropriate fonts and backgrounds capture your readers’ attention, hyperlinks provide further information and interest. After you have initially set up your home page, you can add links. This ability to create literally millions of connections makes the Web different from, and in some ways more complex than, other media.

To create links in a file using the PICO editor, follow these steps:

1. Connect to the Alpha system.
2. At login: type your login name and press **[ENTER]**.
3. At password: type your password and press **[ENTER]**.
4. At TERM=(vt100) (or a similar message) press **[ENTER]**.
5. At Select choice type **62** and press **[ENTER]**.
6. At Do you wish to continue? type **Y** and press **[ENTER]**.
7. At the Alpha prompt (alpha) 1: type **clear** and press **[ENTER]**.
8. At the next Alpha prompt, type **cd www**
9. To put a link in an .html file, type **pico filename.html**, where “filename” is the name of the file you wish to access.

Now that you’re in the PICO editor and have opened your file, continue with these instructions:

1. Find the area of HTML code that corresponds to the area on your Web page where you want to add a link.
2. Using the arrow keys, bring your cursor to the proper lines of code.
3. Type ``
For example, to link to Professor Van Pelt’s home page, type :
``.

Now add the text that names your link. (Example: Click here to see Professor Van Pelt’s Home Page). Follow this link-naming text with ``.

For example, this code:

```
<A HREF="http://www.uwm.edu/~vanpelt">Click here to see Professor  
Van Pelt's Home Page</A>
```

causes the phrase

[Click here to see Professor Van Pelt's Homepage](http://www.uwm.edu/~vanpelt)

to appear underlined and colored as a hyperlink on your Web page.

4. To save these changes to your .html file press **[Ctrl+o]** and **[ENTER]**.
5. Press **[ENTER]** to save the changes to the filename.
6. To exit the file completely, press **[Ctrl+x]**.

You have now learned enough HTML to create text and links on your Web page(s). To refresh your memory when you start writing HTML code on your own, refer to the following Quick Reference Guide to HTML Codes. In addition, remember to visit other Web pages and select "Source" from the Web browser's "View" menu to see how others have used HTML to create their Web pages.

Below is a reference list of common HTML tags and each does.

HTML CODES	Description
<HTML></HTML>	Begin/end HTML file
<HEAD></HEAD>	Begin/end blue welcome banner
<TITLE></TITLE>	Begin/end greeting
<BODY></BODY>	Begin/end body of text and images
<P></P>	Begin/end paragraph
 	Begin new line, insert space
<H1></H1>	Begin/end headings
<ALIGN=CENTER>	Align text/images center of page
<ALIGN=RIGHT>	Align text/images right of page
<ALIGN=LEFT>	Align text/images left of page
	Bold-faces text
<I></I>	Italicizes text
<U></U>	Underlines text
<HR>	Inserts horizontal rule
Text	Inserts and identifies text link
	Inserts image
<PRE></PRE>	Allows text to appear exactly as formatted
	Creates a bulleted list
	Creates a numbered list

Table 4: HTML Quick Reference

CHAPTER FIVE: Graphic Elements

INTRODUCTION

Graphic images create some of the most powerful effects in a Web document. Although a page's content and organization determine its effectiveness, in Web design, a page's appearance is equally important.

Images can illustrate relevant concepts or data in addition to decorating your Web page. Carefully consider the purpose and placement of each graphic element. Too many images or distracting animation clutter the page, visually exhausting and confusing the site's visitors.

At the other end of the spectrum, a Web page with too few graphics and too much text intimidates readers. Balancing text and graphic elements with blank space is the key to creating successful Web documents. Whether its purpose is promotional, informational or recreational, carefully chosen graphic elements can help clarify a Web page's messages.

IMAGE FORMATS

Graphic images come in many file formats. In general, JPEGs and GIFs work well with HTML and are therefore the primary graphic formats on the Web. JPEGs have the extension ".jpg", and GIFs have the extension ".gif" (see this manual's Glossary for definitions of GIFs and JPEGs). Both ".tif" files and "bitmaps" (with the extension ".bmp") can cause difficulty and are best used for print media rather than the Web.

JPEGs (.jpg) and GIFs (.gif) are used extensively because they compress images to a very small size so they can be quickly transported over the Internet. Their compression methods suit them for different types of images. JPEGs are normally used for photos and other detailed images where a full range of color is important. In contrast, GIFs are used for line drawings, icons, text, banners, and animated images where line definition and contrast are more important.

HOW DO GIFS AND JPEGS WORK?

A **GIF** is a compressed format that uses 8-bit indexed color (256 colors). These files include a color table, and each color in the image is indexed to that table. Additional colors are created by a process called “dithering,” in which the table colors are mixed. GIF offers several key features that make it useful for many types of Web graphics:

- Lossless compression. GIFs are usually created in RGB color and then converted to indexed color; some loss in color quality can be expected. But once the conversion is complete, no quality is lost in the compression process.
- Interlacing. GIFs can be “interlaced” (usually by checking a box when saving), allowing them to load in stages rather than all at once.
- Transparency. With GIFs, you can select specific colors to be transparent, allowing you to create graphics with, for example, a transparent background. Simply select “transparent” when you initially create your image.

Because of the method used to compress images, and because of their relatively small number of colors, GIFs are best used for non-photographic images.

JPEGs contain 24-bit color information, which means that they use millions of different colors. But JPEGs use “lossy” compression, so they lose image quality when they’re compressed. On the other hand, JPEGs offer variable compression, allowing you to balance image quality and file size. JPEGs can also be “progressive,” similar to interlacing, allowing them to load in stages rather than all at once. Because JPEGs contain 24-bit color, they are particularly well suited for photographic images.

Images with other file extensions than .gif or .jpg require conversion with a graphics program such as PhotoShop, Corel’s PhotoPaint, or similar shareware/freeware graphic programs.

To convert graphic images to the proper .gif or .jpg format, open the image in the graphic application (File → Open) and save the image (File → Save As...) with the appropriate extension (.gif or .jpg). Make sure you save the new image to a disk.

This chapter shows you how to place graphics on your Web page. You will:

1. Find the graphics you want to use.

2. Save the graphics to a disk.
3. Copy the graphics from the disk to your www area on the Alpha System.
4. Link the graphics to your Web page with HTML.
5. Make your graphic files public.

FIND GRAPHICS ON THE INTERNET

One great source for computer images is the Web. Search engines like Yahoo, Hotbot, Excite, and Google enable you to find specific artwork by using keyword searches, for example, "renaissance paintings," "insect photographs," or "Egyptian hieroglyphs." For a more general search use keywords like "free graphics," "download pictures," "free image library" and so on. Another way to find good ideas for Web graphics is to surf sites similar to yours or other sites that interest you. Follow their links and look for visual elements.

If you're using Netscape or Internet Explorer you can copy the images you see on the Web. Do not, of course, simply take the images that you like; many are copyrighted. Use only images in the public domain. A good source of such images is:

[http://dir.yahoo.com/Arts/Design Arts/Graphic Design/Web Page Design and Layout/Graphics/](http://dir.yahoo.com/Arts/Design_Arts/Graphic_Design/Web_Page_Design_and_Layout/Graphics/)

You can download almost any image on the Internet quickly and easily; however, there are a few restrictions. For example, copying all of the graphic elements from a document and using them in the exact same arrangement in another document without crediting the author may violate copyright laws. When saving images from the Internet, follow the Fair Use Guidelines detailed in Chapter 1 of this manual and respect any wishes expressed on the source page regarding the material.

SAVE IMAGES TO DISK

Using a PC and the right mouse button you can save almost any graphic from the Web in a few simple steps. Most Internet images use either a GIF or a JPEG format (indicated by the .gif or .jpg file name extension). Most browsers and most graphics software packages like Corel and Adobe can read both formats.

Follow these instructions to save an image or graphic to a disk:

1. Insert a disk into the A: drive.

NOTE: You may use a zip disk or CD instead, but these instructions assume the use of an A: drive 3½ floppy disk.

2. Position the mouse pointer over the image and single click the right mouse button.

NOTE: You usually click on your left mouse button. Look at your mouse. There should be both a left and a right button. Click on the right one.

3. In the small dialog box that opens to the right of the mouse pointer on the screen, left click on Save Image As.... (or “Save Picture As....”)
4. In the Save dialogue box, click in the top window, Save in: , and select the A: drive.
5. Notice the image’s file name and extension in the File name: window. Either write down the file name or change it to something you can remember, but DO NOT change the file name extension (.jpg or .gif).
6. Click Save.

USE A SCANNER TO TRANSFER IMAGES AND TEXT

Scanning technology allows you to add your own photographs and other images to Web pages rather than importing them from other Web sites. After scanning and saving the scanned images to a disk you can insert the disk into any computer and open the images in a program such as Corel Draw or Adobe PhotoShop to enhance, resize, or otherwise edit them. You can also scan and transfer text to your Web page to avoid retyping it. After scanning text and saving it to disk, you can open the file in a word processing program such as WordPerfect or Microsoft Word to edit the text. You can now add the text to existing files or post it on your Web page.

Computer scanners are available for student and faculty use in several locations on campus. You do not have to use the same campus computer you use to scan your images to edit them.

Lab Locations With Scanners	Phone Numbers— Use area code when necessary	Notice:
Bolton 225	229-6151	One of two color printer locations on the entire campus (costs more for printing color). Open

		24 hours, 7 days per week
Bolton 180	229-2387	Only for: PantherMail, DES online, and PAWS Access
Curtin 127 and 108 Classrooms		English computer classrooms
Business N234	229-2510	
EMS E173A	229-2239	Open 24 hours, 7 days per week
Library E274	229-6418	
Mitchell 353	229-4957	One of two color printer locations on the entire campus (costs more for printing color)
Union	229-6025	
Sandburg	229-5668	Dormitory computer lab open to residents, open to all students until 7 p.m.

Table 5: Computer Labs with Scanners

COPY IMAGES TO YOUR www FOLDER

Before you can display your images on your Web page, you must upload, or copy, them to your www folder. You can upload graphic files to your www folder with an FTP (file transfer protocol) procedure or program such as AbsoluteFTP or with a Web browser such as Netscape or Internet Explorer. See “Transferring Files using FTP” in Chapter Two on page 19. To access your www account you need to know your alpha computer or Panthermail login name. You would type the following address in the location or address box at the top of your Web browser screen:

ftp://yourloginname@alphax.csd.uwm.edu/www
(where “x” is the first letter in your login name).

For example, if your alpha login name is “smith,” your would type

ftp://smith@alphas.csd.uwm.edu/www/

into the address or location box of your Web browser screen.

We recommend that you use an FTP program such as LeechFTP or AbsoluteFTP as described in Chapter Two.

LINK GRAPHICS TO YOUR WEB PAGE WITH HTML

You can use HTML image tags to link graphic files to your index.html file in order to place images on your Web page. Be sure that you understand how to make files public before you use HTML tags to link graphics to your index.html file. If you have forgotten how to make files public, see the next section, called “Make Your Graphic Files Public.”

The following process works because the image that you want to add to your Web page is now stored in your www folder along with your index.html file.

1. Access your index.html file with the Pico editor or open it in Notepad.
2. Find the place on your Web page (in the corresponding HTML code) where you want the image to appear.
3. Type in the following HTML code for an image tag. Include the file name of the image file with the code.

```
<IMG SRC="filename.gif">
```

For example, if your image file is called “eye003.gif,” type:

```
<IMG SRC="eye003.gif">
```

After you add the image tag, when a Web browser reads your index.html file, it comes across the image tag with the image's filename. The Web browser then finds the image file in your www folder and retrieves it.

If your image does not appear correctly on your Web page, try the following troubleshooting techniques:

- Click the Reload button on the browser's toolbar
- Make the file(s) public using the **mkpub** command at the Alpha prompt (see the following section, called “Make Your Graphic Files Public”).
- Verify that the image is saved to your www folder and has been saved in the proper file format.

If the image is too large or too small, use one the following HTML commands to change its dimensions. Do not resize the image in a graphics application and upload the modified file. HTML code is much more effective.

HTML determines image sizes primarily by number of pixels. Start resizing your image by limiting its height or width to 50 pixels; add one of these two statements to the image tag:

```
 or 
```

When you define one dimension, "HEIGHT=50" for example, the browser will automatically resize WIDTH proportionally. In other words, if the original image is an exact square with equal HEIGHT and WIDTH, and the image's HEIGHT=100, the browser also interprets WIDTH as 100 pixels. Change either HEIGHT or WIDTH to achieve the desired image size.

Including both height and width statements in the same image tag can distort the original image:

```

```

For example, a square image given the above tag would be elongated into a rectangle. Using either HEIGHT or WIDTH maintains the source image's original proportions.

MAKE YOUR GRAPHIC FILES PUBLIC

The last step for placing your graphics on your Web page is important. If you skip this step, you will not be able to view the images you have uploaded and linked to your Web page. You must "make public" all graphic files or HTML files in your www folder that you wish to be seen on your Web page.

Follow these steps to make files public:

1. Connect to the Alpha system.
2. Type **62** to suspend the EZ menu. Press Enter.
3. At the Alpha prompt, type **cd www**
4. At the next Alpha prompt, type **mkpub filename**, where "filename" if the name of the file that contains the image you wish to display on your Web page (something like "dragon.gif" or "star.jpg"). For example, type **mkpub dragon.gif** if the file name is "dragon.gif".

NOTE: If you do not know the names of your image files, type **dir** at the Alpha prompt to list all of the files in your Alpha www folder. See the Appendix for other useful UNIX commands.

5. Press **[ENTER]**
6. When the following screen appears, type **1**.

Please specify whether you want your directory's permissions changed such that in order for users to access the file(s), the files and directories are changed to allow: 1. file names in respective directories to be seen and accessed. 2. file names unseen but access granted. Enter 1 or 2.

7. When the screen reads: (Filename) your file should now be publicly accessible exit the Alpha system.

Now when you open your Web page in a browser, your image will appear on your Web page. If not, click **Reload** or **Refresh** in the browser's toolbar.

CREATE GRAPHICS LINKS

An image, like text, can also function as a hyperlink. Create a graphic link simply by adding the image tag to an existing hyperlink. For example, in the following text link, the words "Click here for XYZ" appear as a highlighted, clickable link on the Web page.

```
<A HREF= "http://Webaddress"> Click here for XYZ </A>
```

You may attach graphic images to this link by inserting the graphics tag,

```
<IMG SRC="filename">
```

to yield the following hyperlink text and graphics tag:

```
<A HREF = "http://urlname"> Click here for XYZ <IMG SRC="filename"> </A>
```

Now, both "click here for XYZ" and the image immediately following this statement will be highlighted as a link on your Web page.

CHAPTER SIX: Organize Your Pages with Tables

WHAT ARE TABLES?

Tables are great for organizing your Web pages so that anyone can find information quickly and easily. Tables improve a Web page's appearance by creating consistency and alignment. Think of your page as a grid of cells or boxes arranged in columns and rows that can contain data, text, lists, images, or links. When you use HTML table codes to lay out this grid, you can easily position the elements on your page. Tables are similar to spreadsheets, which you may have already used in other programs.

WHY USE A TABLE?

- To organize your Web page and lay out information
- To organize and draw attention to data
- To increase the amount of text on a page's opening screen
- To gain more control over image placement on a page (advanced feature)

NOTE: You must be familiar with basic HTML coding and vocabulary before you begin to create tables on a Web page. For a list of table tags used in this chapter, please see Quick Reference Table Tags at the end of this chapter.

This chapter covers two main types of Web page tables: page-wide divider tables that divide up entire Web pages, and column and row tables that are used within the framework of the divider tables. Divider tables are used more often than the simpler column and row tables.

USING DIVIDER TABLES

HTML's divider table tags provide an easy way to organize a Web site, producing pages with the same basic layout and navigation structure. Consistent navigation is the most essential part of good web design. HTML frame tags can also produce a consistent Web site, but can cause usability problems as well as implementation difficulty.

Tags, Closing Tags	Description
<TABLE>, </TABLE>	Denotes a table
<CAPTION>, </CAPTION>	Denotes a caption or title above a table
<TBODY>, </TBODY>	Denotes the table body
<TR>, </TR>	Denotes a row within a table
<TD>, </TD>	Denotes a data section within a table (similar to a column)

Table 6: HTML Table Tags

NOTE: To reduce problems and mistakes on your Web page(s), make sure you enter all table tags in the correct order. For example, the **<TABLE>** tag comes after the **<HTML>** tag and the table data **<TD>** tag comes after the table row **<TR>** tag. The best way to learn how to use table tags is to practice manipulating a table's different attributes.

Tag	Attribute	Description
<TABLE>	BGCOLOR=	Specifies color using hexadecimal code
<TD>	BGCOLOR=	Specifies color using hexadecimal code
<TD>	WIDTH=	Specifies column width using percentage

Table 7: Table Tag Attributes

NOTE: Hexadecimal codes for use with BGCOLOR attributes can be found at http://www.iconbazaar.com/color_tables.

TABLE CODING INSTRUCTIONS

In the following popular basic Web page design, the title area usually contains large text or an image that acts as a banner or logo to describe the Web site and create interest. The navigation area contains links for moving around the site. The content area contains the page's subject matter as text, images or both.

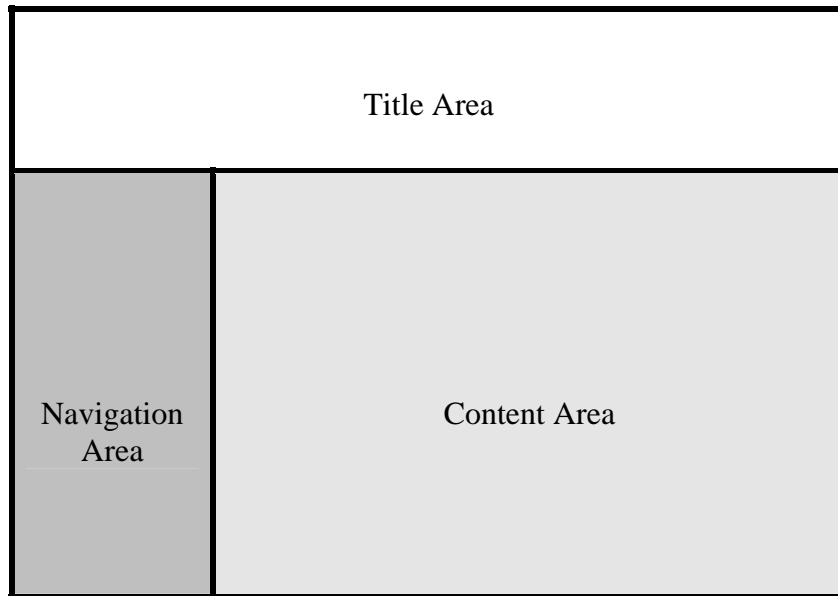


Figure 4: Basic Design for a Web Page

This page's table consists of one row that uses `<TR>` tags to denote a row within a table and two columns that use `<TD>` tags to denote data sections, or columns, within a table. The `<CAPTION>` tag, which denotes a caption or title above a table, is used to put an image in the title area. In the HTML code example, table tags and attributes are printed in bold. The following instructions show how table tags can produce this design throughout a web site.

1. Create an HTML file that includes the code shown below. You can write it in Notepad and later copy it into your www folder. You may also choose to type it directly into an existing html file. Substitute your own image and link information for those in the example. Following is the example code and the Web page it generates in a browser.

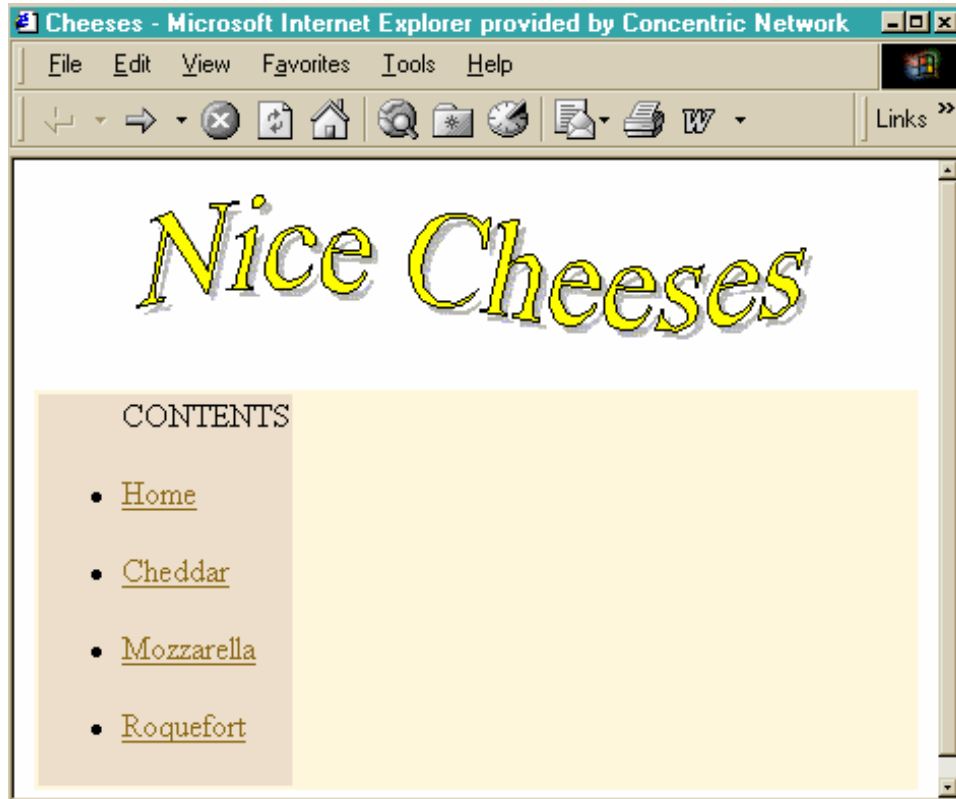
```
<BODY>
<TABLE BGCOLOR=#fff8dc>
  <CAPTION><IMG SRC=nicecheeses.gif></CAPTION>
  <TBODY>
    <TR>
      <TD WIDTH="20%" BGCOLOR=#eedfcc>
        <UL>CONTENTS</P>
        <LI><A href="http://www.uwm.edu/~jdoe/index.html">Home</A>
          <P></P>
        <LI><A HREF="http://www.uwm.edu/~jdoe/cheddar.html">Cheddar</A>
          <P></P>
        <LI><A HREF="http://www.uwm.edu/~jdoe/mozzarella.html">Mozzarella</A>
          <P></P>
        <LI><A HREF="http://www.uwm.edu/~jdoe/roquefort.html">Roquefort</A>
          <P></P>
      </TD>
    </TR>
  </TBODY>
</TABLE>
```

```

        </LI>
    </UL>
</TD>
<TD WIDTH="80%">
</TD>
</TR>
</TBODY>
</TABLE>
</BODY>

```

Figure 5: Browser View of Table Code



2. Now copy the html file you created in Step 1 so that a separate file exists for each item in the navigation area. For this example, create four files of identical content. Name the files home.html, cheddar.html, mozzarella.html and roquefort.html. Each page in this Web site now has identical design and navigation.
3. Edit each HTML file to add unique content. For this example, locate the section of code four lines from the bottom of roquefort.html.

Between these two lines:

```

    </TD>
</TR>

```


Add the following code:

```
<TD WIDTH="80%">
  Roquefort<P>
  Roquefort is considered as the "King of cheeses". It has a tingly
  pungent taste and ranks among blue cheeses. Only the milk of
specially
  bred sheep is used and is ripened in limestone caverns.<BR>
</TD>
```

4. The following code from roquefort.html shows the added content. Below the code is the Web page the code generates in a Web browser.

```
<BODY>
<TABLE BGCOLOR=#fff8dc>
  <CAPTION><IMG SRC=nicecheeses.gif></CAPTION>
  <TBODY>
    <TR>
      <TD WIDTH="20%" BGCOLOR=#eedfcc>
        <UL>CONTENTS<P>
          <LI><A href="http://www.uwm.edu/~jdoe/index.html">Home</A>
          <P></P>
          <LI><A HREF="http://www.uwm.edu/~jdoe/cheddar.html">Cheddar</A>
          <P></P>
          <LI><A HREF="http://www.uwm.edu/~jdoe/mozzarella.html">Mozzarella</A>
          <P></P>
          <LI><A HREF="http://www.uwm.edu/~jdoe/roquefort.html">Roquefort</A>
          <P></P>
          </LI>
        </UL>
      </TD>
      <TD WIDTH="80%">
        Roquefort<P>
        Roquefort is considered as the "King of cheeses". It has a tingly
        pungent taste and ranks among blue cheeses. Only the milk of
specially
        bred sheep is used and is ripened in limestone caverns.<BR>
      </TD>
    </TR>
  </TBODY>
</TABLE>
</BODY>
```

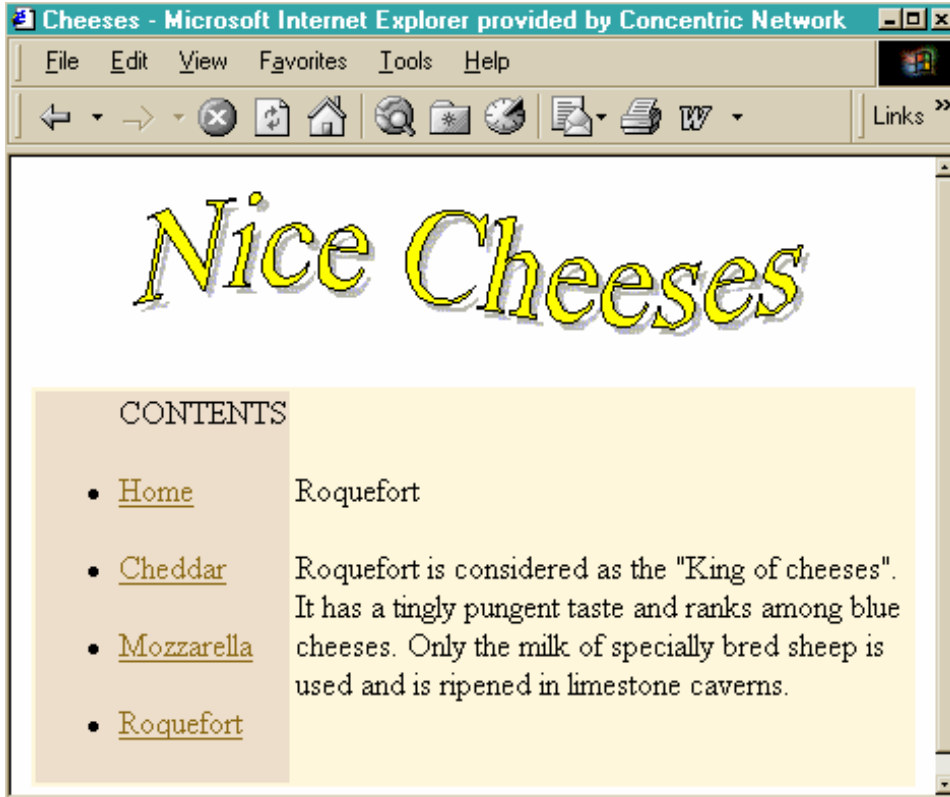


Figure 6: Browser View of Table Codes

To avoid problems, follow these directions:

- Save HTML code in plain text or ASCII file format; do not use other formats such as Microsoft Word's ".doc" format.
- Do not forget end tags, such as `</TD>`, `</TR>` and `</TBODY>`.
- Percentages used in columns created with WIDTH attributes should add up to 100%. (The example in the Nice Cheeses site uses 20% and 80%.)
- Make image files public.

This example site uses an image file with a .gif extension. Programs that can create .gif's include:

- Adobe Photoshop
- Adobe Photoshop Elements
- Jasc PaintShop Pro
- Microsoft Photo Editor, included free with some PCs

More information about HTML basics can be found at these sites:

<http://www.htmlgoodies.com/primers/basics.html>

<http://www.w3.org/MarkUp/Guide/>

CONSTRUCTING COLUMN AND ROW TABLES

Column and row tables give you a great deal of control over the organization and layout of your Web page because you can manipulate the position of tiny segments or images. Each table forms a grid, and each cell in the grid forms a box in which you can place elements such as text, data, graphics, or links. Constructing a column and row table requires several steps.

This section explains how to:

- start a table
- create columns and rows
- make table headings
- add captions
- align table data
- create table borders
- manipulate table width
- customize data cell padding and spacing

NOTE: tables and data can contain text, HTML code, or both, including links, lists, and even other tables.

A table has certain defined defaults. A *default* is an option that is pre-assigned to a table. For example, a default McDonalds cheeseburger comes with pickles. If you don't want pickles, you must specifically ask them to serve the burger without pickles; therefore, asking for "no pickles" changes the default.

Table defaults include the following:

- No visible borders. Borders help to set up grids, but are unnecessary when aligning a picture or centering text.
- All data, text, or graphics are vertically centered and left justified.
- Table width is determined by the longest element in the table's data cells. You can use specific HTML tags to alter a table's width, add a border, or align its text differently.

To create a table, use the tag `<TABLE>`. Every table must begin with this tag. Likewise, your tables must end with the tag `</TABLE>`. Without one tag or the other, your browser may not read your HTML code correctly.

This example code generates a very simple table. Notice the closure of the tag `<TABLE>`.

```
<HTML>
```

```
<TABLE>
```

You will type in your table DATA here.

```
</TABLE>
```

```
</HTML>
```

COLUMNS AND ROWS: THE GUTS OF A TABLE

Table row tags define an area that can contain the data for your new table. The table row tag set begins with `<TR>`, which creates a row within a table, while `</TR>` designates the end of the same row. Tables are specified in HTML row by row, and each row definition contains definitions for each of the cells in that row. To set up a table, define a top row and each of its cells, then define a second row and its cells, and so forth.

Manually setting up such a table can be cumbersome with the PICO editor, but Notepad offers the time saving cut and paste tools. See the previous section called "Use Notepad to Edit your Web Page" for further information and instructions.

Within a table row, the tag `<TD>` defines individual cells. "TD" stands for Table Data. There are no limits to the number of rows you can have, and each row can include as many cells as you need for your columns. However, each row should include the same number of cells so that your columns will line up.

The following table has one row and three cells. "DATA" refers to text or graphics placed in the table.

```
<HTML>
```

```
<TABLE>
```

```
<TR>
```

```
<TD>DATA</TD>
```

```
<TD>DATA</TD>
```

```
<TD>DATA</TD>
```

```
</TR>
```

```
</TABLE>
```

```
<HTML>
```

TABLE HEADINGS

The <TH>, or table headings, tag provides headings or labels for rows or cells. Like all other tags, table headings must close with </TH>. As in other media, the font used for a heading is different than the rest of a Web page's text to highlight its significance. To create a table heading across the top of the table, add the <TH> tags to the first row, as in the following example:

```
<HTML>
<TABLE>
<TR>
<TH> Heading 1 </TH>
<TD> Data cell 1 </TD>
<TD> Data cell 2 </TD>
<TD> Data cell 3 </TD>
</TR>
</TABLE>
</HTML>
```

CAPTIONS

You can add captions to your tables with a Caption tag. Caption tags can be inserted at the top or the bottom of a table.

To insert a caption at the top of your table:

1. Create a table in your index.html file.
2. After the <table> tag, type **<caption valign=top>**
3. Next, type in the caption text that you want at the top of your table.
4. Type **</caption>**.

Follow almost the exact same steps to insert a caption at the bottom of your table:

1. Create a table in your index.html.
2. After the <table> tag, type **<caption valign=bottom>**.
3. Next, type in the text that you want at the bottom of your table.
4. Type **</caption>**.

The following figure shows a Web browser view of a table with a caption at the top:

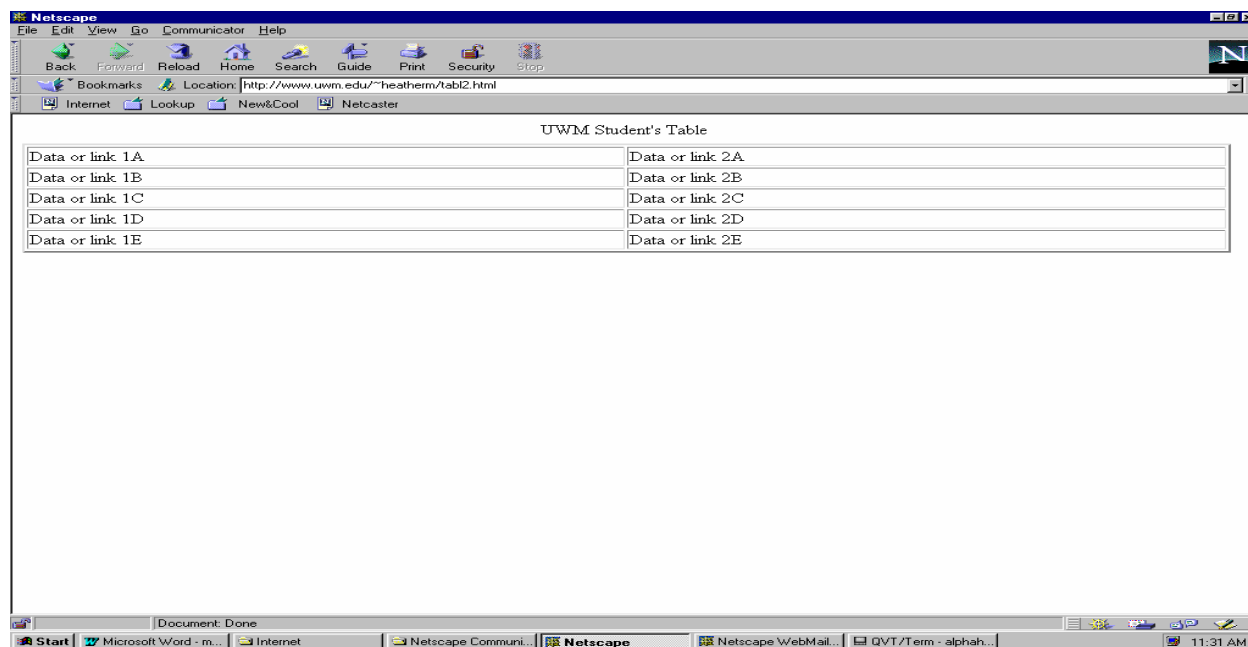


Figure 7: Table with a Caption

ALIGNING TABLE DATA

You can align your table data with a few simple tools. Together, these tools allow great flexibility in formatting your table. With the ALIGN (horizontal alignment) and VALIGN (vertical alignment) attributes you can place table elements into cells in a multitude of ways by combining these attributes with the <CAPTION>, <TR>, <TH>, and <TD> tags.

The following list of tags and attributes will help you to format your tables.

- The Caption tag (<CAPTION>) can be specified as TOP or BOTTOM (the default is TOP). This attribute places the caption either above or below your table. Captions can make your Web page more user friendly.
- The ALIGN attribute can be specified within the row tag <TR> as LEFT, RIGHT, or CENTER (the default is LEFT for table data elements and CENTER for table header elements). The VALIGN attribute can be specified as TOP, BOTTOM, MIDDLE, or BASELINE (the default is MIDDLE). This specification creates the default alignment for all of the table elements in the given row, but it can be overridden in each individual element. The BASELINE element applies to all elements in the row, aligning them to a common baseline.

- The ALIGN attribute can be specified within the table heading tag <TH> as LEFT, RIGHT, or CENTER (the default is CENTER). The VALIGN attribute can be specified within <TD> as TOP, BOTTOM, or MIDDLE (the default is MIDDLE).
- The ALIGN attribute can be specified within the table data tag <TD> as LEFT, RIGHT, or CENTER (the default is LEFT). The VALIGN attribute can be specified within <TD> as TOP, BOTTOM, or MIDDLE (the default is MIDDLE). In the following example, the table has no visible borders. VALIGN also changes in each cell. Notice that you don't need to end the ALIGN or VALIGN commands with </ALIGN> OR </VALIGN>.

```
<HTML>
<TABLE>
<TR>
<TD ALIGN=CENTER VALIGN=TOP> DATA</TD>
<TD ALIGN=CENTER VALIGN=MIDDLE > DATA </TD>
<TD ALIGN=CENTER VALIGN= BOTTOM > DATA </TD>
</TR>
</TABLE>
<HTML>
```

TABLE BORDERS

Borders help to define the rows and columns within your table. To create a border, add the BORDER attribute to the table tag like this: <TABLE BORDER=X> where X equals the border width in pixels. (Average computer screens are about 640 pixels wide.) The border default is one. The higher the number, the thicker the border. BORDER = 0 eliminates the border.

NOTE: All the <TD> tags must be nested within <TR> tag sets, and all the <TR> tags must be contained between <TABLE> tags.

```
<HTML>
<TABLE>
<TABLE BORDER=2>
<TR>
<TH> HEADING </TH>
<TD> Data</TD>
<TD> Data</TD>
<TD> Data</TD>
</TR>
</TABLE>
```

</HTML>

TABLE WIDTH

Similar to the border tag, the tag <TABLE WIDTH=X> defines table width. Width can be expressed as either a number of pixels or a percentage. A table width of 320 or 50% covers half of the screen on a monitor with a resolution of 640x480 (a common screen size). The same 50% table is displayed quite differently on a monitor with a resolution of 800x600.

Defining width by a fixed number of pixels enables you to control the exact placement of data elements regardless of screen size. The percentage method works well if exact placement of table elements is not your primary consideration. However, avoid mixing percentages with numbers of pixels.

If you want your table to cover the full width of the screen, use the tag:

<TABLE WIDTH=100%>

The percentage method is preferable now since larger screens are becoming more common. A minimized screen does not display a Web page described with pixels as accurately as a page described with a percentage.

HTML code for a simple table with one row, three cells, changing the Border default to two, and width changed to 50% of the screen size.

```
<HTML>
<TABLE>
<TABLE WIDTH=50 TABLE BORDER=2>
<TR>
<TH> Citrus Fruits</TH>
<TD> Oranges</TD>
<TD> Tangerines</TD>
<TD> Grapefruit</TD>
</TR>
</TABLE>
</HTML>
```

The <TABLE WIDTH> and <TABLE BORDER> tags need not be used together. However, they must be used (in any order) **after** the <HTML> tag and the <TABLE> tag but **before** the <TR>, <TH> or <TD> tags.

CELL PADDING AND SPACING

Use cell padding within the **<TABLE>** tag to control the amount of space between the visible or invisible border of a cell and its context. Cell padding is defined by number of pixels (like the border value): **<TABLE CELL PADDING=5>**

Use the cell spacing attribute to adjust the space between the cells in the table. In the tag **<TABLE CELL SPACING=X>** “X” represents the number of pixels between table cells. The cell spacing default is two.

The following example shows another way to create table headings and cells with data. Here is the HTML code:

```
<html>
<table>
<table border=2 table width=100%>
<tr>
<th> Heading 1 </th>
<td align=center valign=top> Data 1</td>
<td align=center valign=top> Data 2</td>
</tr>
<tr>
<th>Heading 2</th>
<td align=center valign=top> Data 3</td>
<td align=center valign=top> Data 4</td>
</tr>
<tr>
<th>Heading 3</th>
<td align=center valign=top> Data 5</td>
<td align=center valign=top> Data 6</td>
</tr>
<tr>
<th> Heading 4</th>
<td align=center valign=top> Data 7</td>
<td align=center valign=top> Data 8</td>
</tr>
<tr>
<th> Heading 5</th>
<td align=center valign=top> Data 9</td>
<td align=center valign=top> Data 10</td>
</tr>
</table>
</html>
```

The Web browser view of this table appears in the following figure:

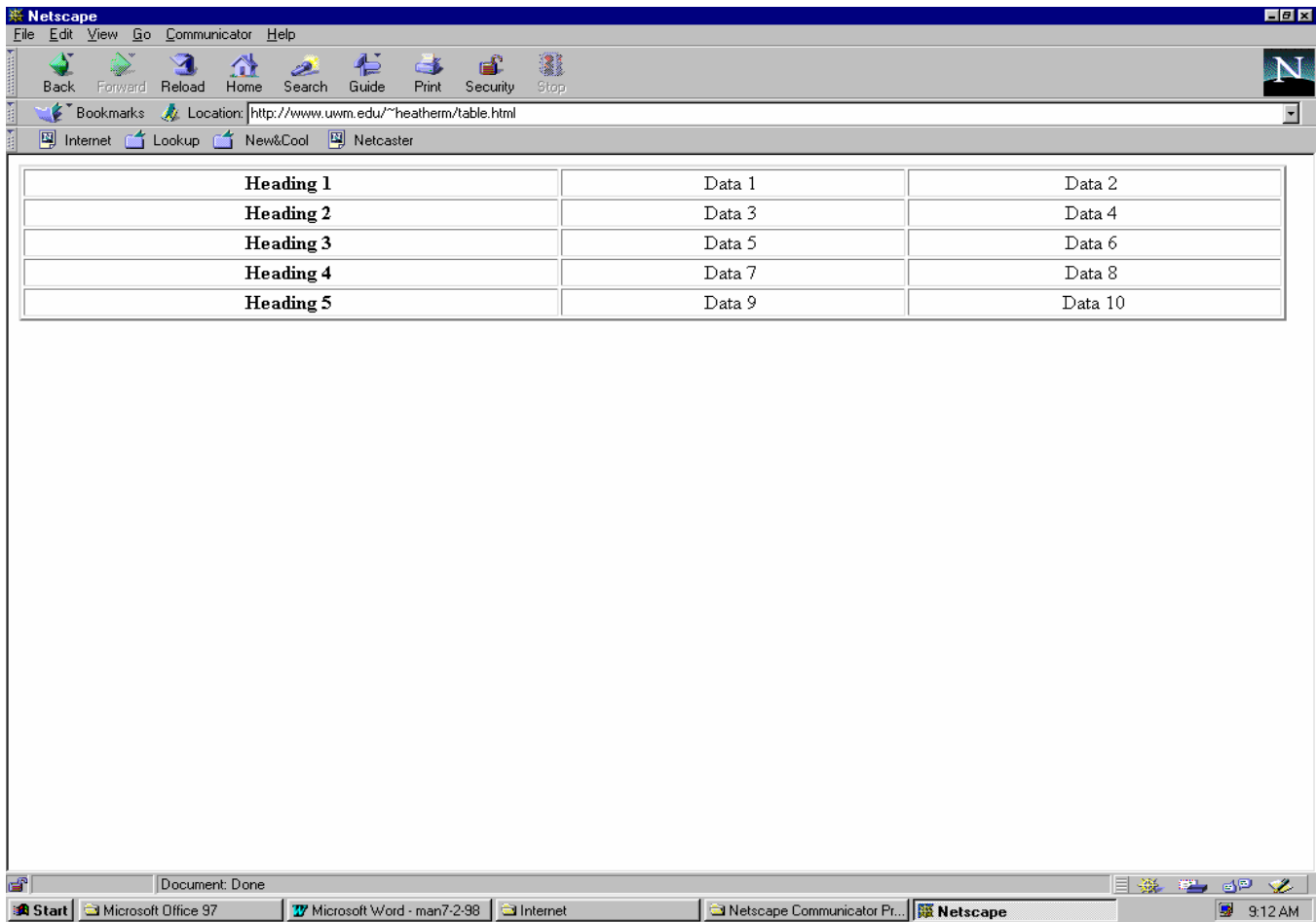


Figure 8: Browser view of a table with headings and aligned data.

Though creating tables can be time consuming, they provide a logical structure for arranging information. Use the following Quick Reference Guide to Table Tags to help you remember the basic tags. Remember that you can use Notepad to create the HTML code for a table. In Notepad you can use options like "copy" and "paste" to perform repetitive editing tasks and even to copy the table code from Notepad to your PICO editing window.

<TABLE> </TABLE>	begins and ends a table
<CAPTION> </CAPTION>	begins and ends a caption
<TH> </TH>	begins and ends a table header
<TR> </TR>	begins and ends a table row
<TD> </TD>	begins and ends table data

<TABLE WIDTH = X>	determines width of table; X is width in pixels or as percent (1-100%)
<TABLE BORDER=X>	determines width of border; X is in pixels; X=0 for no border; default=0
<TABLE CELLSPACING=X>	Determines space between cells; X is in pixels; default=2
<TABLE CELLPADDING=X>	determines space between edges of cells and contents; X is in pixels

Table 8: Quick Reference Guide to Table Tags

CHAPTER SEVEN: Cascading Style Sheets

COMMON STYLES

You can use style sheets to define a large variety of text characteristics. However, this introductory guide discusses just a few of the more common styles. After you learn how to use style sheets, you may want to create your own classes, allowing you to format different types of paragraph text and links. To find more about style sheets see the list of resources at the end of this chapter. The following instructions introduce Cascading Style Sheets (CSS) to anyone new to Web page design, though you should understand at least basic HTML coding. These instructions use Notepad, but you may use any software capable of producing hypertext files.

This tutorial provides the code for two HTML files and a Cascading Style Sheet. You will learn how style sheets work and what you can do with them. You will especially appreciate a style sheet's benefits and ease of use when you link one to a Web site that you design.

ONE SIMPLE STYLE CONTROLS HOW YOUR WEB SITE LOOKS

You can gain more control over the design of your Web pages by using Cascading Style Sheets (CSS). Also known simply as style sheets, these files allow you to change the formatting options of certain HTML text tags, such as `<p>` or `<h1>`. Style sheets make it easy to guarantee consistency throughout your site and to change options like font size and color from one location.

Styles override Web browser default settings to change the way they display HTML-formatted text. Without a style sheet, you must define these text characteristics in each HTML file used in your site. Because complex sites can include hundreds of pages, understanding CSS is invaluable to Web design.

WHAT IS STYLE?

In Web design, styles refer to a combination of formatting codes or options that define the way Web pages are displayed to create a consistent appearance. Two components make up a style: a selector and a declaration (see the following

figure). The selector defines the HTML tag to which the formatting options will apply, such as a paragraph tag or a header tag. The declaration contains all of these characteristics defined by their property and the value. The following are common formatting components:

```
p {font-size: 24pt; color: green; font-family: Arial}
```

NOTE: Do not place these brackets, < >, around the selector in a CSS. However, you must place these brackets, {}, around the entire declaration. In addition, place a colon after the property name before its value, and separate each property-value combination with a semicolon.

The following table lists the styles that will allow you to begin working with CSS to add more design to your Web pages.

Style Characteristic	Property	Example
Font Size	font-size	font-size: 18pt
Typeface	font-family	font-family: "comic sans serif"
Color	Color	color: red
Bold	font-weight	font-weight: 400
Italics	font-style	font-style: italic
Underline, Overline and Line-Through	Text-decoration	text-decoration: underline text-decoration: overline text-decoration: line-through
Indenting	text-indent	text-indent: 0.5in
Alignment	text-align	text-align: justify

Table 9: Cascading Style Sheets

TUTORIAL: WORKING WITH STYLE

The following section demonstrates how style sheets can give you more control over your Web pages. Since browsers do not automatically display CSS, we will first create two simple HTML files that contain the necessary link that notifies the browser to read the CSS before displaying the page.

Step 1. Create Two Sample HTML Files

The following instructions include the code for the two HTML files used in this exercise. Save these files to either your hard drive or to a disk, but store them both in the same file that will also contain your CSS.

1. Open the program you use to create HTML files, such as Notepad .
2. Type the following HTML code to create your first HTML file:

```
<html>
<head>
  <title>Style Sheet Tutorial</title>
</head>
<body>
  <h1>Using Style Sheets Example One</h1>
  <h2>Cascading Style Sheets can give you more control over your
  Web pages.</h2>
  <p>Style sheets are easy to use and allow you the freedom to
  establish your own guidelines for how each level of text is
  displayed.<p>
  <a href="csstutorialTwo.html">Go to page Two</a>
</body>
</html>
```

3. Save this document as: csstutorialOne.html
4. Open a new document to create your second HTML file.
5. Type the following HTML code:

```
<html>
<head>
  <title>Style Sheet Tutorial</title>
</head>
<body>
  <h1>Using Style Sheets Example Two</h1>
  <h2>Style sheets make your Web pages easier to change.</h2>
  <h3>Without style sheets, you would need to define text
  characteristic in each file.</h3>
  <p>By using style sheets, you can change the formatting options
  of your text and headings in one location.<p>
  <a href="csstutorialOne.html">Go to page One</a>
</body>
</html>
```

6. Save this document as: csstutorialTwo.html

You have now created two HTML documents.

Step 2. Open Your HTML Files in a Web Browser

Now that you have created two HTML files, open them in a Web browser to see how they appear. Because you have not yet created a style sheet, the browser will display default text characteristics, commonly Times New Roman, black, with decreasing sizes from header 1 to paragraph text. Remember, browsers recognize six different levels of headers, and you can work with all of them in CSS.

To open the two sample HTML files with your browser:

1. Open your computer's Internet browser (for example, Netscape or Internet Explorer).
2. Minimize your browser window.
3. Locate the file where you stored csstutorialOne.html.
4. Double-click on this file to open it. Your computer will recognize it as an HTML file and display it in your browser window.
5. Click on the link on this page to go to csstutorialTwo.html.
6. Minimize your browser window.

Do not close your browser yet. After you create your style sheet and link it to these Web pages, you can maximize the browser window and click the Refresh or Reload button in the toolbar to update these files.

Step 3. Create a Cascading Style Sheet

Now create a style sheet to link to the two sample HTML files. A browser will recognize this link and read the CSS before displaying the Web pages. The formatting options in your CSS will override the browser's default settings.

To create your style sheet:

1. Open a new document in Notepad.
2. Type the following styles for the three different levels of text used in your two .html files:

```
p {font-size: 11pt; font-family: times new roman; color: black}
h1 {font-size: 30pt; color: blue; font-family: arial}
h2 {font-size: 20pt; color: red}
h3 {font-family: "comic sans serif"; color: black; font-size: 24pt}
```

3. Save this document as csstutorial.css

If you do not specify certain characteristics, your browser will automatically assign the default settings to these options. You may want to format certain text as “black” or “Times New Roman,” to make sure that all browsers display your pages the same. Older browsers often use a gray background and display white text as the default.

Step 4. Link Your Web Pages to the Style Sheet

In order to use the CSS to format your Web pages, you must insert a link that tells your browser to read the style sheet before displaying the pages. This link has three parts: part one, `rel="stylesheet"` tells the browser that this link is for a style sheet; part two, `type="text/css"` tells the browser to search for a plain text file saved with the .css designation. These first two parts of the link are the same whenever you use a CSS. Part three, `href="csstutorial.css"`, provides the actual link to the .css file. This part of the link changes depending on the name of the style sheets you use for future Web pages.

To link your pages to the style sheet:

1. Open the HTML code of each of your sample HTML files.
2. Insert the following tag directly before the `</head>` tag in both files:

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

You have now linked both of your HTML files to the CSS.

Step 5. Display Your Web Pages with Style

Before your browser can recognize the formatting options designated in your style sheet you must complete the following steps:

1. Save any final changes to your CSS.
2. Resave both of your HTML files to ensure that your browser will recognize the most current changes.
3. Maximize the two Web pages you created and click the Refresh or Reload button on your browser’s toolbar in order to display them with the formatting characteristics assigned in your style sheet.

Step 6. Changing Styles

To see how easily you can change the styles displayed in both your Web pages, we will now change the paragraph and header 1 styles in your CSS.

1. Open the HTML code of the csstutorial.css file.
2. Change the color value of the h1 selector to green.
3. Change the font-size of the p selector to 14.

4. Save the file.

After the changes to the CSS have been saved, view the pages:

5. Maximize your Web browser window.
6. Click the Refresh or Reload button in the toolbar to display the changes made to the third header in the second Web page.

The main header should change from blue to green and the paragraph text becomes slightly larger. These changes demonstrate how you can easily control the text formatting options in all of your Web pages by using style sheets.

CONCLUSION AND TROUBLESHOOTING

You now understand the basics of Cascading Style Sheets. Style sheets help you control the design of your Web sites. After you apply your own style sheet to a site that you create, you will begin to appreciate this technology.

If you experience difficulties with this practice exercise or with future style sheets, these tips may help you solve your problems.

- If none of the formatting options designated in your style sheet are applied to your page in the browser:
 - Make sure you have inserted the style sheet link tag into your HTML files.
 - Resave your HTML and CSS files so your browser can recognize the most recent changes.
 - Click the Refresh or Reload button on your browser's toolbar.
 - If you are using an older version of Netscape Navigator, your browser may not recognize style sheets.
- If one particular formatting option does not work:
 - Check the code you entered for that one option.
- If only certain fonts do not change:
 - The software programs in your computer may not recognize a rare font you have specified. You may specify several fonts in the declaration to ensure that the browser will recognize at least one of them:
{font-family:Arial, Helvetica, sans serif}

WHERE TO LEARN MORE

To learn more about Cascading Style Sheets, see these Web sites:

<http://www.w3.org/Style/CSS/>

www.Webmonkey.com

APPENDIX A: Other Tools You Can Use

ADOBE PHOTOSHOP

Adobe Photoshop is a program that allows you to edit photographs, graphics, and images for print, publication, or for use on the web. It is a very powerful and can take substantial time and effort to learn. Adobe also makes Adobe Photo Elements—a less powerful program that is much simpler to learn and use. For more information on Adobe products, visit their website at www.adobe.com. If you are a University of Wisconsin student, you can purchase Adobe products at substantial discounts by visiting www.wisc.edu/wisc.

MACROMEDIA DREAMWEAVER

Macromedia Dreamweaver is a program that aids in the programming and construction of a website. While it is important to learn the HTML code that makes a web site work, Dreamweaver can make text, layout, and graphic changes to a web site easier to do on a large scale. For more information on Macromedia products, visit their website at www.macromedia.com. If you are a University of Wisconsin student, you can purchase Macromedia products at substantial discounts by visiting www.wisc.edu/wisc.

MICROSOFT FRONTPAGE

While it is beneficial even for novice web designers to know the language of HTML, learning it can be difficult. Building on a basic knowledge of HTML, Microsoft FrontPage makes creating web pages easier by providing a graphical interface that allows you to edit pages without relying on extensive HTML knowledge. Less powerful than Dreamweaver, FrontPage is made for the novice web designer. FrontPage is packaged with many Microsoft Office installations or can be purchased separately at www.microsoft.com.

APPENDIX B: UNIX Operating System Basics

UNIX is the operating system that allows you to use the Alpha computer system (like Windows allows you to use a PC). Unlike Windows, the UNIX operating system provides no icons or menus to guide you. Beginning users with some MS-DOS experience will notice similarities between the commands of both systems. UNIX files can be edited with PICO.

BASIC UNIX COMMANDS

You must use several of the following commands to create your Web page(s). To learn more about the syntax or options for any UNIX command, at the Alpha computer prompt type "man x" in which "x" is the name of the command or program you wish to learn about. For example, to learn more about the PICO text editor, type **man pico** at the Alpha computer prompt and press **[Enter]**.

UNIX Command:	Result:
pwd	Prints working directory (your current location)
dir	Lists a directory of files saved in current directory
ls	Lists a shorter directory of files in current directory
cp <i>filename newlocation</i>	Copies a file to a new location or new name
mv <i>filename newlocation</i>	Moves a file to new location
mkpub <i>filename</i>	Makes a file public and readable by any Unix user
more <i>filename</i>	Displays a file on your screen one page at a time
rm <i>filename</i>	Removes or deletes a file from your Unix directory
mkdir <i>directory</i>	Makes a new directory under current directory
rmdir <i>directory</i>	Removes or deletes a directory
cd <i>directory</i>	Changes your location to a new directory
cd	Changes your location back to "root" or home directory
Ctrl+h	Deletes the last character typed (may be shell-dependent)
Ctrl+x	Deletes the current line (may be shell dependent)
Ctrl+c	Interrupts-terminates current process or application
pico <i>filename</i>	Invokes Pico editor for work on a text file
pine	Invokes Pine e-mail program
wwwsetup	Sets up www directory and index.html homepage file

APPENDIX C: Glossary

- @**
The "at" sign
- A fixture in every email address, @ separates the username from the domain name, indicating that you are "at" a particular electronic address
- Alpha system**
- The Alpha computer complex is UWM's academic multi-user computing system. The complex consists of a group of Digital Alpha machines that provide electronic mail, interactive computing, batch computing, Web server, News servers, Print server, etc.
- Anchor**
- In HTML, *anchors* mark the start and end of hypertext links, for example <title>, marks the start of a title of a web page.
- Angle brackets**
< >
- Angle brackets around text indicate that all the characters within the brackets must be treated as a single unit, with no spaces between parts, as in
<http://www.infolink.org/glossary.htm>
- ASCII**
- American Standard Code for Information Interchange is a standard format for representing characters so that files can be shared between programs.
- Bookmark**
- A feature of most Web browsers. You can save frequently accessed links in a *bookmark* file, rather than have to look up the URL each time. See also: Favorites
- Bps**
Bits-Per-Second
- A measurement of how fast data is moved from one place to another. A 56K *modem* can move about 57,000 bits per second.

**CGI
Common Gateway
Interface**

Defines a set of rules that describe how a *Web Server* communicates with another piece of software on the same machine, and how the other piece of software (the CGI program) talks to the web server. Any piece of software can be a CGI program if it handles input and output according to CGI standards.

Client

A remote computer connected to a host or server computer and the software that makes this connection possible.

Compressed file

A file that's been squished so it takes up less disk space and travels faster through network and modem connections. Before you can use the file, you must *decompress* (or expand) it using a special program. Popular decompression programs include PKZip (for DOS) and WinZip (for Windows).

Domain name

The address that identifies an Internet site. Domain Names consist of at least 2 parts. The left part is the name of the company, institution, or other organization. The right part identifies the highest sub domain. Domains can be a country, such as *ca* for Canada, *fr* for France, or the type of organization: *com* for commercial; *edu* for educational, etc.

Download

To transfer information electronically from one computer to another, as when you move a program from an archive to your computer. See Upload and FTP.

**Email
Electronic Mail**

A way of sending messages on computers attached to local or global networks.

Email address

The address you use to send and receive email. Your email address contains your username, the “@” symbol, and the domain name, as in 1smartuser@uwm.edu.

**FAQ
Frequently Asked**

A list of the most common questions posted on a newsgroup

Questions

File extension

In filenames, the group of letters after the period is called the file extension. For example, if the filename is `command.com`, the extension is `.com`.

Forms

The standard HTML technique for receiving input from a user. Forms can include a variety of input mechanisms, such as text input fields, check boxes, radio buttons, and drop-down lists. When the user presses a form's submit button, the information from the input mechanism is sent to a CGI program for processing.

FTP File Transfer Protocol

A way of moving files across networks. With *FTP* you can login to another Internet site and download or send files. Some sites have public file archives that you can access by using *FTP* with the account name "anonymous" and your e-mail address as password, which is called *anonymous ftp*

GIF Graphic Interface Format

Pronounced "jiff" or "giff." A method used to compress and transfer graphics images into digital information; it is commonly used to transfer graphics files on the Internet because of its excellent display of solid colors on all Web browsers. A GIF file is a graphic image stored in a compressed format, and is usually associated with Web documents. GIF is short for *Graphic Interchange Format*, a format developed by CompuServe for transferring graphic files. The format stores lots of graphic information in little space. As opposed to bitmap, GIF files sacrifice some data to achieve a greater compression. GIF files use the 3 character extension `.gif`

History List

A list (usually a pull-down menu) of the Web pages you most recently visited. History lists enable you to return quickly to a site or see an overview of your latest surfing session.

Home Page

The page that appears every time you open a web browser, a homepage has hypertext links to other pages on the same

server or to other Web servers. And usually the source file for the named index.html

**HTML
Hypertext Markup
Language**

The coded format used to create WWW documents. HTML commands control how a piece of text will appear. Files in html format are viewed with a *World Wide Web Client* program and use the extension .html or .htm

HTML Editor

A program designed to make it easier to create Web pages. Instead of typing codes, you format the document as if you were using a desktop publishing program. The HTML editor inserts the codes for you.

**HTTP
Hyper Text Transfer
Protocol**

A term coined by Ted Nelson to refer to a nonlinear system of information browsing and retrieval that contains associative links to other related documents. *Hypertext* is the basic organizing principle of the WWW

Hyperlink

An icon, graphic, or word in a file that, when clicked with the mouse, automatically opens another file for viewing. World Wide Web pages often include hyperlinks that display other Web pages when selected. Usually these hyper linked pages are related in some way to the first page. Hyperlinks include the address or names of the files to which they point, but typically this code is hidden from the user.

Hypertext

A document coded in HTML or a collection of such documents which feature electronic links, often as key words or key phrases, to topics within the document or to other documents.

Hypertext link

A connection between two documents or sections of a document on the Web; a type of hyperlink. Using a mouse to click on a hypertext link allows you to jump from one place in a document to another section in the document or to another document altogether. Documents and images on the World Wide Web are connected through hyperlinks.

Icon	A small picture or image that represents an object, a folder, or a program. Clicking or double-clicking icons launches programs, opens windows, and executes commands.
Internet	A vast network of computers offering many types of services, including email and access to the World Wide Web. As a "network of networks" the Internet links computers around the world.
ISP Internet service provider	A person or company providing access to the Internet. America On-Line (AOL) and ExecPC are examples of commercial Internet service providers who will connect you to the Internet for a fee.
IRC Internet Relay Chat	The online equivalent of CB radio and telephone conferencing, IRC lets you communicate synchronously (in "real time") with other people online.
JPEG Joint Photographic Experts Group	Pronounced "jay-peg". A graphic image in compressed format associated with Web documents. As opposed to bitmap, JPEG sacrifice some data to achieve a greater compression, providing a good color range for use in photographic and other detailed images on your Web pages. JPEG filenames use the extension <i>.jpeg</i> as in "sunset.jpeg" or <i>.jpg</i> as in "family.jpg. Short for <i>Joint Photograph Group</i> , a file-compression format used for storing graphic files, related to JPEG (see definition above). If you come across a file that end in <i>.JPG</i> , you can view it in Netscape Navigator, or you can have one of your helper applications display it.
Listserv	An on going email discussion about a technical or non-technical issue. Participants subscribe via a central service, and listservs may have a moderator who manages information flow and content.
Logical Codes	In a Web command, codes that provide general directions on how to display text. For example, <i>em</i> stands for emphasis,

which might mean bold or italic. Physical codes yield more precise instructions. For example **b** means bold.

Meta Information

The header information located in the HTML programming code that makes up a Web page. This is what Web "robots" explore when indexing information to locate on their search engine software.

Modem

A shortened form of "modulator-demodulator," a modem is device or piece of electronic equipment that connects a computer to a data transmission line (usually a telephone line), enabling the computer to communicate with other computers and the Internet.

Netiquette

A combination of the words *Net* and *etiquette*, *netiquette* refers to appropriate behavior on a network, and more generally the Internet.

Newsgroup

A group of people and their collection of postings on the Usenet network. Newsgroups are open forums in which anyone may participate. Each newsgroup has a topic, which can be as broad as the focus of alt.activism or as narrow as the computer applications discussed in comp.sys.mac.apps.

Physical Codes

In a Web document, codes that provide specific directions on how to display text. For example "*bold*" stands for bold and instructs a browser to display a text in bold. *Logical codes* give less precise instructions. For example, *em* means emphasis, which might mean bold or italic.

Plug-in

A program that becomes a part of Web browser and increases its capabilities. Compare it to a helper application, which is an independent program that works with a browser. You can get plug-ins for displaying graphics, playing audio and video clips, and for exploring virtual worlds at no cost from Web sites by downloading them to your computer's browser.

Proxy Server

A computer that processes requests by verifying source host information, destination host address, and information about the requested service. If the communication checks out against defined security policy, the request is allowed to pass through to the real Web server.

**RTF
Rich Text File**

A text file which formats text with commands for emphasis (bold, underline, italic), fonts, and page layout. A multimedia document may also be called a rich text file.

Search Engine

Software that searches through a database located on the computer. At Web-based search engines, surfers type in a keyword query (descriptor words), and the search engine responds with a list of all the sites in its database fitting the query description. Two popular commercial search engines are Yahoo and Webcrawler.

Tags

HTML codes that work behind the scenes to tell Navigator how to display a document and how to open other linked documents. Tags can control the look of text (as in titles and headings), insert anchors that link this document to other documents, and control character formatting (by making it bold or italic). HTML tags are almost always enclosed by angle brackets: <tag>.

TCP/IP

Acronym for *Transmission Control Protocol/Internet Protocol*, the preferred method of data transfers over the Internet. TCP/IP controls software applications on the Internet by enabling the sending computer to compress data into packets and send it to a receiving computer. The receiving computer unpacks the packets and assembles them into a useful form.

Telnet

A program that lets you log onto another computer from your own computer using a username and a password. Telnet allows you to run an offsite computer as if you were sitting at the given computer.

Text File	A file with text characters only. Similar to ASCII DOS files, text files contain no special formatting and are usually portable or readable when retrieved by any word processor or text editor and uses the extension .txt
UNIX Shell	Provides an interface to the UNIX operating system. Shell refers to the environment your computer operates in, such as Windows, DOS, or UNIX. The UNIX shell on the alpha mainframe or mini computers is the equivalent of the DOS shell on a microcomputer. Each shell has its own prompt, which enables you to tell what shell you are currently running in. An alternate shell you can use on UNIX is the "EZ" shell that provides an easy-to-use menu system listing many of the common programs and commands you can run in UNIX.
Upload	To copy a file from your computer to another computer. You usually upload files to share them with other users. See download.
URL Uniform Resource Locator	Pronounced "you-are-ell." A string of characters that uniquely identifies each page of information on the World Wide Web; a Web address. The URL for UWM is http://www.uwm.edu .
Username	The information that, combined with your password, lets you access your computer account; also called <i>account name</i> , <i>userid</i> , or <i>login name</i> . Your Internet email address probably begins with your username.
VRML	Pronounced "vermal", VRML stands for Virtual Reality Markup Language, a programming language used to place interactive, three-dimensional worlds on the Web. With a VRML player, such as Netscape's Live3D, you can explore these worlds.
Web Browser	A software application used to locate and display Web pages. The two most popular browsers are Netscape Navigator and Microsoft Internet Explorer. Both of these are <i>graphical browsers</i> , which means that they can display graphics as well

as text. In addition, most modern browsers can present multimedia information, including sound and video, though they require plug-ins for some formats.

Web Page

A Web document, which appears as a single, unified page on the viewer's browser screen. Web pages may be very long and you may have to scroll far down the page to reach the end, but all the information for the page or document is located at the unique URL of the Web page in question. Clicking on a link on one Web page usually moves you to a new web page or document with a new URL.

whois

A UNIX command that you can use to find out a person's email address, mailing address, phone number, or other information, if you know the person's last name and the location of the server that person logs in to.

World Wide Web

A facet of the Internet that links documents from servers located all around the world. These documents are called Web pages and are read by Web browsers like Netscape Navigator and Internet Explorer.

Zip

The process of compressing a file so that it takes up less space and transfers more quickly. If you have a zipped file, you must unzip it before you can use it.