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ACKNOWLEDGMENTS

Web Design For Cypro Cable Ltd.

Graduation Project

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The Project be inspired for future idea. While I have the honor of having my name attached to this work, there are many others who have helped this idea become a reality.

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I would like to thank my father, my mother, my sisters and I am happy from theirs' be one of piece.

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INTRODUCTION DOCUMENT	1
-----------------------	---

SECTION 2	11
-----------	----

SECTION 3	21-49
-----------	-------

1. INTRODUCTION TO HTML	1
-------------------------	---

1.1. What are HTML tags?	1
1.2. Opening Up Your Workspace	2
1.3. Creating Your HTML Document	3
1.4. Displaying Your Document in a Web Browser	4
1.5. Modifying An HTML Document	5
1.6. Making Changes to Your HTML Document	6

ABSTRACT

This project give to answer the questions which are what is HTML and how is web page designed and how is Macromedia flash worked.

H-T-M-L are initials that stand for **HyperText Markup Language**. HTML tags may tell a web browser to bold the text, italicize it, make it into a header, or make it be a hypertext link to another web page. It is important to note that the ending tag

An HTML document contains two distinct parts, the head and the body. The **head** contains information about the document that is not displayed on the screen. The **body** then contains everything else that is displayed as part of the web page.

JPEG compression is very effective for photographic images where the colors can vary spatially over short distances. JPEG offers some dramatic compression in filesize, sometimes by a factor of 10 (e.g. a 1500 kb file reduced to 150 kb), which may be at a trade-off for some image quality. JPEG images do not have the ability to have transparency.

2. LINKING WITH ANCHORS	24
2.1. What is a URL?	24
2.2. Linking to Local Files	24
2.2.1. Link to Local File	24
2.2.2. Anchor Link to a Graphic	25
2.2.3. Links to Other Directories	26
2.2.4. Anchor Links to a Higher Level Directory	27
2.3. URL's Pointers to the Internet	30
2.3.1. What is a URL?	30
2.3.2. How are URL's Structured?	31
2.4. Links to the World Wide Web	32
2.4.1. HTML for Anchors to the Internet	33

ACKNOWLEDGMENT.....	i
ABSTRACT.....	ii
CONTENT.....	iii-iv-v
1. INTRODUCTION TO HTML.....	1
1.1. What are HTML tags?.....	1
1.2. Opening Up Your Workspace.....	2
1.3. Creating Your HTML Document.....	3
1.3.1. Displaying Your Document in a Web Browser.....	5
1.4. Modifying An HTML Document.....	5
1.4.1. Making Changes in Your HTML Document.....	5
1.4.2. Drag and Drop Bonus!.....	6
1.5. Headings: Six Levels Deep.....	6
1.5.1. HTML Headings.....	6
1.5.2. Placing HTML Headings in Your Document.....	7
1.6. Breaking It Up Into Paragraphs.....	8
1.6.1. HTML Paragraph Breaks.....	8
1.6.2. Inserting Paragraph Breaks.....	8
1.6.3. Other Types of Breaks.....	10
1.7. Doing It With Style.....	11
1.7.1. HTML Style Tags.....	11
1.7.2. Entering Styled Text in Your HTML Document.....	12
1.8. Lists.....	13
1.8.1. Unordered Lists.....	13
1.8.2. Ordered Lists.....	14
1.8.3. Nested Lists.....	14
1.8.4. Placing Lists in Your HTML Document.....	16
1.9. Graphics "the Web".....	17
1.9.1. The Web's Graphic Format.....	18
1.9.2. Some Points to Consider When Using Graphics.....	18
2. LINKING WITH ANCHORS.....	24
2.1. What is a URL?.....	24
2.2. Linking to Local Files.....	24
2.2.1. Link to Local Files.....	24
2.2.2. Anchor Link to a Graphic.....	25
2.2.3. Links to Other Directories.....	26
2.2.4. Anchor Links to a Higher Level Directory.....	27
2.3. URLs: Pointers to the Internet.....	30
2.3.1. What is a URL?.....	30
2.3.2. How are URLs Structured?.....	31
2.4. Links to the World: Internet Sites.....	32
2.4.1. HTML for Anchors to the Internet.....	32

2.5. Links to Sections of a Page	33
2.5.1. The Named Anchor.....	34
2.6. The Named Anchor	37
2.6.1. A HyperLink Button.....	37
2.7. Performatted Text.....	39
2.8. Special Characters.....	41
2.8.1. Accent Marks	41
2.8.2. HTML Escape Sequences.....	42
2.8.3. Extra Spaces.....	43
2.9. Definition Lists.....	44
2.10. Adres Footers and E-mail Lists.....	46
2.11. Lumping vs. Splitting	49
 3. "STANDARD" And "ENHANCED" HTML	55
3.1. Peeking At The Source	57
3.2. Colorful and Textured Backgrounds.....	58
3.2.1. Colorful and Textured Backgrounds.....	58
3.2.2. Solid Color Backgrounds.....	58
3.2.3. Textured Backgrounds.....	59
3.3. Spiffing Up Text	61
3.3.1. Font Size.....	61
3.3.2. Font Color.....	63
3.3.3. Superscripts and Subscripts.....	64
3.3.4. Font Face.....	65
3.4. Extra Alignment	66
3.4.1. Text Alignment.....	66
3.4.2. Aligning Images and Text.....	69
3.4.3. Image Space Padding.....	71
3.4.4. Adding Image Alignment to our Site.....	72
 4. TABLES.....	74
4.1. Basic Table Tags.....	74
4.2. Rows and Columns.....	75
4.3. A Data Table.....	76
4.4. Invisible or "Phantom" Tables.....	77
4.5. Coloring Tables.....	79
4.6. Adding Some FORM to Our webs.....	81
4.6.1. Forming Forms.....	82
4.6.2. Text Input Elements (type="text").....	82
4.6.3. Password Input Elements (type="password").....	83
4.6.4. Text Area Input Elements (type="textarea").....	84
4.6.5. Radio buttons (type="radio")	84
4.6.6. Check Boxes (type="checkbox").....	85
4.6.7. Menu Select (type="select").....	86
4.6.8. Submit and Reset (type="submit" and type="reset").....	86

5.DESIGN WEB PAGE FOR CYPRO CABLE LTD.....	88
5.1. About Cypro Cable Ltd.	88
5.2. Cypro Cable Web Site.....	89
5.2.1. Click "Hakkımızda".....	90
5.2.2. Click "Bize Ulasın".....	91
5.2.3. Click "Pazarlama".....	92
5.2.4. Click "Servisler".....	93
5.2.5. Click "Uretim Çesitleri".....	94
5.2.6. Click "Müsteri Hattı".....	95
CONCLUSION.....	96
REFERENCES.....	96
APENDIX A.....	97

1.1. What are HTML tags?

When a web browser displays a page such as the one you are reading now, it reads first across the file, and looks for special codes or "tags" that are marked by the "<" and ">" signs. The general format for a HTML tag is:

```
<tag attribute="value" tag_name>
```

For example, the code for this section uses a header tag:

```
<h2>What are HTML tags?</h2>
```

This tag tells a web browser to display the text "What are HTML tags?" in the style of header level 2 (We'll learn more about these tags later). HTML tags may tell a web browser to bold the text, italicize it, make it into a header, or make it be a hyperlinked document web page. It is important to note that the ending tag,

```
</tag_name>
```

contains the "/" slash character. This "/" slash tells a web browser to stop tagging the text. (HTML tags are paired this way. If you forget the slash, a web browser will continue to tag the rest of the text in your document, producing undesirable results (as we mentioned you may want to try this later).

NOTE: A web browser does not care if you use upper or lower case. For example, <h2>, <H2> is no different from <H2>, <h2>.

Unlike computer programming, if you make a typographical error in HTML, you will receive a "warning" or "error" the system; your web page will simply look, well... wrong. This will be and easy to go inside the HTML and make the changes.

INTRODUCTION TO HTML

1. INTRODUCTION

H-T-M-L are initials that stand for **HyperText Markup Language** (computer people love initials and acronyms -- you'll be talking acronyms ASAP). Let me break it down for you:

- **Hyper** is the opposite of linear. It used to be that computer programs had to move in a linear fashion. This before this, this before this, and so on. HTML does not hold to that pattern and allows the person viewing the World Wide Web page to go anywhere, any time they want.
- **Text** is what you will use. Real, honest to goodness English letters.
- **Mark up** is what you will do. You will write in plain English and then mark up what you wrote. More to come on that in the next Primer.
- **Language** because they needed something that started with "L" to finish HTML and Hypertext Markup Louie didn't flow correctly. Because it's a language, really -- but the language is plain English.

1.1. What are HTML tags?

When a web browser displays a page such as the one you are reading now, it reads from a plain text file, and looks for special codes or "tags" that are marked by the < and > signs. The general format for a HTML tag is:

```
<tag_name>string of text</tag_name>
```

As an example, the title for this section uses a **header** tag:

```
<h3>What are HTML tags?</h3>
```

This tag tells a web browser to display the text **What are HTML tags?** in the style of header level 3 (We'll learn more about these tags later). HTML tags may tell a web browser to bold the text, italicize it, make it into a header, or make it be a hypertext link to another web page. It is important to note that the ending tag,

```
</tag_name>
```

contains the "/" slash character. This "/" slash tells a web browser to stop tagging the text. Many HTML tags are paired this way. If you forget the slash, a web browser will continue the tag for the rest of the text in your document, producing undesirable results (as an experiment you may want to try this later).

NOTE: A web browser does not care if you use upper or lower case. For example, <h3>...</h3> is no different from <H3>...</H3>

Unlike computer programming, if you make a typographical error in HTML you will not get a "bomb" or "crash" the system; your web page will simply look, well... wrong. It is quick and easy to go inside the HTML and make the changes.

Your browser has a small but open vocabulary! An interesting aspect of HTML is that if the browser does not know what to do with a given tag, it will ignore it! For example, in this document you are viewing, the header tag for this section *really* looks like this:

```
<wigggle><h3>What are HTML tags?</h3></wigggle>
```

but since your browser probably does not support a **<wigggle>** tag (I made it up, perhaps in the future it could cause the text to wave across the screen?), it proceeds with what it knows how to do. If I were programming a new web browser, I might decide to add the functionality for the **<wigggle>** tag into my software.

1.2. Opening Up Your Workspace

To complete the lessons in this tutorial, you should create a second web window (this allows you to keep this window with the lesson instructions and one window as your "workspace"), plus open your text editor application in a third window.

NOTE: This is a good place to remind you that we will provide directions that are somewhat general as the menu names and file names can differ depending on which web browser you are using. If our instructions say, "Select Open Location... from the File Menu" and your web browser does not have that *exact* choice, try to find the closest equivalent option in your own web browser.

In some web browsers (notable Internet Explorer), a new browser window opens with either a copy of the page you are viewing or your home page. Just ignore that for now, we will load new content in it below.

So you will want to be pretty comfortable jumping between different applications and windows on your computer. Another option is to print out the lesson instructions (but we really do not want to promote that kind of excessive tree carnage).

Here are the steps for setting up your "workspace":

From the File menu of your web browser, select New Window or New Web Browser (The exact name of the menu command can be different depending on what browser you are using). A second web window should appear. Think of the first window as your "textbook" and the second clone window as your "workspace" for completing the HTML lessons.

NOTE: The only reason to have two windows here is so that you can read the instructions for the lessons and also view your working document. It is not mandatory to have two windows open; it just makes your work easier. You could also bookmark this web page or jump back here via your Go or History menu.

Next, you need to jump out of the web browser, go to your desktop and open your text editor program.

NOTE: You will need to move back and forth between the different windows to complete these lessons. This can be a challenge depending on the size of your monitor. You may choose to resize the three windows so that they all fit on your screen or layer your windows so you can click on any of them to bring it to the front.

If you are using a word processor program to create your HTML, be sure to save in plain text (or ASCII) format.

If you are just starting out, we most STRONGLY recommend that you use the simplest text editor available -- TextEdit for the Mac OSX (but you need to know how to save files as Plain Text-- as an alternative, Mac users can download the free and wonderfully simple Plain Old HTML Editor) or the Windows NotePad. Why not use those nifty HTML editors? It is sound instructional design that you first learn the concepts and THEN look for shortcuts or helpers that make the work less tedious. When you have got a few lessons under your belt, then check out some of our recommended free HTML Editors.

Also, it will help you if you first create a new directory/folder on your computer that will be your work area. You can call it **workarea** or **myspace** or whatever you like; just make sure that you keep all of the files you create in this one area. It will make your life simpler... well, at least while working on this tutorial!

1.3. Creating Your HTML Document

An HTML document contains two distinct parts, the head and the body. The **head** contains information about the document that is not displayed on the screen. The **body** then contains everything else that is displayed as part of the web page.

The basic structure then of any HTML page is:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2//EN">
<html>
<head>
<!-- header info used to contain extra information about
      this document, not displayed on the page -->
</head>

<body>

<!-- all the HTML for display -->
:
:
:
</body>
</html>
```

The very first line:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2//EN">
```

is not technically required, but is a code that tells the browser what version of HTML the current page is written for. For more information, see the W3C Reference Specification.

Enclose all HTML content within **<html>...</html>** tags. Inside is first your **<head>...</head>** and then the **<body>...</body>** sections.

Also note the **comment** tags enclosed by **<!-- blah blah blah -->**. The text between the tags is NOT displayed in the web page but is for information that might be of use to you or anyone else who might look at the HTML code behind the web page. When your web pages get complicated (like you will see when we get into tables, frames, and other fun

stuff about 20 lessons from now!), the comments will be very helpful when you need to update a page you may have created long ago.

Here are the steps for creating your first HTML file. Are you ready?

1. If it is not open already, launch your text editor program.
2. Go to the text editor window.

Enter the following text (you do not have to press RETURN at the end of each line; the web browser will word wrap all text):

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2//EN">
<html>
<head>
<title>Volcano Web</title>
</head>
<!-- written for the Writing HTML Tutorial
by Lorrie Lava, February 31, 1999 -->
<body>
In this lesson you will use the Internet to research
information on volcanoes and then write a report on
your results.
</body>
</html>
```

NOTE: Look where the `<title>...</title>` tag is located. It is in the `<head>...</head>` portion and thus will not be visible on the screen. What does it do? The `<title>` tag is used to uniquely identify each document and is also displayed in the title bar of the browser window.

In you will learn how to add a string of text for a title that will appear directly on your webpage.

Also note that we have inserted a comment tag that lists the name of the author and the date the document was created. You could write anything in between the comment tags but it is only visible when you look at the source HTML for a web page.

3. Save the document as a file called **"volc.html"** and keep it in the "work area" folder/directory you set up for this tutorial. Also, if you are using a word processor program to create your HTML, be sure to save in plain text (or ASCII) format.

NOTE: For Windows 3.1 users, you *must* save all of your HTML files with names that end in .HTM, so in this case your file should be VOLC.HTM. Do not worry! Your web browser is smart enough to know that a file that has a name that ends in .HTM is an HTML file.

You can create files with names like VOLC.HTML if you use Windows95 or a later Windows operating system.

By using this file name extension, a web browser will know to read these text files as HTML and properly display the web page.

1.3.1.Displaying Your Document in a Web Browser

1. Return to the web browser window you are using for your "work space". (If you do not have a second browser window open yet, select **New Window** or **New Browser** from the **File** window.)
2. Select **Open File...** from the **File** menu. (Note: For users of Internet Explorer, click the **Browse** button to select your file)
3. Use the dialog box to find and open the file you created, "**volc.html**"
4. You should now see in the title bar of the workspace window the text "Volcano Web" and in the web page below, the one sentence of **<body>** text you wrote, "In this lesson..."

1.4. Modifying An HTML Document

Now that you have created your first HTML document, you will learn how to swiftly make changes in your document and view the updates within your web browser.

1.4.1.Making Changes in Your HTML Document

1. Go to the text editor window.
2. Below the text you typed from the previous lesson, press RETURN a few times and type the following text:

A volcano is a location where magma,
or hot melted rock from within a planet,
reaches the surface. It may happen violently,
in a massive supersonic explosion, or more
quietly, as a sticky, slow lava flow.

Note that this text should be above the **</body>** and **</html>** tags at the bottom of your HTML file.

3. Select **Save** from the **File** menu to update the changes in your HTML file.

Reloading The Document in Your Web Browser

Return to the web browser workspace where the previous version of your file was displayed. Note that the new text you entered in the previous steps may not yet be visible. To see the changes, use the **Reload** button or menu item in your web browser. This instructs your web browser to read in the same HTML file and display it with whatever changes have been made. You should now see the new text that you entered.

Note that the web browser ignores all blank lines and extra spaces (carriage returns) that you enter in the HTML file. It will also ignore any extra space characters (beyond the one between words). However, when you are writing HTML, it will help you greatly to separate major sections by some blank lines... when you need to go back and edit content, it makes it easier to locate the correct location to make the changes. Of course, there will be times that you want your web pages to have blank space between sections (e.g. between paragraphs).

1.4.2. Drag and Drop Bonus!

There may be an easier way for you to load and view your HTML pages. You will have to arrange your computer desktop so that you can see the icon for your HTML files adjacent to your web browser window. Simply click and drag the icon for your "vol.html" or "vol.htm" file right into your web browser window. Voilà! your page will display if your computer supports drag and drop operations (It works for operating for Macintosh OS 7.5 and Windows 95 or newer).

1.5. Headings: Six Levels Deep

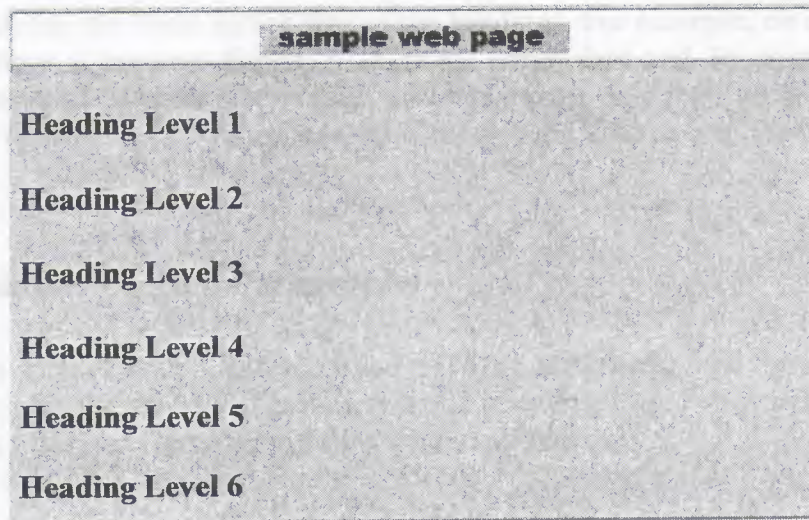
As you see in this web page, the section headings ("Headings -- Six Levels Deep", "Objectives", "Lesson", "HTML Headings" ...) appear as different sizes and, perhaps, different colors and fonts. HTML provides tags for designating headings in six levels of significance. Your browser determines the exact font and size for display.

1.5.1. HTML Headings

You created headings in HTML by "tagging" certain chunks of text with heading tags. The format for an HTML heading tag is:

`<hN>Text to Appear in Heading</hN>`

where N is a number from 1 to 6 identifying the heading size. Here are some examples of different heading sizes:



Heading levels range from level 1 (Most Important) to level 6 (Least Important). Like an outline, your heading levels should have logical, consistent order and be parallel.

1.5.2.Placing HTML Headings in Your Document

1. Re-open your workspace (if not already opened).
2. Go to the text editor window.
3. Open the HTML text file you created in lesson 2, "**volc.html**".
4. First, we will use the tag to display the title as the biggest header, **<H1>**. Enter the following above the existing body text and **after** the **</head><body>** tags:

```
<h1>Volcano Web</h1>
```

5. Below the text already entered, create other headings for future sections of your page.

Enter the following headings inside the body of your web page (Note that some are **H3** and others are **H2** tags):

```
<h2>Introduction</h2>
<h2>Volcano Terminology</h2>
<h2>Volcanic Places in the USA</h2>
<h3>Mount St Helens</h3>
<h3>Long Valley</h3>
<h2>Volcanic Places on Mars</h2>
<h2>Research Project</h2>
```

<h3>References</h3>

6. Save changes in your text editor.
7. Return to your web browser, Open and Reload the HTML file.

Note that on the computer you are using now, you can use the settings in your web browser to define the fonts and/or size of the headings. For example, on one computer you could have a browser display h1 tags as Times font and 36 point; h2 tags as Helvetica font and 24 point, etc. HTML codes designate only that the headers are of a certain type (h1 to h6); how it is displayed is controlled by the user of the web browser.

1.6.Breaking It Up Into Paragraphs

So far you have created and modified HTML documents, and you should feel comfortable with the process of editing text and reloading it into your web browser. So now relax for this **fast** lesson on inserting paragraph breaks.

1.6.1.HTML Paragraph Breaks

We've seen earlier that a web browser will ignore all of the CARRIAGE RETURNS typed into your text editor. But, wherever a browser sees the **paragraph** tag, it inserts a blank line and starts a new paragraph. The HTML code for forcing a paragraph break is:

```
<p>
```

Note that this tag is special in that it does not require an ending tag; for now you do not need to use:

```
</p>
```

In a later lesson we will see why we want to use **<p>** a closing **</p>** for the more current HTML coding standards. For basic HTML coding, let's keep it simple for now. Also, the **<h>** tags have a built in break so it is unnecessary to put **<p>** tag before a header tag:

```
<p>
```

```
<h2>Blah Blah Blah Blah</h2>
```

1.6.2.Inserting Paragraph Breaks

Follow the directions below to insert and view a paragraph break in your HTML document.

1. Re-open your workspace (if not already opened).
2. Go to the text editor window.

3. Open your working document, volc.html, in the text editor (if not already opened).
4. First we want to move the sentences ("A volcano is") so that they are under the **Introduction** heading. Use the mouse to **cut** and **paste** this text in the proper location.
5. After these sentences, we want to add some more text. But rather than re-typing this in, from this web page use your mouse to select and **copy** the sentences:

Volcanoes have been a part of earth's history long before humans. Compare the history of human beings, a few million years in the making, to that of the Earth, over four billion years in the making.

6. Now, return to your HTML document in the text editor, and **paste** this text after the existing sentences under the <h2>Introduction</h2> heading.
7. Save the changes in the text editor.
8. Return to your web browser.
9. If your working document is not visible, Use the **Open Local...** command from the **File** menu to open the document.
10. Select **Reload** from the **File** menu. You should now see the two sentences of the Introduction. We now want to put a paragraph break *between* these sentences.
11. Again, return to your HTML document in the text editor.
12. After the second sentence under <h2>Introduction</h2> (the one that ends " as a sticky, slow lava flow."), press RETURN (it is not necessary but it makes the HTML more readable as you work on it), and then enter the **paragraph** tag:

<p>

This section should now look like:

<h2>Introduction</h2>

A volcano is a location where magma, or hot melted rock from within a planet, reaches the surface. It may happen violently, in a massive supersonic explosion, or more quietly, as a sticky, slow lava flow.

<p>

Volcanoes have been a part of earth's history long before humans. Compare the history of human beings, a few million years in the making, to that of the Earth, over four billion years in the making.

Save the changes in the text editor.

Return to your web browser and **Reload** the document. The two sentences of the introduction should now be separate paragraphs.

1.6.3.Other Types of Breaks

To separate major sections of a web page, use the horizontal rule or hr tag. This inserts a straight line like you see right above the heading for this section.

The HTML format for a **horizontal rule** tag is:

`<hr>`

Let's try it now! Put an **hr** tag above the **Introduction** heading. This will help to separate the opening sentence of the lesson from the other portions that will follow.

And finally, there is the **
** tag which forces text to a new line like the **<p>** tag, but without inserting a blank line. You might use this tag when making a list of items, when writing the lines of a poem, etc. Compare the differences between using the **
** and **<p>** in these two examples:

Paragraph **<p>** tags Only

HTML	Result
And then, we could all see at once the brilliant purpose of the paragraph tag. <p> Moving on... <p> the more tags you write, the better you will feel?	<div>sample web page</div> <div>And then, we could all see at once the brilliant purpose of the paragraph tag. Moving on... the more tags you write, the better you will feel?</div>

Paragraph **<p>** and Line Break **
** tags

HTML	Result
And then, we could all see
 at once the brilliant purpose
 of the paragraph tag. <p> Moving on...
 the more tags you write,
 the better you will feel?	<div>sample web page</div> <div>And then, we could all see at once the brilliant purpose of the paragraph tag. Moving on... the more tags you write, the better you will feel?</div>

The **
** tag can be used for a different layout style for your section headings. If you notice, the **header** tags **<h1>**, **<h2>**, ... automatically insert white space above and below the text of the header tag. Some web page authors prefer a style that controls this white space.

Section titles with Header Tags

HTML

and in the end it was all
for naught.

<h4>The New Cheese Edict**</h4>**
Later, sir Longhorn declared
that all makers of cheese would
have to be certified before
commencing production.

Result

sample web page

and in the end it was all for
naught.
The New Cheese Edict
Later, sir Longhorn declared
that all makers of cheese
would have to be certified
before commencing
production.

Section titles with **** and **
** tags

NOTE! The ** tag is covered in the next lesson but all it does is make the text bold.**

HTML

and in the end it was all
for naught.

<p>

****The New Cheese Edict**
**
Later, sir Longhorn declared
that all makers of cheese would
have to be certified before
commencing production.

Result

sample web page

and in the end it was all for
naught.
The New Cheese Edict
Later, sir Longhorn declared
that all makers of cheese
would have to be certified
before commencing
production.

The difference may seem trivial now, but it opens up possibilities when later we learn to create text of different size and color for our section headings.

1.7. Doing It With Style

Just like a word processor, HTML can tell a web browser to display certain portions of text in *Italic* or **Bold Style** or even a **combination**.

1.7.1. HTML Style Tags

HTML offers several tags for adding style to your text. Just remember to be judicious and consistent in the use of styles; too much can make the text uncomfortable to read...

a few million years in the making, to that of the Earth,
over four **<i>billion</i>** years in the making.

6. Finally, we will use the **typewriter**, tag to indicate a special word. Under the **Volcano Terminology** heading, enter the following:

The study of volcanoes, or **<tt>Volcanology</tt>**,
includes many odd terms.

7. **Save** in the text editor and **Reload** in your web browser.

1.8. Lists

Lists can present items of information in an easy-to-read format. In fact, there is a list right here, lurking under the next heading!

- Identify HTML codes for creating unordered, ordered, and nested lists for a web page.
- Place different list types within your HTML document and view the changes within your web page.

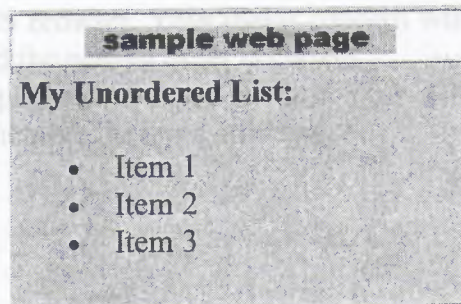
Many web pages display lists of items -- these may be items preceded with a "bullet" (Unordered) or a sequentially numbered list (Ordered).

These lists are easy to format in HTML, and they may even be nested (lists of lists) to produce an outline format. Lists are also handy for creating an index or table of contents to a series of documents or chapters.

1.8.1.Unordered Lists

Unordered Lists, or ** .. ** tags, are ones that appear as a list of items with "bullets" or markers in the front. The bullet marks will depend on the particular version of your web browser and the font specified for displaying normal WWW text (e.g. for Macintosh, the bullets are the option-8 character -- in Times font this is a small square, in Geneva it is a large round dot).

Here is an example of an unordered list:



And this is the HTML format for producing this format:

My Unordered List:


```

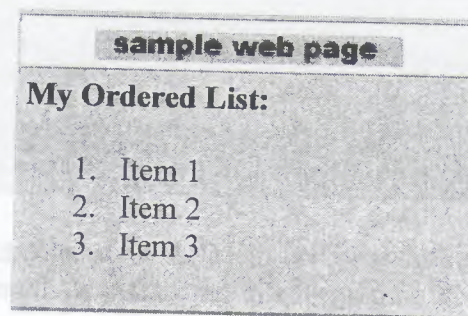
<ul>
  <li> Item 1
  <li> Item 2
  <li> Item 3
</ul>

```

The **** tag marks the beginning and end of the list, and the **** indicates each list item.

1.8.2. Ordered Lists

Ordered lists are ones where the browser numbers each successive list item starting with "1." Note that the only difference is changing the **ul** tag to **ol** tag. Using the example from above:



And this is the HTML format for producing this format:

```

<b>My Ordered List:</b>
<ol>
  <li> Item 1
  <li> Item 2
  <li> Item 3
</ol>

```

1.8.3. Nested Lists

Ordered Lists and Unordered lists can have different levels; each will be indented appropriately by your web browser. Your major concern will be to verify that each list is properly terminated and the nesting order is correct.

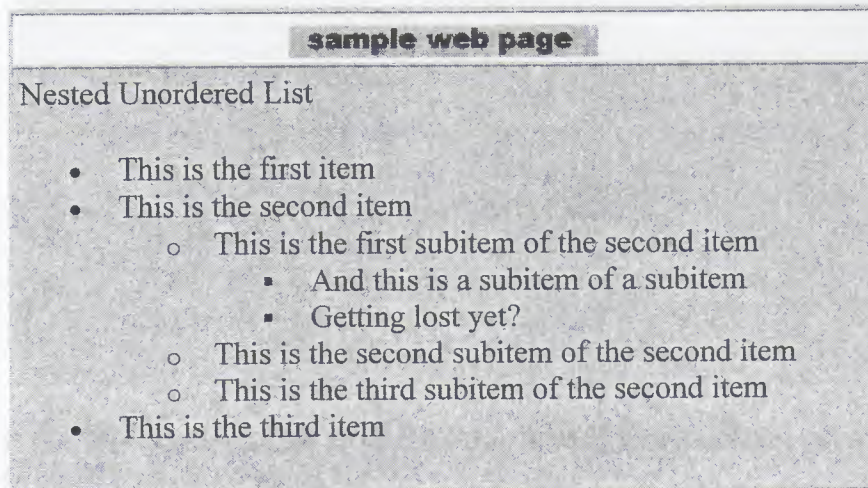
It can start to look complicated with all of those **** **** **** **** tags floating around, but just try to remember the basic structure:

```

<ul>
  <li>
    <ol>
      <li>
        <li>
          <li>
            <li>
              <li>
                <li>
              </li>
            </li>
          </li>
        </li>
      </ol>
    </li>
  </ul>

```

Here is an example of an unordered list with sublevels of other lists:



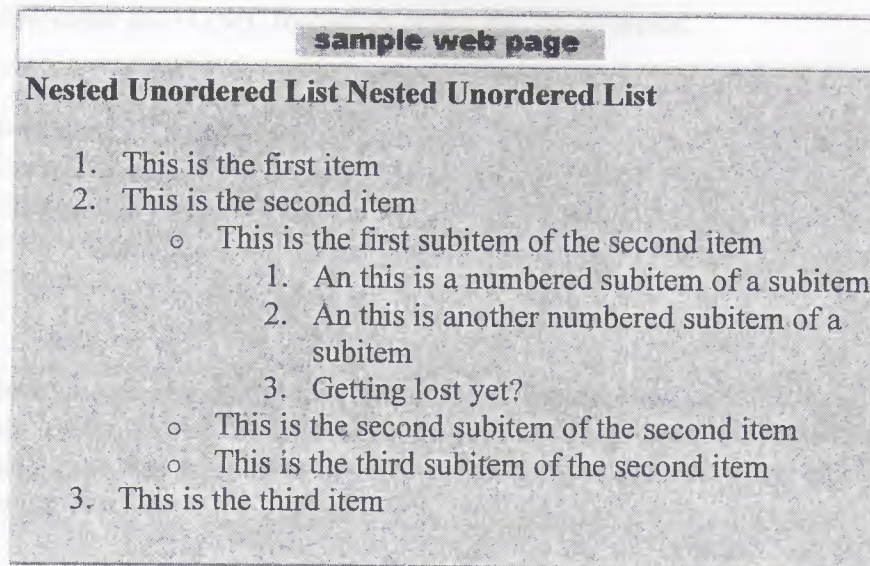
Note how the bullet marks change for different levels of the list. And this is the HTML format for producing this format:

```
<b>Nested Unordered List</b>
<ul>
  <li>This is the first item
  <li>This is the second item
    <ul>
      <li> This is the first subitem of the second item
        <ul>
          <li> And this is a subitem of a subitem
          <li> Getting lost yet?
        </ul>
      <li> This is the second subitem of the second item
      <li> This is the third subitem of the second item
    </ul>
  <li>This is the third item
</ul>
```

Nested Lists — Mixing them together

Not only can you include ordered lists within ordered lists, but you can also mix and match list types. Hold onto your hats! The HTML starts to look pretty ugly, but watch how lists completely contain other lists.

For example, this ordered list includes a nested unordered list:



And this is the HTML format for producing this format. Note how the HTML has been indented to make it easier to read:

```
<b>Nested Unordered List</b>
<ol>
  <li>This is the first item
  <li>This is the second item
    <ul>
      <li> This is the first subitem of the second item
        <ol>
          <li> And this is a numbered subitem of a subitem
          <li> And this is another numbered subitem of a subitem
          <li> Getting lost yet?
        </ol>
      <li> This is the second subitem of the second item
      <li> This is the third subitem of the second item
    </ul>
  <li>This is the third item
</ol>
```

1.8.4.Placing Lists in Your HTML Document

Using the **list** tags, you will now add an ordered and an unordered list to your Volcano Web page.

1. Re-open your workspace (if not already opened).
2. Open your HTML document in the text editor.
3. Under the **Volcano Terminology** header we will use an unordered list to display examples of technical words used in the study of volcanoes. Go to this section in your HTML document.
4. First add the following sentence.

How many of these do you know?

5. Now enter the HTML format to create the list of terms:

```
<ul>
  <li>caldera
  <li>vesicularity
  <li>pahoehoe
  <li>rheology
  <li>lahar
</ul>
```

6. Now we will use an ordered list to define the required parts of the assignment in this lesson. Under the **Research Project** heading, enter the following: (HINT -- this might be a good time to copy and paste from the web page, unless you enjoy typing in text!)

Your mission is to find information and report on a volcano, other than the ones listed above, that has erupted in the last 100 years. Your reports must include:

```
<ol>
  <li>Type of volcano
  <li>Geographic location
  <li>Name, distance, and population of nearest major city
  <li>Dates of most recent and most destructive eruptions.
  <li>Other events associated with the recent eruptions
  (earthquakes, floods, mudslides, etc)
</ol>
<p>
```

Then, write a one page description on the major hazards to humans in the vicinity of this volcano. Speculate on what you would do if you were in charge of minimizing the risk to the population.

7. **Save** your HTML file and **Reload** in your web browser.

1.9. Graphics "the Web"

Sending text over the Internet is just old fashioned e-mail. People have been doing it for decades! When you can include **Pictures**, your message can be much more informative! Is the going rate still 1000 words per picture?

- Identify the graphic formats for the World Wide Web.
- Discuss key points to consider when including graphics in WWW documents.
- Download a graphic file to your computer.
- Use the correct HTML format for including pictures in your web page.

1.9.1.The Web's Graphic Format

There are numerous file formats for computer graphics... PICT, GIF, TIFF, PNG, not to mention EPS, BMP, PCX, JPEG...

It sounds like cryptic poetry. Bad poetry. Geek poetry!

The way a web browser displays graphics in HTML format indicates the location of a graphic file in a single format that can be interpreted by different types of computers. For example, when the information in that format is received by your Macintosh computer, the web browser knows to display it as a picture format for Macintosh. However, when that same information is received by your Windows browser, it is displayed as a Windows graphic.

In technical jargon, we would say that this picture format is **platform independent**. HTML itself is platform independent, since plain text characters can be understood by any computer.

The standard format that can display **within** a web page is GIF or Graphics Interchange Format. The GIF compresses the picture information (reduces the file size) and translates it to binary code that can be sent over the Internet. GIF compression is most effective on graphics that have contiguous areas of solid color, and compression is even greater when the color is continuous in the horizontal direction. GIF images have the feature of defining a color to be "transparent" so images can appear to have non-rectangular boundaries. They can also be saved in the "interlaced" format so that when you see a web page, the images start to appear soon and "dissolve" to the final image.

The other file format used on the web is JPEG (named after the Joint Photographic Expert Group that designed this format). In the early web years, JPEG images were **not** displayed in the page but were displayed in a separate window, using an external "helper" application. But most web browsers these days support JPEG images to be displayed right in the web page too.

JPEG compression is very effective for photographic images where the colors can vary spatially over short distances ("grainy" images). JPEG offers some dramatic compression in filesize, sometimes by a factor of 10 (e.g. a 1500 kb file reduced to 150 kb), which may be at a trade-off for some image quality. JPEG images do not have the ability to have transparency.

For more information about these file formats, see the SITO page on Graphics File Compression. If you are in the mood for a great book, try Lynda Weinman's Designing Web Graphics.

1.9.2.Some Points to Consider When Using Graphics

For this tutorial, you do not have to use one of these graphics programs. We will show you how to get a copy of the images that you will need.

However, as you begin to develop your own web pages, you should become familiar with creating pictures in either GIF or JPEG format. If your web pages include graphics, consider the following:

- Large and numerous images may look great on a high-end computer, but they will frustrate users who must wait for images to be sent over the network. As a suggestion, keep the total file size of all images on a web less than 100k (we aim for less than 50k each).

- Not all of us have a 21-inch computer monitor! Keep graphic images no wider than 480 pixels and no higher than 300 pixels to avoid forcing users to scroll or resize their web browser window.
- Color gradients may look pretty but for GIF images they do not compress as much as solid color areas and they can sometimes come out "banded".
- Some graphics programs offer options for "no dithering" when converting to GIF -- this can reduce the amount of "noise" in a solid background.
- Many dark grey tones on Macintosh computers are not discernible on Windows computers.
- Rather than displaying all of the images on the web page, have them linked as external images that are downloaded only when a viewer clicks on a hypertext item. If you have numerous pictures to display, try to break the web page into a series of linked pages.
- A single image (e.g. a small "bullet") can appear several times in a web page with little added delay each time you use that same image.
- Many web browsers "cache" images (storing them on your computer) meaning that using the same file in several web pages will load them from the viewer's computer rather than loading them across the Internet.
- Most importantly, make sure that the images are ones that **add** meaning to your HTML documents.

You may design a beautiful web page, loaded with large pictures, that may load nicely from your computer, but may be excruciatingly slow by a viewer using a slow modem over a busy network. The 'net is a busy place and getting busier every second.

Inline Graphics

- Place an inline image within your HTML document.
- Select how the pictures align with surrounding text.
- Modify the inline image tag to account for viewers using a non-graphic browser.
- Specify the dimensions of inline image.

Let's see how with HTML you can include pictures like the "Big M" in a web page...

HTML Tags for Inline Graphics

An "inline" image is one that appears within the text of a WWW page, such as



this picture of "Big M".

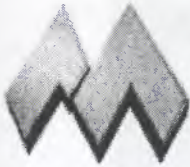
The HTML format for the inline **image** tag is:

```

```


where **filename.gif** is the name of a GIF file that resides in the same directory/folder as your HTML document. By "inline", this means that a web browser will display the image in between text.

Note how the text immediately follows the "Big M" above. What if we want the "Big M" sitting on its very own line? To force the image to appear on a separate line,



simply insert a **paragraph** tag before the **image** tag:

```
<p> 
```

Alignment of Text and Inline Graphics

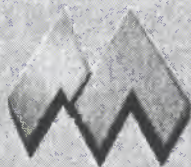
With an attribute to the **<img...>** tag, you can also control how text adjacent to the image aligns with the picture. The **align** attribute, added inside the **** tag, can produce the following effects:

align=top

```

```

sample web page



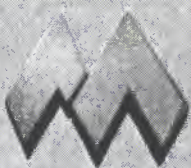
is for Maricopa Community Colleges located in the Valley of the Sun, metropolitan Phoenix, Arizona. Our license plates say that we are the Grand Canyon State...

align=middle

```

```

sample web page

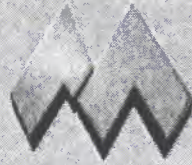


is for Maricopa Community Colleges located in the Valley of the Sun, metropolitan Phoenix, Arizona. Our license plates say that we are the Grand Canyon State...

align=bottom (default)

``

sample web page



is for Maricopa Community Colleges located in the Valley of the Sun, metropolitan Phoenix, Arizona. Our license plates say that we are the Grand Canyon State...

Note how the text aligns only for one line... (shrink or stretch the width of your WWW browser window to see what happens.) In a later lesson, we will see a way to align blocks of text so that they flow around the side of an image.

Placing an Inline Image in Your HTML document

1. Re-open your workspace (if not already open).
2. Open your **volc.html** document with the text editor.
3. Above the **<h1>Volcano Web</h1>** heading, enter the following:
4. ``
5. Save and reload in your web browser.

In placing the image, you may have wondered why we did not need to put a **<p>** tag after the image. This is because the following text was a header. A web browser **always** inserts a paragraph break before and after an **<h1,h2,h3...>** tag.

The alt="..." attribute

If your web pages will be viewed by users using a text-only browser (such as lynx), they will not be able to view any inline images. Or sometimes, users will turn off the loading of inline images to save time on downloading over slow network connections. An attribute for the **** tag allows for substitution of a descriptive string of text to hold the place of the image.

Under these conditions, a viewer with a text browser will see a place holder so that the top of our lesson page looks like:

sample web page

[IMAGE]

Volcano Web

In this lesson you will use the Internet to research information on volcanoes and then write a report on your results.

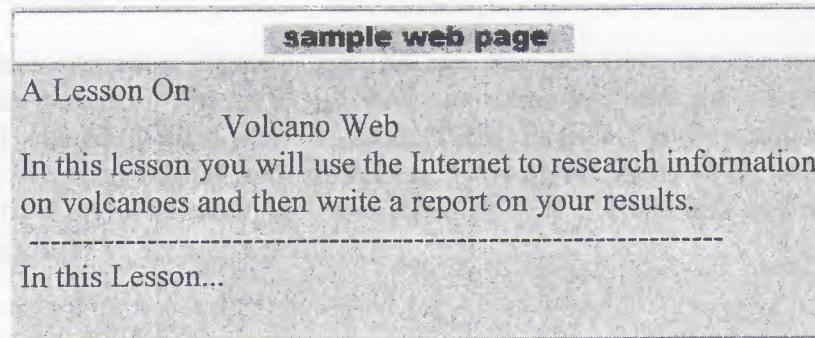
In this Lesson...

This lets the viewer know that there is a graphic inserted at the top of this page. You could modify the `` tag so that rather than using the place holder, it displays a text string. For example, in our lesson we could add "A Lesson on:" by modifying the `` to read:

```

```

The `alt="..."` attribute replaces the place holder with a text string so that from a text-only browser (or when loading of images is shut off), it would now appear:



At this time, make this same edit to your HTML file for the `` tag that displays the picture of the volcano.

Height and Width attributes

Another option you may want to include in your `<img...>` tags are two attributes that give the dimensions of the image in pixels. Why? Normally, your web browser has to determine these dimensions as it reads in the image; the loading of your page can be faster if you specify these numbers in your HTML.

The format for including this option is:

```

```

where **X** is the width of the image and **Y** is the height of the image in pixels.

You can usually use some sort of graphics program or utility to determine these numbers. Another way to find the dimensions of an image is to load it into your web browser -- you may be able to drag and drop the icon for the image into your browser window -- and the height and width will be displayed in the title bar of the browser.

For our example in this lesson, the **lava.gif** image is 300 pixels wide and 259 pixels high. So you should edit your **volc.html** file to read:

```

```

NOTE: the order of the attributes inside the `` tag does not matter.

Often we are asked if you can alter the size of the image by inserting numbers other than the actual dimensions of the image. The answer is **yes** but the results may be undesirable. If you insert larger numbers (to make the image bigger) the result will be a "blocky" picture. Sometimes this can be a useful effect on images with large areas of solid color. Take a look at our example of Going from Small to Big. If you use lower

numbers (to make the image smaller) the result may be a distorted picture. Also, the full size image still has to be downloaded, so there is no real savings in terms of time to download the image. Any re-sizing of the image requires extra "work" by the web browser to recalculate the page layout.

You could experiment and see for yourself. We just might be wrong!

You can also specify the size of an inline image in dimensions that are percentages of the current browser window size, so that the image will resize itself if the viewer expands or reduces the size of their browser window. Take a look at our example of Percentage Scaling. *Caveat Emptor!* This may not work on all web browsers!

NOTE: Some computer systems (UNIX) are case sensitive for the names of files, meaning that the file "lava.GIF" is NOT the same as "lava.gif". Other computers (Macintosh) consider them as the same files. Even if your computer does not differentiate between capital and small case, we suggest that you be consistent in the naming of files and how they are referred to in your HTML and use all lower case letters. (Many WWW servers run UNIX).

After all, without the hypertext, we would be only calling this "Writing TML" and not Writing HTML.

2.2. Linking to Local Files

- Create a link to an HTML document in the same directory/folder as your main document.
- Create a link to display a graphic image.
- Create a link to a file in a different directory/folder than your main document.
- Organize the structure of your web.

Now, you will take your first step of "authoring" by creating a hypertext link to a second web page. These links are called "local" because they reside on the same computer as the working document (they do not have to traverse out on the Internet). You will also be shuffling around the parts of your growing web site (do you see how this becomes more than just a "book page"?).

2.2.1. Link to Local Files

The simplest anchor link is one that opens another HTML file in the same directory as the presently displayed web page. The HTML format for doing this is:

```
<a href="filename.html">text that responds to link</a>
```

Think of it as "a" for anchor link and "href" for "hypertext reference".

The filename must be another HTML file. Whatever text comes after the first ">" and before the closing "" symbols will be the "hypertext" that appears highlighted and "typed."

Now follow these steps to build an anchor link in your HTML document (a "book file"):

1. Open your HTML document, *web.html*, in my text editor.

2. LINKING WITH ANCHORS

2.1. What is a URL?

The real power of the web is the ability to create hypertext links to related information. That other information may be other web pages, graphics, sounds, digital movies, animations, software programs, contents of a file server, a log-in session to a remote computer, a software archive, or an "ftp" site.

The World Wide Web uses an addressing scheme known as **URLs**, or **Uniform Resource Locators** (sometimes also called "Universal Resource Locator"), to indicate the location of such items. These hypertext links, the ones usually underlined in blue, are known as **anchors** (This should not be news to you as you followed several to get this far!).

That sounds like a lot to do! Don't worry -- it is no more complex than what you have done up to this point.

After all, without the hypertext, we would be only calling this "**Writing TML**" and not **Writing HTML**.

2.2. Linking to Local Files

- Create a link to an HTML document in the same directory/folder as your main document.
- Create a link to display a graphic image.
- Create a link to a file in a different directory/folder than your main document.
- Reorganize the structure of your web.

Now, you will take your first step of "anchoring" by creating a hypertext link to a second web page. These links are called "local" because they reside on the same computer as the working document (they do not have to venture out on the Internet). You will also be shuffling around the parts of your growing web site (do you see how this becomes more than just a "home page"?).

2.2.1. Link to Local Files

The simplest **anchor** link is one that opens another HTML file in the same directory as the presently displayed web page. The HTML format for doing this is:

```
<a href="filename.html">text that responds to link</a>
```

Think of it as "a" for **anchor** link and "href" for "**h**ypertext **r**eference". The filename must be another HTML file. Whatever text occurs after the first > and before the closing symbols will be the "hypertext" that appears underlined and "hyper."

Now follow these steps to build an anchor link in your HTML document to a local file:

1. Open your HTML document, **volc.html**, in the text editor.

2. First, under the **Volcanic Places in the USA** heading, enter the following text which introduces the two volcanoes discussed in later sections.

Listed below are two places in the United States that are considered "active" volcanic areas.

3. Below the "Mount St. Helens" heading, enter:

On May 18, 1980, after a long period of rest, this quiet mountain in Washington provided `` detailed observations`` on the mechanics of highly explosive eruptions.

The text "detailed observations" will link the viewer to a second HTML document called **msh.html**. This second HTML file does not yet exist; we will construct it in steps (5) and (6).

4. Save and close your HTML document
5. Now, with your text editor, open a window for a **New** document.
6. Enter the following text in the new window:

```
<html>
<head>
<title>Mount St Helens</title>
</head>
<body>
<h1>Mount St Helens</h1>
The towering pine trees of this once-quiet mountain
were toppled over like toothpicks.
</body>
</html>
```

7. Save this file as **msh.html** in the same directory/folder as your working HTML file (**volc.html**).
8. **Reload volc.html** in your web browser.
9. Test the hypertext link for the words "detailed observations". When selected, it should connect you to the new page about Mount St. Helens.

2.2.2.Anchor Link to a Graphic

We learned how to display an "inline" graphic that would appear in your web page. With the **anchor** tag, you can also create a link to display a graphic file. When the anchor link is selected, it will download the image file and display the image by itself in your web browser.

NOTE: Most web browsers will display such a link to an image file directly in your web browser. Depending on the web browser, and the preferences/settings on your

computer, you may be promoted to either save the file or to select an application to display the file.

Regardless of the action, if you get that far, the link to the image file has succeeded.

The simplest anchor link is to a file in the same directory/folder as the document that calls it. The format for creating a hypertext link to a graphic is the same as above for linking to another HTML document:

```
<a href="filename.gif">text that responds to link</a>
```

where **filename.gif** is the name of a GIF image file.

Now follow these steps to add a link to a graphic file in your HTML document:

1. Download a copy of a GIF image from the Lesson 8a Image Studio.
2. Open the **msh.html** file in the text editor.
3. Modify the text to include a link to the image of Mount St. Helens.
4. The towering pine trees of this once-quiet mountain
were toppled over like toothpicks.
5. **Save** the **msh.html** file and **Reload** in your web browser
6. Now click on the link you just created in step (3).
7. A picture of blown down trees should be displayed.

2.2.3.Links to Other Directories

The **anchor** tags can also link to an HTML document or graphic file in another directory/folder in relation to the document that contains the anchor. For example, in our lesson, we may wish to keep all of the graphics in a separate directory/folder called **pictures**. As you create more and more HTML files, keeping the image files in its own area will make things a bit more organized for you. Let's do that now:

1. From your computer system, create a sub-directory/folder called **pictures** in the same location where your **volc.html** file is stored.
2. Move the **msh.gif** file to this new sub-directory/folder.
3. Open the **msh.html** file in your text editor.
4. Edit the **anchor** tag for the graphic to read:

The towering pine trees of this once-quiet mountain
were toppled over
like toothpicks.

NOTE: With HTML you can direct your web browser to open any document/graphic at a directory level *lower* (i.e. a sub-directory or folder within the directory/folder that contains the working HTML file) by using the "/" character to indicate the change to a sub-directory called "pictures."

 **work area**

 **volc.html**

 **pictures**

 **msh.gif**

5. Save the HTML document and **Reload** in your web browser.

If all went well, the link in the sentence describing the blown-down trees should now call up the graphic file stored in the **pictures** sub-directory/folder.

2.2.4.Anchor Links to a Higher Level Directory

The types of links we have constructed here are known as "relative" links, meaning a web browser can construct the full URL based upon the current location of the HTML page and the link information in the `` tags. This is very powerful because you can build all your web pages on one computer, test them, and move them to another computer -- all the relative links will stay intact.

In this lesson we saw how to construct a hyperlink to a document that is stored in a directory **lower** than the working HTML page. Note that you can also construct a link that connects to a **higher** level directory as well by using this HTML:

```
<a href="../../home.html">return to home</a>
```

Each instance of `"../"` the URL of an anchor link tells the web browser to go to a higher level directory/folder relative to the current page; in this case to go up two directory/folder levels and look for a file called **home.html**.

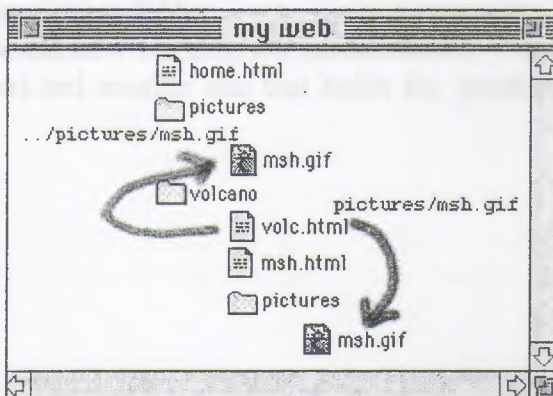
In our example, let's say that our **pictures** sub directory was not in the same directory/folder as the **volc.html** file but was actually one level higher.

In the previous section we constructed a link from the **volc.html** file to the **msh.gif** file in a subdirectory:

```

```

Now, we want to reorganize our web structure so that the pictures folder/directory is at a higher level. The link is now written:



so the web browser looks for a folder called "pictures" that is stored one level up from our **volc.html** file.

An advantage of this structure is that it would be easier to store a large number of graphics in this upper folder/directory that can be shared in other web pages. We may do another lesson on landforms that makes use of the pictures stored in this folder/directory.

So now it is time to do a little re-organizing of our HTML files. This requires that you are familiar with moving files and directories around on your computer. **Read this carefully! It may be feeling like it's getting complicated, but it will all be clear soon!**

1. First, create a new folder/directory and name it **volcano** (it is recommended to keep the file names in all lower case).
2. Now, move the two HTML files **volc.html** and **msh.html** into this new folder/directory.
3. Move the **pictures** folder/directory (along with the **msh.gif** file inside) so that it is in the **same** level as the new **volcano** folder/directory. Also, move the **lava.gif** file that we added in lesson 7a into the pictures folder.
4. So your entire **workarea** directory should now contain two subdirectories -- one that holds your HTML files (**volcano**) and another one that holds the graphics (**pictures**):

 **work area**

 **pictures**

 **lava.gif**

 **msh.gif**

 **volcano**

 **volc.html**

 **msh.html**

5. We've moved some things around so now we will have to update the anchor links in our HTML files. First, look at the first local link we built in the **volc.html** file:

<h3>Mount St Helens</h3>

On May 18, 1980, after a long period of rest, this quiet mountain in Washington provided detailed observations on the mechanics of highly explosive eruptions.

NOTE: Since the msh.html file is still in the same relative directory as volc.html, we do not have to change any of this HTML! Can you see how relative file linking is one of the powerful features of HTML?

6. But now let's look at the link to the picture of Mt. St Helens that we created in the msh.html file:

The towering pine trees of this once-quiet mountain
were toppled over
like toothpicks.

Open this file in your text editor and edit the link to read:

The towering pine trees of this once-quiet mountain
were toppled over
like toothpicks.

This relative link tells the web browser to go up one level from the current folder/directory (**volcano**) and look there for another folder/directory called **pictures** that contains a GIF image called **msh.gif**

7. You will have to update the <img...> tag that displays the title graphic. Open the **volc.html** file in your text editor and modify the line just below the <body> tag to read:

```

```

8. Save your file. You should then **Open** the **volc.html** file in your web browser and test the link to **msh.html** and then try the link to the picture of Mount St Helens.

One More Small Change

This last small step may not be obvious, but we will explain it shortly. The last thing you should do in this lesson is to change the name of your working file from **volc.html** to **index.html**. You should do this using the normal way of editing a file's name from the computer desktop (on the Macintosh click on the file name; on Windows right-mouse click on the icon and select the option for **Rename**). Note also for Windows users that if you use a special editor program to create HTML files, you will not see the ".html" extension on the desktop file name, so in that case, you would change the file name from **volc** to **index** because under the hood, the computer knows that there is a ".html" at the end.

Why are we doing this? Let's say you have finished this lesson and are ready to store it on a World Wide Web server for the world to see. And let's assume that the Internet address for this server at Big University is:

<http://www.bigu.edu/>

And your file will be stored in a series of directories:

--= top level of server: www.bigu.edu

/courses

/science

/geology

/volc.html

so that the URL for the Volcano Web might be:

<http://www.bigu.edu/courses/science/geology/volcano/volc.html>

Pretty long, eh? Now here is the promised explanation -- on most WWW servers you can designate one standard name that is the "default" web page for that directory and on most systems that name is.... [index.html](#). What this means is that the Internet address:

<http://www.bigu.edu/courses/science/geology/volcano/>

is equivalent to

<http://www.bigu.edu/courses/science/geology/volcano/index.html>

This might make you think that it is a lot of energy to cut 20 letters out of a URL! But it does tend to make your URL look a bit more professional -- If you were creating the Longhorn Cheese Home page,

<http://www.cheese.com/longhorn/>

looks less redundant in print than

<http://www.cheese.com/longhorn/longhorn.html>

which comes into play when people read about your URL and are trying to connect by typing it into their web browser.

Note also that this special file name **index.html** is used on most web servers but it might also be **default.htm**-- check with the people that run your web server.

2.3.URLs: Pointers to the Internet

2.3.1.What is a URL?

The Uniform Resource Locator (URL) is what the WWW uses to find the location of files and documents from computers on the Internet. On your web browser screen, the URL for this document is typically displayed in the upper part of the Web browser window. The URL includes:

- an identifier for the type of Internet server;

- an Internet address; and
- a file path to the particular item of interest.

The URL is what you will need to build a link from the web page that you are creating to connect to some other piece of information available on the Internet. For more information, see Curling Up To URLs (v0.2)

2.3.2.How are URLs Structured?

The structure of a URL is:

type://in.ter.net.address/directory/sub-directory/.../filename

The "**type**" indicates the type of Internet server being accessed:

http

a web server, "Http" stands for HyperText Transfer Protocol

gopher

an Internet Gopher site or menu driven directories of files and information

ftp

an anonymous File Transfer Protocol (FTP) site, archives of files.

telnet

initiates a Telnet session to log on remotely to another computer When selected, your web browser will launch a Telnet external program and connect to the specified site.

WAIS

Wide Area Indexed Server -- a site to search a collection of subject oriented documents by keywords

file

A file on your local computer system (hard drive, floppy, local file server)

The **type** is always followed by "://" and the Internet address of a remote computer. This is in the structure of:

host.domain.domain.domain

For example:

machine.department.college.edu

123.45.6.78

office.company.com

agency.branch.gov

machine.organization.country

If the URL is to the main level of this host (its "home page"), then the URL is terminated with a slash "/". If you are linking to a sub-directory or a file, you must also add the exact path to that item using the slash character to indicate the entire file path.

Note: For most web servers spelling does count! So does capitalization! File names on UNIX computers are case sensitive, meaning that a file named

SpiffyText.html

is a different file than

spiffytext.html

2.4. Links to the World: Internet Sites

2.4.1. HTML for Anchors to the Internet

Linking to a site on the Internet combines what we have worked on earlier in the lessons on **Links to Local Files** by incorporating what we have learned about **URLs**. The full HTML format for an **anchor** link to an item on the Internet is:

```
<a href="URL">Text to Activate Link</a>
```

where **URL** is the full Uniform Resource Locator, in quotes, the address for the Internet site where you want to send the viewer. The string **Text to Activate Link** is what will show up as hypertext in your web browser (usually but not always) underlined and in blue. When a viewer clicks on this hypertext, the web browser will link them to the Internet site indicated by the URL. Remember that a URL can be a link to another World Wide Web (WWW) server, Gopher server, FTP site, or any text, graphic, sound, video file on these servers.

Now, we will add a hypertext link to a site that has information about volcanoes on the planet Mars. Follow these directions to add anchor links on your HTML document:

1. Open your **index.html** file in the text editor.
2. Below the heading, **Volcanic Places on Mars**, enter the following text:

```
<a href="http://solarviews.com/eng/mars.htm">
Mars</a> has its fair share of volcanic landforms,
including the largest known volcano in the solar system,
<a href="http://www.solarviews.com/browse/mgs/mgsmons1.jpg">
Olympus Mons</a>
```

Note: We've made a link to two different types of information. The first hyperlink connects to a web page that describes information about the planet Mars. The second is a link to a large JPEG image of a Martian volcano.

3. **Save** and **Reload** in your web browser.

A Quick 'n Easy Way to Enter URLs in Anchor Tags

As you navigate among different web pages, the URL of the currently visible page can be viewed at the top of the web browser window (You may have to look for a menu option to **Display URLs**). For example, in this document, the URL looks something like:

<http://www.mcli.dist.maricopa.edu/tut/tut8c.html>

You can use your mouse to select and **copy** a URL from the web browser display and then paste it in the **anchor** tag of your HTML document. This is much more efficient than writing URLs down on paper (some are quite long!).

Now we will add some links to other sites that we will list under the **References** section of our Volcano lesson. One such site that might offer relevant information is the US Geological Survey.

Follow these steps:

1. Open your HTML document **index.html** in the text editor
2. Under the heading "References", enter:

Use these references to start your research:

```
<ul>
<li> <a href="">Educational Resources from the
USGS</a>
</ul>
```

NOTE: We've constructed the hypertext link but we still need to enter a URL between the quotes.

3. Connect to the US Geological Survey Education Index.
4. From the web page, use the mouse to **Select** the URL as displayed in the URL display field.
5. From the **Edit** menu, **Copy** the URL.
6. Now, return to your HTML document **index.html**
7. Click the mouse once between the two quote marks you inserted in step #2 and **Paste** the text you copied in step #5. The final **anchor** tag should look like:

```
<a href="http://info.er.usgs.gov/education/index.html">
Educational Resources from the USGS</a>
```

2.5. Links to Sections of a Page

- Create a hidden reference marker for a particular section within an HTML file.

- Build a hypertext link that will connect to a particular section within an HTML file.
- Build a hypertext link that will connect to a particular section within another HTML file.
- Create a hypertext table of contents for a web page.

2.5.1. The Named Anchor

A **named anchor** is a hidden reference marker for a particular section of your HTML file. This might be used to link to a different section of the same page if it is long, or to a marked section of another page. For example, on this page you are viewing, I could create a hidden marker called "check" that marked the heading below "Check Your Work". Then, I write an anchor link that connects to this section of this document. Once you click on a link to this named anchor, your web browser will jump so this line is at the top of the screen.

The HTML format for creating the named anchor is:

```
<a name="NAME">Text to Link To</a>
```

or for the link you just tried above:

```
<a name="check">Check Your Work</a>
```

Writing a Link to a Named Anchor

When you want to create a hypertext link to a named anchor, use the following HTML:

```
<a href="#xxxxx">Text to act as hypertext</a>
```

or for the link you just tried that sent you to the section below:

```
Go to <a href="#check">Check Your Work</a>
```

The "#" symbol instructs your web browser to look through the HTML document for a named anchor called "**xxxxxx**" or in our example "**check**". When you select or click on the hypertext, it brings the part of the document that contains the named anchor to the top of the screen.

Adding Named Anchors

Now, we will build a table of contents for our lesson that will appear at the top of our Volcano Web page. The entries for this will be the headings we have already created. Each will act as a hypertext link to a particular section of our lesson. The first step is to create a named anchor for each of the heading sections in your Volcano Web lesson:

1. Open your **index.html** file in the text editor
2. Find the heading for the **Introduction**. Change it from:

```
<h2>Introduction</h2>
```

so that it looks like:

```
<h2><a name="intro">Introduction</a></h2>
```

NOTE: You have just marked the line that contains the header "Introduction" with a hidden reference marker, the named anchor "intro".

3. In a similar manner, change all header **<h2>** tags for the other sections:

```
<h2><a name="term">Volcano Terminology</a></h2>
```

```
<h2><a name="usa">Volcanic Places in the USA</a></h2>
```

```
<h2><a name="mars">Volcanic Places on Mars</a></h2>
```

```
<h2><a name="project">Research Project</a></h2>
```

4. If you **Reload** now from your web browser, you will not notice any visible change. The named anchor tags we have just added are hidden from the user's view.

Adding Links to a Named Anchor in the Same Document

Now we will set up a table of contents that will appear at the top of the screen. We will use an unordered list to create this list:

1. If not already open, open your **index.html** file in the text editor.
2. Below the first sentence under the **Volcano Web** heading enter the following text:

```
<hr>
```

```
<b>In this Lesson...</b>
```

```
<ul><i>
```

```
<li>Introduction
```

```
<li>Volcano Terminology
```

```
<li>Volcanic Places in the USA
```

```
<li>Volcanic Places on Mars
```

```
<li>Research Project</i>
```

```
</ul>
```

NOTE: This index is marked off above and below by a solid line using the **<hr>** tag. The *Italic* style is used on the entries for the text. At this point we have only

entered the text of the index entries. Below we will add the HTML to make the links active.

3. **Save** and **Reload** into in your web browser.

Finally, we want to make each item of the list act as a hypertext link to another section of the document. To do this, we will use a variation of the basic anchor link. Rather than linking to another file, we link to one of the named anchors (the hidden markers that you created above) within the same HTML file. We indicate a named anchor by preceding the reference marker name with a "#" symbol:

1. Open your **index.html** file in the text editor
2. Go to the first list item in your index section. Change it from:

```
<li>Introduction
```

to look like:

```
<li><a href="#intro">Introduction</a>
```

3. You should now be able to fill in the other links to named anchors so that the section looks like:

```
<hr>
<b>In this Lesson...</b>
<ul><i>
<li><a href="#intro">Introduction</a>
<li><a href="#term">Volcano Terminology</a>
<li><a href="#usa">Volcanic Places in the USA</a>
<li><a href="#mars">Volcanic Places on Mars</a>
<li><a href="#project">Research Project</a></i>
</ul>
```

4. **Save** and **Reload** into your web browser. When you click on an item in your index, the browser should display the associated section at the top of your screen.

NOTE:Your web browser will try its best to bring to the top of the browser the text enclosed by the `...` occurs. In this case, there is no content after the last few examples, so when you click on the link to Research Project it will not jump to the very top of the screen. If you really wish to make this happen, until we write more content under this heading in your document, you can insert 10-20 of `
` tags.

Adding Links to a Named Anchor in Another Document

You can create a link that jumps to a section of another HTML document that is marked by a named anchor. The HTML for building a link to a named anchor in another local HTML document is:

```
<a href="file.html#NAME">Text to activate link</a>
```

and if the document exists on another web site:

```
<a href="http://www.cheese.org/pub/recipe.html#colby">Colby Cheese</a>
```

We created a hypertext link that jumped from the section of our lesson on Mount St. Helens to **msh.html**, a separate HTML file. Now we will add a link in that second document that will return to the original section of the main Volcano page.

1. Open your **msh.html** file in the text editor
2. Near the bottom of the HTML (but above the **</body>** tag) enter the following text:

```
<hr>
```

```
<a href="index.html#usa">Return to <i>Volcano Web</i></a>
```

NOTE: We have included the Italic Style tag **<i>...</i>** within the text marked by the named anchor "usa".

3. **Save** and **Reload** into your web browser. When you click on one of the hypertext links at the bottom of the **msh.html** page, you should jump back to the "Volcanic Places in the USA" section of the Volcano Web lesson.

In this case the link is just the name of another HTML file, **msh.html**, in the same directory as the **index.html** file. However, you can use a full URL to link to a named anchor in an HTML file on a remote computer. For example, to create a link to the "Introduction" section of an HTML file stored on the MCLI WWW server, the syntax would be:

```
<a href="http://www.mcli.dist.maricopa.edu/tut/final/index.html#intro">  
Introduction to Volcano Web</a>
```

The reference marker **"#anchor_name"** is tacked onto the end of the URL.

2.6. HyperGraphics

2.6.1.A HyperLink Button

From the previous lessons, you have (hopefully) become comfortable with creating hypertext, text within your documents that connects a viewer to related information. You can also use inline images (see Lesson 7a) to act in a "hyper" manner. If you recall, in an earlier lesson we linked some text in our **Volcano Web** page, **index.html**, to a second page, **msh.html**, that described Mount St. Helens. Now in the latter page, we want to add a button that when clicked will link a reader back to the main lesson page.

The way to do this is to put the HTML tags for inline images within the hypertext portion of the anchor tag:

```
<a href="fileX.html">   
Go to Document X</a>
```

In your web page, this HTML code will display an inline image and the text **Go to Document X**. Both will act as hyperlinks; clicking on either the text or the picture will tell your web browser to go to the HTML file **fileX.html**. The image alone could be a hyperlink. In the World Wide Web, a "HyperGraphic" generally is surrounded by a colored box matching the color of hypertext on your web page, so you know that it is "active".

NOTE: Many browsers now can alter the color of hypertext and some pages have suppressed the display of the outline around HyperGraphic links. Generally, you can identify a hyperlink area on a web page by looking for a change in the cursor as it passes over a "hot" region. The cursor usually changes from an arrow to a hand when it passes over an active link.

From a design standpoint, we recommend that if you use pictures to act as hyperlinks that you offer also a text link or use the ALT= attribute in the <IMG...> tag in case the viewer has turned off the loading of images.

Now we will create a "hyper" graphic button. First, you need to get a copy of an arrow button from the Lesson 8e Image Studio.

You should now have a copy of the image file somewhere on your computer (You should move it to the **pictures** folder/directory in your workarea).

Next, add the HTML to make the button work:

1. Open the second HTML file, **msh.html** in your text editor.
2. At the bottom, modify the last line to:

```
<hr>  
<a href="index.html#usa">   
Return to <i>Volcano Web</i></a>
```

Note: The inlineimage tag (<img...>) is completely within the anchor between the > that marks the end of the URL and the that marks the end of the hypertext. Also note how the <i> tag is used within the active hypertext to emphasize the title of the lesson. And finally, we have used the <hr> tag to put a horizontal rule or a line above the button graphic.

3. **Save** the HTML file.
4. Return to your web browser, and select **Open Local** from the **File** menu to read in the **msh.html** file.
5. Select **Reload** from the **File** menu to update the changes.
6. Test the hyperlink to the Mount St. Helens page and the new button that should return you to the Volcano Web page.

2.7. Preformatted Text

In previous lessons we have seen that a web browser will ignore extraneous space characters, tabs, and carriage returns in your HTML files. However, there are some instances where it will be important to maintain these aspects of page layout. In this lesson, the example will be where we want to insert a table of text with aligned columns.

The **preformat** tag instructs your web browser to display the text **exactly** as typed in the HTML document, including spaces, tabs, and carriage returns. A browser typically displays such text as a

m o n o s p a c e d

type, meaning a font in which every character has the same width. Here is example of what the **preformat** does:

sample web page

```

<pre>
We have indented with 5 space characters.
And used the carriage return to jump
to
a
new
line.

    Here    we
    use
    spaces  to
    create  a
    text    table.
</pre>

```

Without the **<pre>** and **</pre>** tags, the same HTML produce:

sample web page

We have indented with 5 space characters. And used the carriage return to jump to a new line. Here we use spaces to create a text table.

With the **preformat** tag, it helps if the text editor you are using can display in a monospaced font (such as "Courier" or "Monaco"); if not, you will have to count spaces when aligning text into columns (and you will mutter bad words under your breath). For our Volcano lesson, we want to add a table under the **Introduction** section that lists several well-known volcanoes, when they erupted, and the volume of erupted material. To do this:

1. Open the second HTML file, **index.html** in your text editor.
2. Under the last portion of the **Introduction** section, place a header of level 4 (<h4>) with the text **Volumes of Some Well-Known Volcanic Eruptions**
3. Below this heading, enter the following text **exactly** as follows (this would be an opportune time to cut and paste from this web page!):

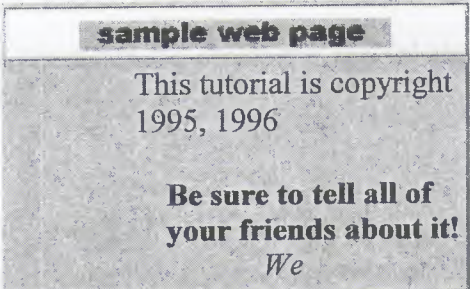
```
<pre>
Eruption          Date          Volume in km^3
-----
Paricutin, Mexico    1943          1.3
Mt. Vesuvius, Italy  79 A.D.        3
Mount St. Helen, Washington 1980          4
Krakatoa, Indonesia 1883          18
Long Valley, California pre-historic 500 - 600
Yellowstone, Wyoming pre-historic 2400
</pre>
```

In this example we use space characters to make the first column left justified and the other 2 columns center-justified. The dashes are used to highlight the column headings.

4. **Save** and **Reload** in your web browser.

More Information

You can still use HTML tags inside text that is marked by the **preformat** tag. For example we can add a hypertext link and some style tags that are **within** the **<pre>...</pre>** tags:

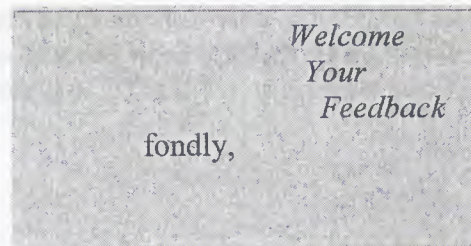
HTML	Result
<pre><pre> This tutorial is copyright 1995, 1996 Be sure to tell all of your friends about it! <i>We Welcome</pre>	

```

Your
Feedback</i>

fondly,
<a href=
"http://www.mcli.dist.maricopa.edu/">
mcli</a>
</pre>

```



Note that the HTML tags do not count as spaces; they are ignored within the preformat region.

Some web page developers will use the `<pre>...</pre>` tags with carriage returns in between to add white space between text or graphics in their web pages -- especially if they wish more white space than provided by the `<p>` tag. For example:

HTML	Result
<pre> Cheese was long since abolished from the Orient. <pre> </pre> ...until Sir Longhorn arrived with the great Cheese Crusade of 1167. </pre>	

2.8. Special Characters

- Use the HTML codes for ISO Latin 1 characters to display accent marks for non-English letters.
- Override the HTML use of `<` and `>` symbols when you need them in a document.
- Add extra spaces in between words and letters in a document.

2.8.1. Accent Marks

Sometime you may need to use a special character in an HTML document, an accent or diacritical mark. The ones that are known as ISO These special characters are marked in HTML as:

`&xxxx;`

where XXXX is the code name for the special character. To create the special character for the German umlaut (**ü**), we need to use the HTML:

`ü`

For example, in the Terminology section of our Volcano lesson, we want to add an explanation of a technical term that was used to describe a particular type of volcanic

flow. This term *nuée ardente* is from the French term for "glowing cloud"; but to use the proper spelling we need an "acute" accent, so that the word appears as *nuée ardente*. In this case, we replace the first **e** in **nuée** with the HTML for the acute accented "e" **é**:

`nuée ardente`

For reference on these codes, see the list of special ISO characters.
Now we will add a sentence to our HTML document that uses an accented letter:

1. Open the HTML file, **index.html** in your text editor.
2. Under the list of terms of the Volcanology Terminology section enter the text:

The term `<I>nuée ardente,</I>` or
"glowing cloud" was first used by La Croix (1904)
in his description of the volcanic flows he observed in
the 1902 eruption of Mt Pelée, a historically
active volcano on the island of Martinique.

NOTE: We have applied the acute accent mark for two "e" letters in this sentence. It may look strange! Be sure that you replace the letter with the sequence that displays the same letter with the accent mark.

3. **Save and Reload** the HTML file.

2.8.3 HTML Escape Sequences

The HTML for the accent mark is an example of the more general class of tags known as **escape sequences**. In entering HTML so far, you may have wondered what you do when you need to use a `<` (less-than) or a `>` (greater-than) sign? These two characters, plus the `&` (ampersand) have special meaning in HTML and cannot be used as typed. Instead, use the **escape sequences**:

`<` is used for `<`
`>` is used for `>`
`&` is used for `&`

Now let's apply one of these symbols in our Volcano lesson. In the previous lesson, we added a table that lists several volcanoes and how much material was erupted from each. Let's say one of the values (500-600) for Long Valley is not very accurate (often such values are estimates), and we would like the entry to read `>450 & <700`. To do this:

1. Open the HTML file, **index.html** in your text editor.
2. Under the heading of **Volumes of Some Well-Known Volcanic Eruptions**, find the line for Long Valley in our table:
3. Long Valley, California pre-historic 500 - 600

and change it to:

Long Valley, California pre-historic >450 & <700

NOTE: Although we are using the escape sequences within a preformatted text, note how a web browser properly interprets and displays the special characters. The escape sequences can thus be used in all portions of an HTML document including headings and anchor links.


4. **Save** and **Reload** the HTML file.

2.8.4.Extra Spaces

As you may have seen, a web browser will ignore all extraneous spaces in your HTML files. However, there may be times when you really want to have more than one space. When? Some writers like to have two spaces following the period at the end of the sentence. What if you wanted to indent the first sentence of every paragraph? How about having a single word with its individual letters spaced far apart?

An HTML code for adding a space character is the special character known as the "non-breaking space":

Here are some examples of how you might use the non-breaking space:

HTML	Result
Two non-breaking spaces are used to spread the letters in a word farther apart	
<tt> C H E E S E S E </tt>	

You may want to experiment with different ways to use the non-breaking space. At this time, we will not modify our HTML documents, but you may, if you wish, add the code for indenting each opening sentence of all paragraphs using two instances of the special code for the non-breaking space.

More Information

Here are some more special characters that you may find useful:

Name	HTML	Result
Copyright	©	©
Trademark	®	®
Cent	¢	¢
Degree sign	°	°
double-less than	«	«
micron	µ	μ
Midline dot	·	·
Negation, continuation line	¬	¬
Paragraph	¶	¶
Plus/Minus	±	±
British Pound	£	£
double greater than	»	»
Section	§	§
Yen	¥	¥

2.9. Definition Lists

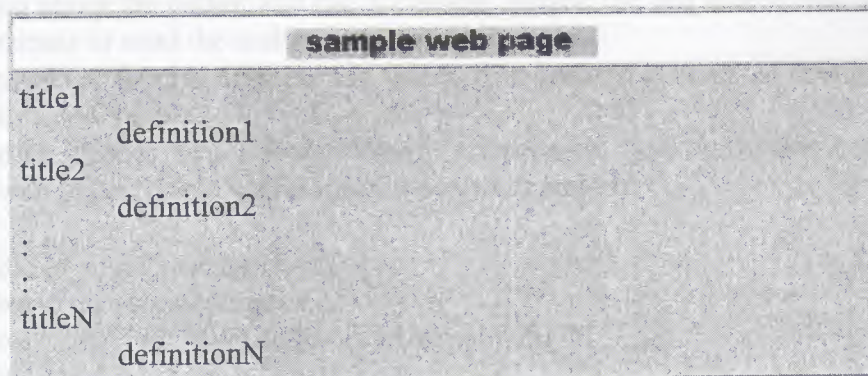
We saw how to create two types of lists: ordered `...` and unordered `...` lists. We now introduce a third variety, the **definition list**. Unlike the lists we have seen earlier, the definition list marks its entries not with a bullet marker or a number, but by its pattern of indentation.

The format for a definition list tag is:

```
<dl>
<dt> title1
<dd> definition1
<dt> title2
<dd> definition2
:
:
:
<dt> titleN
<dd> definitionN
</dl>
```

The `<dl> </dl>` tags include alternating pairs of titles `<dt>` and definitions `<dd>`. A Web browser will typically generate the list with each definition indented to offset it from the title.

Viewed in a web browser, the above example looks like this:



The definition list might be used as a glossary, but for our example we will use it to create a short bibliography for our Volcano Web lesson:

1. Open the HTML file, **index.html** in your text editor.
2. After the unordered list under the heading **References** enter the following:

```
<h3>Bibliography</h3>
```

Check your library for these books:

```
<dl>
```

```
<dt>Cas, R.A.F. and Wright, J. V. (1987).
```

```
<dd><I>Volcanic Successions: Modern and Ancient.</I>  
London: Allen & Unwin.
```

```
<dt>La Croix, A. (1904)
```

```
<dd><I>La Montagna Pelée et ses éruptions.</I>  
Paris: Masson
```

```
<dt>Lipman, P.W. and Mullineaux (eds). (1981)
```

```
<dd><I>The 1980 Eruptions of Mount St. Helens, Washington.</I>  
U.S. Geological Survey Professional Paper 1250.  
</dl>
```

NOTE: We have used some of the Special Characters for the ampersand symbol ("&") in the first reference and for the accent marks in the second reference.

3. **Save** and **Reload** into your web browser.

More Information

You can include other ordered/unordered lists within a definition list. For example, let's say we are making a list of the major mineral groups, with a description of their characteristics, and a sublist of minerals in each group and how they are used in society. We wish it to look like (just a few entries are shown)

2.10. Address Footers and E-Mail Links

A worthwhile feature of web pages is a "footer" at the bottom of a page that provides information about the author and the document, maybe the last date it was modified, as well as a means to send the author a message by e-mail.

This is the place for the **address** tag which just stylizes a block of text in italic and offsets it to a new line.

It is a good idea to make footers brief, informative, and consistent between your different web pages. Some useful information to include is:

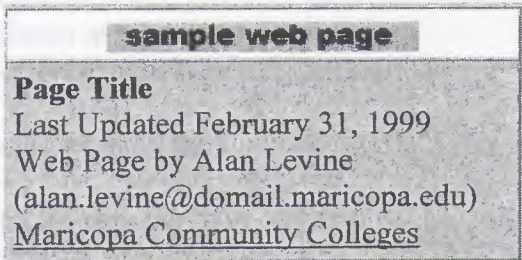
- Title or subject of the current page
- Date it was created/updated
- Copyright if appropriate (or even meaningful?)
- Name and e-mail for the web page author
- Name and hypertext link to affiliation/organization

As examples, see the footers at the bottom of every web page in this tutorial. In composing your own style, take a look at other web pages for ideas. **Imitation still is a very high form of flattery!**

The HTML format for the **address** tag looks like:

```
<address>
  text text text text text text text text
  text text text text text text text text
</address>
```

Note that all other HTML inside the **address** tag is legal, so we might modify it with bold tags, line breaks, and a hypertext link tag:

HTML	Result
<pre><address> Page Title
 Last Updated February 31, 1999
 Web Page by Alan Levine (alan.levine@domail.maricopa.edu)
 Maricopa Community Colleges
 </address></pre>	

Now, suppose someone was reading your page and wanted to send you a comment on how nice your page looked. They would have to write down your e-mail address, launch another program, and send you a message. Wouldn't it be great if you could send email from your Web browser? Well, most web browsers now can!

The way to do this is to create a hypertext link with the **mailto** type in the URL . Create an email hypertext link like this:


```
<a href="mailto:alan.levine@domail.maricopa.edu">send an e-mail to alan</a>
```

When the text **send an e-mail to alan** is clicked, the web browser will bring up a screen where you can compose a message and send it to me. What's more, you can also insert a default subject line for the e-mail message (NOTE: this may not work on all browsers):

```
<a href="mailto:alan.levine@domail.maricopa.edu?subject=hi from lesson 12">
  send an e-mail to alan</a>
```

Try it! Send me a note! send an e-mail to alan

And there is more you can do by adding on to the **mailto** link. If you wanted to send the same message to more than one address, say the President and Vice-President, you just put the email addresses separated by commas (note that in your HTML code this should be one long line, we have broken it up so it displays better here):

```
<a href="mailto:alan.levine@domail.maricopa.edu,pres@whitehouse.gov,
  vice-pres@whitehouse.gov?subject=hi from lesson 12">
  send an e-mail to alan, the pres, and the vice-pres</a>
```

Let's say the Vice-President should only be carbon copied ("cc:") on this message. To do this, just add another string after the subject using **cc=** and the email address. Note that the Subject= string and the cc= string are separated by a **&**:

```
<a href="mailto:alan.levine@domail.maricopa.edu,pres@whitehouse.gov,
  ?subject=hi from lesson 12&cc=vice-pres@whitehouse.gov">
  send an e-mail to alan, the pres; cc: the vice-pres</a>
```

And lastly, you can try to insert a default message using the syntax **body=** and the text that should be placed in the body part of the email message window:

```
<a href="mailto:alan.levine@domail.maricopa.edu,pres@whitehouse.gov,
  ?subject=hi from lesson 12&cc=vice-pres@whitehouse.gov
  &body=Hi there, I think Alan deserves a dinner at your place.">
  send an e-mail to alan, the pres; cc: the vice-pres, with a default message</a>
```

Please do not try sending these messages! Alan likes e-mail but don't bother the folks in the Whitehouse!

Now, let's return to our Volcano example. Note that you can have any text (or graphic) act as the hypertext link. So in the previous example, we would modify the HTML to have the internet address create the link for e-mail.

HTML	Result
<pre><address> Page Title
 Last Updated February 31, 1999
 Web Page by Alan Levine </address></pre>	<div>sample web page</div> <div>Page Title Last Updated February 31, 1999 Web Page by Alan Levine</div>


```
href="mailto:alan.levine@domail.maricopa.edu">
(alan.levine@domail.maricopa.edu)</a> <br>
<a href="http://www.mcli.dist.maricopa.edu/">
Maricopa Community Colleges</a><br>
</address>
```

(alan.levine@domail.maricopa.edu)
Maricopa Community Colleges

And finally, we recommend that you also put in the footer the URL for the page. Why? What if someone prints out your web page but does not bookmark it or write down its URL? Including the URL on the page provides a handy reference. Just modify the above example (note how this HTML is **below** the <address>...</address> tag:

HTML	Result
<pre><address> Page Title
 Last Updated February 31, 1999
 Web Page by Alan Levine (alan.levine@domail.maricopa.edu)
 Maricopa Community Colleges
 </address> <p> <tt> URL: http://www.mcli.dist.maricopa.edu/tut/ </tt></pre>	<p>sample web page</p> <p>Page Title Last Updated February 31, 1999 Web Page by Alan Levine alan.levine@domail.maricopa.edu <u>Maricopa Community Colleges</u></p> <p>URL: http://www.mcli.dist.maricopa.edu/tut/</p>

Now it is time to add a footer to your HTML file. For this example, we assume you are "Lorrie Lava" a staff Volcanologist at Big University (feel free to put your own information in place of what is below):

1. Open the HTML file, **index.html** in your text editor.
2. At the bottom of the document (but above the </body></html> tags), add the following:

```
<hr>
<address><b>Volcano Web</b> <br>
created by Lorrie Lava, <a
href="mailto:lava@pele.bigu.edu">lava@pele.bigu.edu</a><br>
Volcanic Studies, <a href="http://www.bigu.edu/">Big University</a><p>
<tt>last modified: April 1, 1995</tt>
</address>
<p>
<tt>URL: http://www.bigu.edu/web/index.html</tt>
```

NOTE: We've used several HTML tags that have been covered in previous lessons. Also note the extra `<p>` tag at the bottom; this makes sure the last line of text is always visible.

3. **Save** and **Reload** the HTML file.

2.11. Lumping vs. Splitting

- Transform a single web page to a series of linked pages
- Create a template for multiple web pages
- Build navigational features for connecting multiple web pages

For organizing information, sometimes it's better to "lump" things together; other times it is better to "split" them apart. Scrolling through long web pages is often tedious. Long, single web pages take longer to load over networks when compare to a series of smaller pages.

In many cases, you can identify logical points to "split" information into multiple web-pages. However, there is no magical formula, and opinions will vary. You should strike a balance between pages with breaks that parallel the content yet avoid forcing the reader to click through too many screens of options and sub-options before getting to the desired information. It also becomes important to build in hypertext links that help the reader navigate your information web as well as providing visual clues about their location within the web.

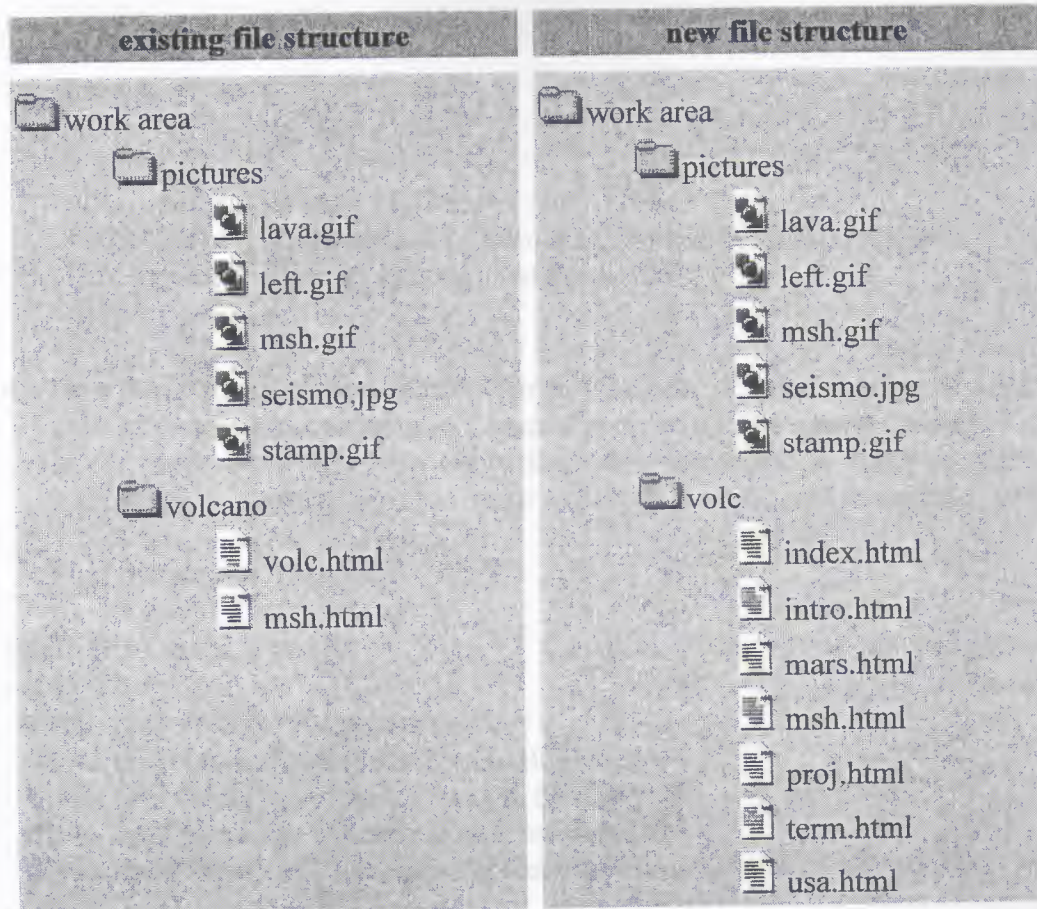
So far we have built one web page with a link to a shorter page. we created a list of links that works as a table of contents by connecting them to named anchors for the different sections of the Volcano Web lesson. These same divisions might be sensible breakpoints for splitting the single long page into sub-pages.

Up to now we have created a directory called **volc** that contains our two HTML files (**index.html**, the lesson, and **msh.html**, a second web page). We also have a second directory called **pictures** that contains our graphic image files.

We will now split the single Volcano Web file into a series of web pages, linked as shown in this schematic diagram. The entry point is a main index/cover page, **index.html** that has links that point to each of the other parts of our lesson:

- Introduction
[intro.html]
- Volcano Terminology
[term.html]
- Volcanic Places in the USA
[usa.html]
- Volcanic Places on Mars
[mars.html]
- Research Project
[proj.html]

Each part of the lesson will link back to the index as well as to the preceding and following pages. Also note the two-way link between **usa.html** and **msh.html**. Or if you prefer a more traditional directory listing structure:



NOTE: To complete this lesson, we will have to create quite a few new files and do a fair amount of copy/pasting from the files you have been working on. Be sure that you are comfortable jumping around between the different application and document windows on your computer.

Also, we have changed the name of the volcano directory/folder to a shorter volc. (We like trying to keep our URLs from getting too long, but also not shrinking them too short that they are cryptic)

1. First make a copy of the **index.html** file you have been working on and name it **old.html** or something like that. This is a very good habit when you start making major changes to your web pages!
2. Now open the original version of the **index.html** file in your text editor. This is our lesson that we have been working on to this point.
3. We are going to use the picture, the opening text/quotation, and the table of contents as the content for our title page. To do this, we will remove the sections that will be "split" out to other web pages.

Delete the sections from **Introduction** to **Bibliography**, that is everything from:

<hr>

<h2>Introduction</h2>

A volcano is a location where magma,
or hot melted rock from within a planet, reaches the surface.

:

through

:

<dt>Lipman, P.W. and Mullineaux (eds). (1981)

<dd><I>The 1980 Eruptions of Mount St. Helens, Washington.</I>

U.S. Geological Survey Professional Paper 1250.

</dl>

4. Now look at the section labeled "In this Lesson..." In our previous work, we used hypertext links to jump to a named anchor (e.g. ..[term](#)) in the same document. Now we will modify these anchor links so that each jumps to another web page (which we will create below).

Find the portion that reads:

In this Lesson...

<i>

Introduction

Volcano Terminology

Volcanic Places in the USA

Volcanic Places on Mars

Research Project</i>

and edit it to read:

In this Lesson...

<i>

Introduction

Volcano Terminology

Volcanic Places in the USA

Volcanic Places on Mars

Research Project</i>

NOTE: Be sure you understand the difference between a link written:

go to questions

and another one written:

go to questions

The next thing we will have to do is create the individual files for the other parts of our lesson. It will be easier if we first create a template file that we can modify for each of the different pages.

1. In your text editor, create a new file called **temp.html**
2. In this file, put the following HTML

HTML	Notes
<pre> <html> <head> <title>XXXXXXXXXX</title> </head> <body> <h5>Volcano Web / Index / back / next</h5> <h2>XXXXXXXXXX</h2> : : : <hr> <address> Volcano WebL : XXXXXXXXXX <p> created by Lorrie Lava, lava@pele.bigu.edu
 Volcanic Studies, Big University<p> <tt>last modified: April 1, 1995</tt> </address> <p> <tt>URL: http://www.bigu.edu/web/xxxxxxxx.html </tt> <p> </body> </html> </pre>	<p>HEAD: In the head portion of each document, XXXXXXXXXX is the name of that section</p> <p>NAVIGATION: At the top of each page we use a small header (h=5) to create navigation links. Index points back to the main cover page. next and back link to the following and preceding pages. You will have to fill in the appropriate file name in for xxxx.html. Notice how this provides a common visual clue to each of our web pages.</p> <p>HEADER: Use a header=2 to put a title for that page.</p> <p>ADDRESS FOOTER: Note how the footer is now set up to indicate the name of the main web page (with a link back to it) as well as a line of text that indicates the name of the current section XXXXXXXXXX. Placing the name of the page here adds another important visual clue to the location of this page in the structure of the web we are creating.</p> <p>URL: Be sure to modify the line that indicates the document's URL to reflect its file name xxxxxxxx.html</p>

- Now you should make 5 copies of the template file and make the appropriate changes to the template:

File Name	Section	Notes
intro.html	Introduction	As this is the first section, remove the line from the navigation section: <code>back</code>
term.html	Volcano Terminology	
usa.html	Volcanic Places in the USA	
mars.html	Volcanic Places on Mars	
proj.html	Research Project	As this is the last section, remove the line from the navigation section: <code>next</code>

- Now, open the old **index.html** file (that we re-named **old.html**) in your text editor. For each of the new files, you will have to copy the HTML that was underneath that section's `<h2>...</h2>` header and paste it into the new files you created in the previous step. Note that **Volcanic Places in the US** and **Research Projects** both include sub-sections that have `<h3>...</h3>` headers.
- Finally, you will have to modify the link in **msh.html** file. Previously, it returned to a named anchor in the main lesson (the section for **Volcanic Places in the US**) where now it should link to the **usa.html** file. Open **msh.html** file in your text editor and edit the line to read:

```
<a href="usa.html">

```

- Return to

```
<i>Volcano Web</i></a>
```

Just to be consistent, you should also make the footer look like:

```
<hr>
<address>
<b><a href="index.html">
Volcano Web</a> : <a href="usa.html">
Volcanic Places in the USA</a> :
Mount St. Helens</b> <p>
```


created by Lorrie Lava,

lava@pele.bigu.edu

Volcanic Studies,

Big University<p>

<tt>last modified: April 1, 1995</tt>

</address>

<p>

<tt>URL: http://www.bigu.edu/web/msh.html</tt>

</body>

</html>

Even when NCSA Mosaic first opened the scene in 1993 as the first graphical web browser (created by what kid Marc Andreessen and others), the standards were followed to the letter, which at that time were updated to HTML 2.0.

The web started to get popular.

Extremely popular.

Insanely popular.

Other programmers began to build web browsers that offered the same functionality as Mosaic (because they supported all of the HTML features contained within the international standards). A group that included the original developer of Mosaic formed a new company - its mascot was "Mosaic", ("Mosaic" + "Communic") with a brand new web browser known as Netscape Navigator.

Netscape was faster and more reliable than the NCSA Mosaic. It had a cool mascot. Netscape grew popular quickly perhaps because it combined functionality that included all of HTML 2.0 PLUS more tags for things that you would not do in HTML 2.0. These "extensions" or "enhancements" have caused (and still cause) a great deal of arguments between HTML purists and those that like the "new flow standard" features that Netscape added.

The Mosaic Netscape was immensely popular and quickly grabbed 90% of the web-browser pie. Now, in HTML, you could define ordered paragraphs in your page, formatted tables of text, text that wrapped around the side of images, and more. You began to see web pages that said, "This page optimized for Netscape". Other browsers began to include support for the Netscape "HTML 2.0+" features. As the major online services opened up to the web, the browser market got even more crowded (and noisy).

The international community was faced with a dilemma, as the market was largely demanding these "non-standard" tags to become part of HTML. As the rules for HTML 3.0 were being developed, they began to include most (but not all) of the tags Netscape had introduced. The standards process seemed to move too slowly for many people. And the battle grew bigger into 1996 when Microsoft introduced their own special HTML tags. Would HTML become more Babel-like? For more information about the HTML battle, we refer you to Andy King's HTML 3.0 and Netscape. The most recent

3. "STANDARD" AND "ENHANCED" HTML

- Decide whether to use HTML that may not work for all web browsers
- View the source HTML of any web page

How about a little history?

Long, long, ago ("in a galaxy far away?")... well around 1990, the World Wide Web was a text-based system based upon the HyperText Markup Language. The tags and interpretation were all built upon standards (HTML 1.0) set by an international committee. This was the key to the "web" becoming "world wide" because, by following the standards, the information was completely independent of the computer from which it was viewed.

Even when NCSA Mosaic burst upon the scene in 1993 as the first graphical web browser (created by whiz kid Marc Andreessen and others), the standards were followed to the letter, which at that time were updated to HTML 2.0.

The web started to get popular.

Extremely popular.

Insanely popular.

Other programmers began to build web browsers that offered the same functionality as Mosaic (because they supported all of the HTML features contained within the international standards). A group that included the original developer of Mosaic formed a new company -- its mascot was "Mozilla", ("Mosaic" + "Godzilla") with a brand new web browser known as Netscape Navigator.

Netscape was faster and more reliable than the NCSA Mosaic. It had a cool mascot! NetScape grew popular quickly perhaps because it contained functionalities that included all of HTML 2.0 PLUS more tags for things that you could not do in HTML 2.0. These "extensions" or "enhancements" have caused (and still cause) a great deal of arguments between HTML purists and those that like the "less than standard" features that Netscape added.

The Mozilla Netscape was **immensely** popular and quickly grabbed 3/4 of the web-browser pie. Now, in HTML, you could include colored backgrounds to your pages, formatted tables of text, text that wrapped around the side of images, and more. You began to see web pages that said, **"This page optimized for Netscape"**. Other browsers began to include support for the Netscape "HTML 2.0+" features. As the major online services opened up to the web, the browser market got even more crowded (and noisy).

The international commission was faced with a dilemma, as the market was largely demanding these "non-standard" tags to become part of HTML. As the rules for HTML 3.0 were being developed, they began to include most (but not all) of the tags Netscape had introduced. The standards process seemed to move too slowly for many people.

And the battle grew bigger into 1996 when Microsoft introduced their own special HTML tags. Would HTML become more Babel-like? For more information about the HTML battle, we refer you to Andy King's HTML 3.0 and Netscape. The most recent

action has been the proposal of HTML 3.2, which encompasses most of the features supported by the big players in the browser arena now, Netscape and Microsoft.

The most recent position statement reflecting HTML 4.0 is the suggested standard that should be adopted by all web browsers. This latest evolution is meant to be a step that will provide a great deal of flexibility for future changes without them being mere "bolt-on" tags that have occurred to date. As we will see in later sections, Style Sheets provide a very efficient means for updating an entire web site with more consistent appearances, plus new features for easily internationalizing content and providing more accessibility features for the visually impaired.

So what does this mean for you? As you develop web pages, you should consider what your readers will be using to access your pages. Perhaps you are a teacher in one school or an information department in a company that is sure all of their users will be using a particular browser. Then you can be comfortable designing and testing on only one browser. However, we consider this a short sighted approach that may down the road force you to do massive, tedious updates to your HTML coded pages.

More commonly, you will be "publishing" web pages from an Internet server and have no idea what browser is being used or even what kind of computer it is used on. You can add special warnings to your page. You can stick closer to the standards that are most widely supported on all web browsers. Even if you do use special tags, there are usually ways to have an alternative that will not cause havoc for users of other browsers.

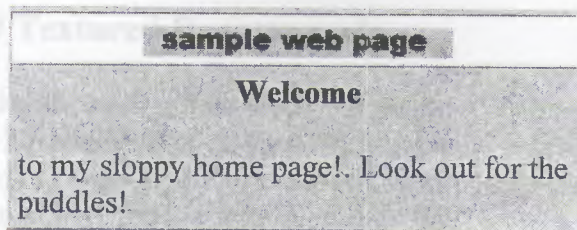
Most importantly... do not become fixated on how the page looks on just your own computer! Your readers may have different browsers, different fonts, different text color preferences, different monitor sizes -- all of which may cause the display to vary in size, layout or appearance from how it looks on your computer. If you can try out your web pages on different computers, stretch and shrink the browser window, switch the standard fonts.

Fortunately, the original design for HTML has a very open and forgiving set of rules -- if a browser encounters a tag it does not know how to deal with or display, it simply ignores these tags.

For example, let's say my browser supports the `<drip>...</drip>` tag. This tag makes all text inside appears normal and then slowly "drip" toward the bottom of the page (editorial note -- I MADE THIS UP!), a fancy effect for my home page:

```
<drip><H2 align=center>Welcome</H2></drip>  
to my sloppy home page!. Look out  
for the puddles!
```

which works like a charm on **my** home made browser because it has been programmed to understand how to display the `<drip>...</drip>` tags. On **your** browser that does not support this feature, you will see:



If your browser doesn't support this tag it just skips over it completely, rather than bombing or presenting an error message.

It's a brilliant concept, isn't it?

3.1. Peeking At The Source

If you have not learned this already, the best secret for learning how to design web pages is to ... "creatively borrow". We are not advocating stealing HTML! But, if you find a web page design that you like, or find yourself asking, "How did they do that?" the easy thing to do is to look at their HTML code! It is sitting there waiting for you.

This is one of the best responses to the question, "Why should I learn all of this darn HTML gunk when I can just use a visual editor such as _____"? You cannot learn much from other websites if you depend upon a helper application to make your web pages. But... if you can "peek under the hood" of a web page and examine its HTML, you can understand and perhaps re-purpose interesting design techniques.

The exact menu names for doing this are different depending on which web browser and version you are using. Typically, your web browser menu will have an item called **View** from which you can select **Source** or **Page Source**. When you select this, it will download the HTML source code corresponding to the URL of the current page in view, and display this HTML code for you to see.

Another way to grab the HTML source of a page in view is to select **Save as...** from the **File** menu of your browser. This will bring up your familiar Save dialog box where you can select a location on your computer's drive and a file name. You should also see in the dialog box a pop-up menu labeled **Format** -- be sure to select the option labeled **Source**.

NOTE: This will save for you the HTML file for the page in view... but not any of the images used in the page. Some newer web browsers as well as third party tools provide the functionality to download everything in that web page as a single package.

And a third way to get to the HTML source is to access the hidden menu-- right mouse click for Windows and Unix users, control-click for Macintosh users-- on any blank area of a web page.

As practice, see how quickly you can see and save the HTML source code for this lesson page.

As we go on into these more advanced lessons, the instructions will get a bit longer and more complicated. But you've gotten this far ok!

3.2. Colorful and Textured Backgrounds

- Create a solid color background for a web page.
- Calculate the hexadecimal code for a color value.
- Change the color of text and hypertext link items.
- Create a textured background from a graphic file.

The background of your page should be just that -- in the background. As we add different colors or even patterns, keep in mind that it should not interfere with the readability of text. But don't take our words for gospel, draw your own conclusions from an example of what happens when you do not think about the impact of a noisy background.

For the pages of this tutorial, we have used a solid white color that makes for a clean and non-interfering (even if not dramatic) backdrop. No, it is not very exciting, but it is readable.

With some modifications to the `<body>` tag, you can add a solid color background to your web page. But before we show you how to do the fancy color stuff, we must first talk about RGB color values and their "hexadecimal" representation.

3.2.1. "Hex-Dec" and Color Basics

In a web browser, you have at your disposal many system colors to color text and backgrounds. Each color is identified by its

Red- Green- Blue (RGB) values, three numbers that range from 0 to 255, each of which represents the intensity of the **Red**, **Green**, or **Blue** component of the desired color. Maximum values of all three (R=255, G=255, B=255) produce the color **white** and minimal values (R=0, G=0, B=0) produce **black**. All other colors are represented by different of RGB triplets.

Here is the tricky part. Rather than identifying a **color** as something like "**102,153,255**" each number is converted from base 10 (normal everyday numbers, digits from **0,1,2,3,4,5,6,7,8,9**) representation to hexadecimal, base 16 (digits from **0,1,2,3,4,5,6,7,8,9,A,B,C,D,E,F**). Why? Hexadecimal is more easily and more efficiently understood by computers. So for the color example above, we would write in hexadecimal as "**6699FF**". In this example, "**66**" is the **Red** value, "**99**" the **Green**, and "**FF**" the **Blue**.

3.2.2. Solid Color Backgrounds

The first thing we will do is add a color background to the index.html file. The HTML format for adding a solid color background involves modifying the `<body>` tag to read:

```
<body bgcolor=#XXXXXX>
```

where **XXXXXX** is the hexadecimal representation (indicated by the # sign in front of it) of the desired color.

If you recall, the image we use for the opening has pictures of volcanoes on a black background -- so if we were to use the same black color for the background of the web page, the picture would merge well into our page:

1. Open the **index.html** file in your text editor.
2. Find the **<body>** tag and change it to:

```
<body bgcolor=#000000>
```

3. **Save** and **Load** your HTML file in your web browser

If you did things correctly, your browser should have changed the background to a solid black. **But you may have noticed that you cannot see your text!** Why? Well, the default color for text is also black, so you now have black text on a black background! Fortunately, we have some other options to add to the body tag to color the text and the hypertext items:

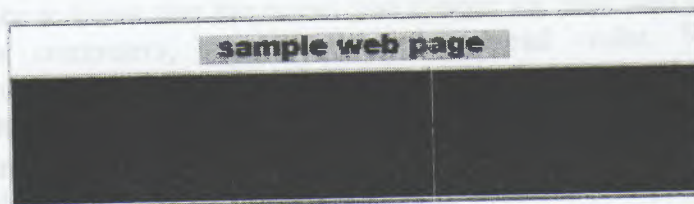
```
<BODY BGCOLOR=#XXXXXX TEXT=#XXXXXX LINK=#XXXXXX VLINK=#XXXXXX>
```

where the XXXXXX values will determine:

- **BGCOLOR** = the color of the background (default is **grey**)
- **TEXT** = the color of normal body text (default is **black**)
- **LINK** = the color of an item that is a hypertext link (default is **blue**)
- **VLINK** = the color of a hypertext item recently visited (default is **purple**)

You can now add some of these other color values by changing the tag to read:

```
<BODY      BGCOLOR=#000000      TEXT=#FFFFCC      LINK=#33CCFF  
VLINK=#FF6666>
```



NOTE: the order of the items in the **<BODY>** tag does not matter

You should now modify the **<BODY>** tags in all of your HTML files (fast and easy to do by copying and pasting the above example for the new **<body>** tag).

3.2.3. Textured Backgrounds

Solid colors add some variety to web pages -- but you can go even farther by adding a textured background. You use a small image file (GIF or JPEG) and the browser will "tile" the web page with repeated copies of the image. Some of the things you should keep in mind are:

- **file size:** Adding a background texture will require that an additional graphic file be downloaded. We suggest that the image files be less than 10k in size.
- **readability:** Be selective! Many background texture files are more distracting than enhancing for readability. Try to use background textures that are very light (with dark text) or very dark (with light text). Select for high contrast with the text and its background.
- **effect:** In the first web browsers that used backgrounds, the page would not appear until the background file was downloaded. This might mean for a slow connection, your reader might have to wait long for the background image to arrive before even seeing any content! However, later browsers download the background **last** so the page first is grey, then the text and graphics appear, and lastly the background arrives. REMEMBER! The load time for your pages will likely be slower (considerably for older modems) when your pages are read from a web server.

In this part of the lesson, we will give you a chance to experiment with three different background images. The HTML format for adding a background image file is:

```
<body background="bgfile.gif">
```

where **bgfile.gif** is the name of the image file.

NOTE: Many web browsers have the ability to change the default text colors -- sometimes a user may have the preferences set for colors that will interfere with the ones you have selected. Therefore, we suggest when using any background tags (solid color or texture file) that you include the "normal" colors -- black for text, blue for hypertext links, and purple for recent links: `<BODY TEXT=#000000 VLINK=#660099 LINK=#0000FF>`

More Information

If you would like to know that the colors you choose for your web pages will look the same on other computers, consider the hexadecimal codes. With the different combinations of letters and numbers, there are literally millions of colors to choose from, e.g. **#FD6A2C**, **#06E293** or **#55A92B**. Yet, not all of these colors will be the same on all computers. Moreover, if your visitor does not have a cutting edge computer capable of displaying "millions" of colors, the web browser will make a closest "guess" to match the colors, with perhaps undesirable results.

Fortunately, you can do something about this... only use hex colors that are included in the NetScape 216 color palette. "What is that?" you ask. It is a set of 216 unique colors that are common to the system colors of both Macintosh and Windows operating systems. Therefore, these colors can be displayed on almost any computer.

If you are choosing these magical colors, you just need to choose ones that are triplet combinations of the following color codes: **00 33 66 99 CC FF**. For examples, these colors are all part of the cross-platform color set: **#FF6600**, **#00FF66** or **#669933**.

3.3. Spiffing Up Text

- Change the size of specific portions of text in a web page
- Change the color of specific portions of text in a web page
- Create superscripts and subscripts for text in a web page
- Specify the font for portions of text on a web page

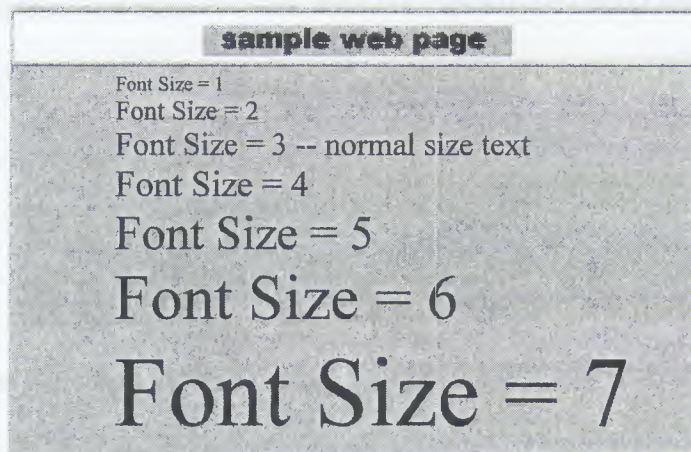
With the HTML introduced by Netscape and HTML 3.2, you have some more options for formatting your text. Specifically, you can create different sized text as well as different colored text. When used judiciously, the text formatting can enhance the layout of a web page. When used with reckless abandon, it can produce web pages that look like noise.

You can also now create superscript and subscripts used in mathematical expressions, chemical formulas, or as footnote markers.

We will introduce you to these text features with some examples that you will use to modify your Volcano Web pages. You may want to first refer to the font test page to determine if your web browser supports the tags used.

3.3.1. Font Size

The `..` tag introduced by Netscape may be used to set the size of the font from 1 (smallest) to 7 (largest) with a size of 3 being the normal text size:



Remember that the actual size will depend on the computer font the user has selected for their web browser -- you are adjusting the size relative to the default font they have chosen.

The format for the **font** size tag is:

```
<font size=N>blah blah blah</font>
```

where N=1 to 7. The font tag may be used in conjunction with other style tags or inside header tags.

The other method for using the **font** tag is to provide a **relative** size change:


```
<font size=+1>blah blah blah</font>  
<font size=-2>blah blah blah</font>
```

i.e. where the +N or -N value provides the **offset** from the current font size. This is used with another tag:

```
<basefont size=5>
```

which changes the **base font size** from its default value of 3 to some other value. You might do this in a web page that will mostly have text of a larger or smaller than standard font size. That way, if you need to adjust small portions of the page, you can use the relative font size tags shown above.

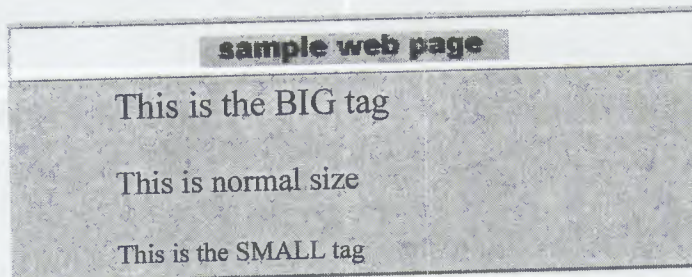
The power of using relative font size tags (e.g. **size=+2**) over absolute size tags (e.g. **size=5**) is that we could easily shift the size of ALL text in that page by changing one instance of the **<basefont>** tag.

Note: The **<basefont>** tag has no closing tag -- it continues to be the base font size until another **<basefont>** tag occurs.

If a web browser does not support the **** tags, you may want to try the HTML 3.0 tags:

```
<BIG>...</BIG>  
<SMALL>...</SMALL>
```

which gives you less font sizes to work with but can still be useful for those browsers.



We will first use the **** tag to modify the title in our opening page:

1. Open the **index.html** file in your text editor
2. Previously we used an **<h1>..</h1>** header tag to format the title of our page. We will now use some font size tags instead to create a mixed size title.

Change the line that reads:

```
<h1>Volcano Web</h1>
```

to:

```
<p>  
<b><font size=+4>V</font><font size=+3>OLCANO
```

WEB

Look carefully at what we have done -- the first V is now increased in size by 4 units above the base value, and the other letters (now capitalized) are increased 3 units above base value. This provides the layout style of SMALL CAPS. Also note that we have added a **...** tag to make the title stand out. And finally, because we are not using a header tag that carries a line break by default, we had to add a **<p>** tag above the title to force it to appear on a new line (we do not need one after because the next HTML is a **<BLOCKQUOTE>** that carries its own line break -).

3. Next, we would like to make the quote from Pliny stand out a bit more, so we will raise it one font size:

```
<b><i><font size=+1>"Nature raves savagely,  
threatening the lands"</font></i></b><br>
```

4. **Save and Load** into your web browser

Can you see the difference between using the **** tags and the **<h1>**, **<h2>**, etc, tags for section titles? The formatting differences may be subtle, but it does offer you, the HTML author, alternatives for your web page design. Just remember that if a reader's browser does not support font size tags, they will see **all** the text as the standard size.

Two Methods for Creating Headings	
<pre><h3>...</h3></pre>	<pre><p> ...
</pre>
<div><p>sample web page</p><p>...before the next great innovation that rocked the world of rotten milk.</p><p>History of Longhorn Cheese</p><p>Longhorn cheese was first discovered by Alister Longhorn in 1754 when he...</p></div>	<div><p>sample web page</p><p>...before the next great innovation that rocked the world of rotten milk.</p><p>History of Longhorn Cheese</p><p>Longhorn cheese was first discovered by Alister Longhorn in 1754 when he...</p></div>

3.3.2.Font Color

We introduced the tags for coloring text of the entire web page as well as the proper format for representing color values in HTML. You can also add an attribute to the **** tag to color a selected portion of text using the hexadecimal codes or the 16 colors recognized by their names:

```
<font color=red>...</font>  
<font color=#993459>...</font>
```



```

<font color=lime>...</font>
<font color=#002200>...</font>
<font color=navy>...</font>
<font color=#193467>...</font>

```

We will not go crazy with the color tags, but as an example, we will change the color of the **VOLCANO WEB** text we worked on above for the cover page. If you recall, we set the text color for the text of this page to yellow and we will override that color just for the title text:

1. Open the **index.html** file in your text editor.
2. Edit the line that contains the text of VOLCANO WEB to read:

```

<b><font size=+4 color=#FF66FF>V</font>
<font size=+3 color=#DD0055>OLCANO WEB</font></b>

```

3. Save and Reload in your web browser

NOTE: The size and color attributes can reside together in a tag. The effect here makes the "V" a brighter violet color and one size larger than the other letters.

3.3.3. Superscripts and Subscripts

Until HTML 3.0 you were out of luck if you needed to write mathematical expressions, chemical formulas, or other expressions with superscripts and/or subscripts. These new tags raise/lower the "scripted" text one half line and sizes it one size smaller.

The HTML format for these tags is:

Superscripts / Subscripts	
HTML	Result
^{...}	super ^{script}
_{...}	sub _{script}

We will now use these tags for our **Introduction** page:

1. Open the **intro.html** file in your text editor.
2. First we will use subscripts to write some chemical formulas. After the last sentence in paragraph 2 ("Compare the history of human beings..."), add this sentence that uses subscripts:

Volcanoes were important contributors to the early earth atmosphere by releasing gases such as nitrogen (N₂),

carbon dioxide (CO₂), and ammonia (NH₄).

3. Now we will use superscripts to denote a cubic volume. Below the table we created with the `<pre>...</pre>` tags, add this sentence:

Note that volcanic eruptions that occurred before historic times were several orders of magnitude larger (more than 1000 km³ in erupted volume) than ones observed by humans.

4. If you notice the third column of our table, when we first wrote it we had to use "**km^3**" to indicate "km³". Although this text is **inside** the preformat tag, we can still use the superscript tag. To do this change:

Volume in km³

to

Volume in km³

3.3.4. Font Face

The HTML 3.2 standards included the `` tag to specify a particular screen font for text display. This may not work in all web browsers, so you may first want to try the font test.

The HTML for specifying a font face is:

```
<font FACE="font1,font2">some text
```

If a viewer's web browser supports the **font FACE** attribute and they have one of the listed fonts installed on their computer, then the text will be displayed with the specified font. Otherwise, it will use the same font as the rest of the web page.

If you choose to use a font face, you should select a face that is standard or be sure that the intended computers have any "exotic" fonts installed.

We will now modify the `` tag for our title page so that the words "Volcano Web" appear in a different font:

1. Open the **index.html** file in your text editor.
2. Edit the line that contains the text of VOLCANO WEB to read:

```
<b><font face="Arial,Helvetica" size=+4 color=#FF66FF>V</font><br><font face="Arial,Helvetica" size=+3 color=#DD0055>OLCANO<br>WEB</font></b>
```


3. **Save and Reload** in your web browser

NOTE: We've included specifiers for the browser to choose Arial for Windows Helvetica for Macintosh and/or computers that do not have the Arial font installed.

Use this HTML with discretion! There is an art of use versus abuse of too many font styles!

3.4. **Extra Alignment**

- Create text that is aligned to center of the page
- Align images and blocks of text
- Add specified spacing around images
- Create text that is right justified

3.4.1. **Text Alignment**

As the web grew and grew and grew, there was demand for more control over page layout. One desire was to format text that was aligned to the center of a page, rather than just justified to the left margin.

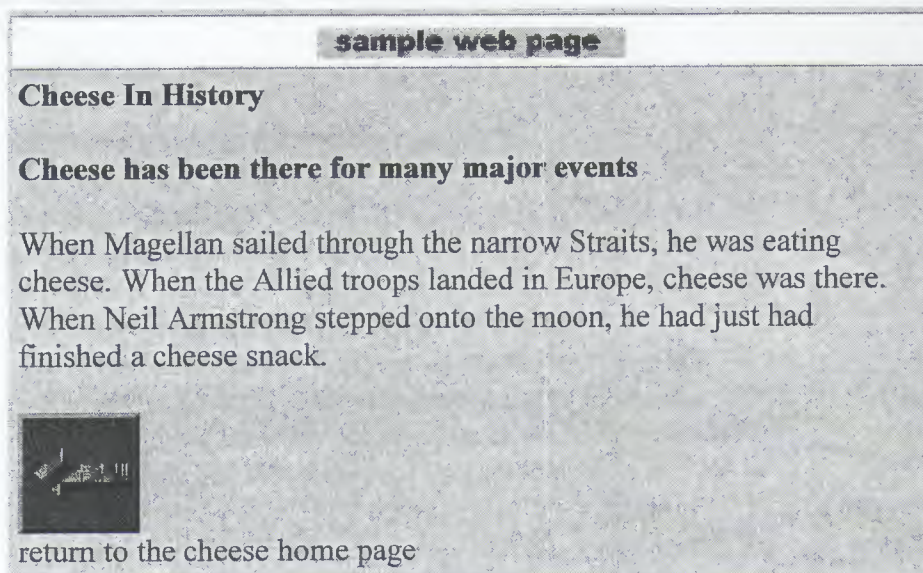
This gets into one of those sticky Netscape versus "standard" HTML situations. Netscape introduced an HTML extension -- **<center>...</center>** tag -- it aligns everything inside the tags with the center of the web page. Seems to make sense? Well, if you talk to a mark-up language purist, alignment is an **attribute**. The more general HTML (and "standard") for center alignment is a variation on the **<p>** tag:

```
<p align=center>
blah blah blah
<br>
blah blah
</p>
```

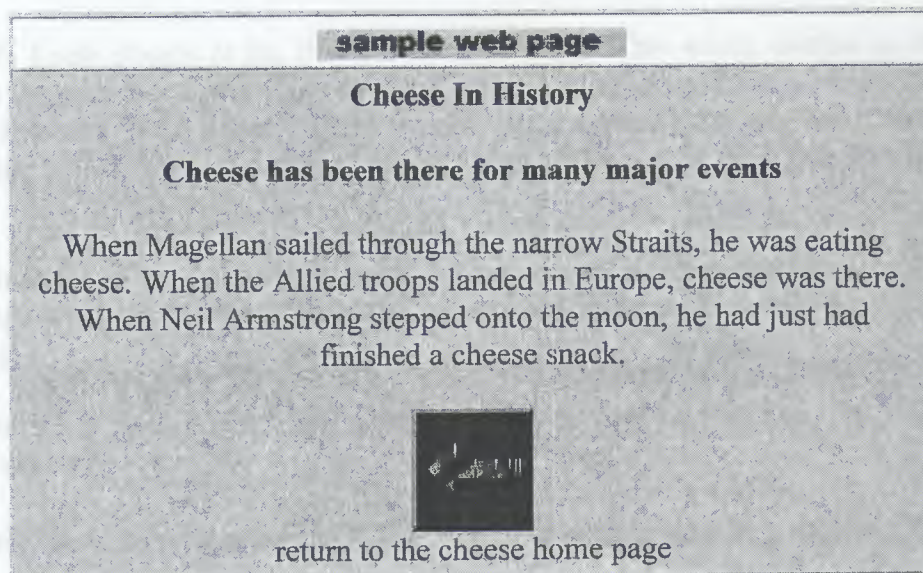
Note that now there is a closing **</p>** tag. This becomes important later when we get into Style Sheets and other design features of HTML 4.0. Also, if you are center aligning several paragraphs, each one will have to be marked with a separate **<p align=center>...</p>**

Most other browsers and the HTML 3.2 standards now support Netscape's **<center>...</center>** tags. Remember that if a browser does not support a tag, it will just ignore it.

For the effect of center alignment, compare:



with this example that center aligns the content:



Now we will modify our cover page (**index.html**) to use the **<center>...</center>** tag on the list of lesson sections. We will also make some other changes to improve its appearance.

1. Open up the **index.html** file in your text editor.
2. Find the section that looks like:

In this Lesson...

<i>

Introduction

Volcano Terminology

Volcanic Places in the USA

Volcanic Places on Mars

Research Project

</i>

and replace it with the following HTML:

<p align=center>

<i>

Introduction

Volcano Terminology

Volcanic Places in the USA

Volcanic Places on Mars

Research Project

</i>

</p>

3. **Save and Load** into your web browser.

NOTE: Look closely at the changes we have made. This whole section is enclosed in the <p align=center>..</p> tags for alignment. The unordered list we built would look odd centered -- the bullet marks would be staggered. So we have removed the structure. The
 tags at the end of each line will force a line break.

And finally, we have added a ... tag to increase the text size. (Note, this may not work on all web browsers; reports are that the font will not be resized in Internet Explorer version 4).

If you wish you could also use the <center>...</center> tags in place of <p align=center>...</p>

You may want to compare your HTML file to an example of how it should look at this point.

Any header <hN>...</hN> tag may be center aligned by adding the attribute:

<hN align=center>blah blah blah</hN>

We will now use this attribute to center the title of each web page:
Open all of your other HTML files in your text editor.

For each one, edit the text that appears near the top, in `<h1>` or `<h2>` tags, following this example from file **intro.html**:

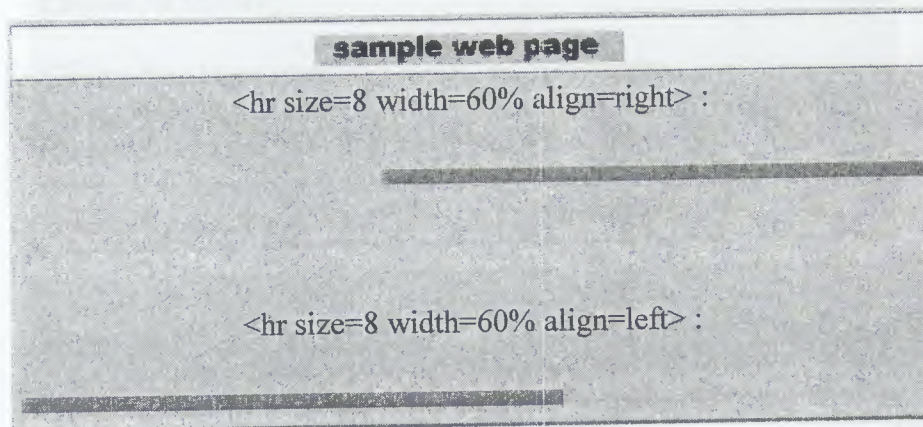
```
<h2>Introduction</h2>
```

to

```
<h2 align=center>Introduction</h2>
```

1. **Save** and **Reload** into your web browser.

NOTE: There is also an `align` attribute for the `<hr>` tag that is relevant to the other options we reviewed "Easy Horizontal Rules". When you specify a shorter width for a horizontal rule, you can also specify that it be aligned to the left or the right (the default is to center align horizontal rule lines):



3.4.2. Aligning Images and Text

We learned how to put images in our pages and saw that we could have one line of text align with the top, middle, or bottom of an image. However, up to now, we could not have a block of text sitting side by side with an inline image.

With the **align** attribute in the `` tag we can specify to have the image itself aligned to the right or left margin of the page. But more so, we can have any HTML following it "fill" in around the empty space. The HTML to do this is:

```

```

```

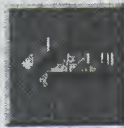
```

Compare these two examples:

no align attribute

align=bottom (default if none specified)

sample web page



Cheese In History

Cheese has been there for many major events

When Magellan sailed through the narrow Straits, he was eating cheese. When the Allied troops landed in Europe, cheese was there. When Neil Armstrong stepped onto the moon, he had just had finished a cheese snack.

text flow

align=left

sample web page



Cheese In History

Cheese has been there for many major events

When Magellan sailed through the narrow Straits, he was eating cheese. When the Allied troops landed in Europe, cheese was there. When Neil Armstrong stepped onto the moon, he had just had finished a cheese snack.

Shrink and stretch your web browser window to see how it affects your page with aligned images/text.

One more note. There will be times when the text or other items that are aligned with the image are rather short and you want to force the next text to jump down below the image. There is an attribute for the `
` tag to clear the alignment:

`<br clear=left>`

`<br clear=right>`

`<br clear=all>`

that will "clear" (or disable) any preceding alignments set up in the `` tags. We suggest that you always use these tags because the alignment will vary depending on the font specified in the reader's web browser and the width of their browser window.

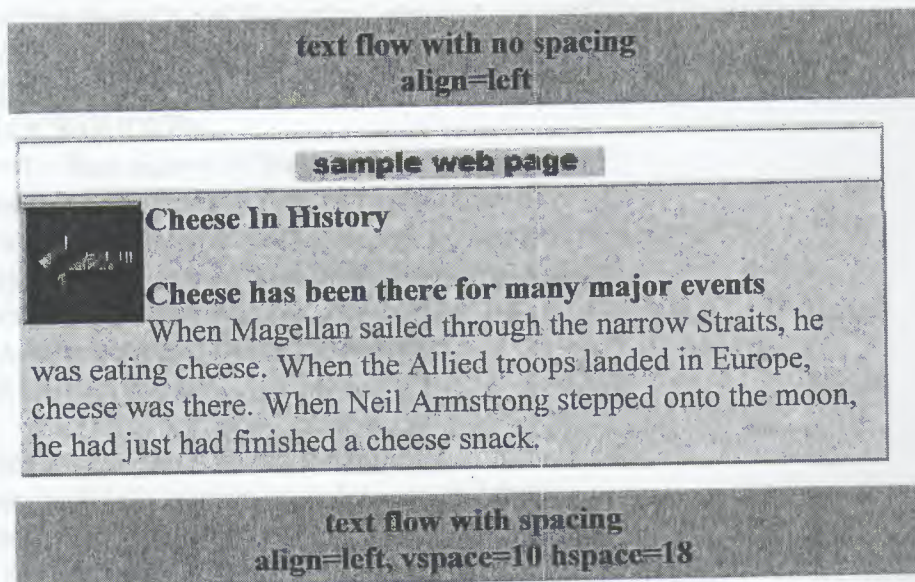
3.4.3. Image Space Padding

Sometimes when you use the right or left alignment with an image, the text wraps a bit too close to the image. There is an option you can add to the `` tags to add more padding or space around your image:

```

```

The **vspace** and **hspace** options put the amount of pixels specified of space above and below (vspace) or on the left and the right (hspace) of the image. So we could modify our example above to look like:



3.4.4. Adding Image Alignment To Our Site

We will now return to our **index.html** page to re-format the opening screen. The picture may look nice, but it takes more vertical space to have the picture followed by the text below. We will use the image/text alignment to put some of the text adjacent to the image.



1. Open the **index.html** file in your text editor.
2. Find the portion that reads:

```

<p>
<b><font face="Arial,Helvetica" size=+4 color=#FF66FF>V</font>
<font face="Arial,Helvetica" size=+3 color=#DD0055>OLCANO
WEB</font></b>
<BLOCKQUOTE>
<b><I><font size=+1>"Nature raves savagely,
threatening the lands"</font></I></b><br>
-- <a href="http://www.livius.org/pi-pm/pliny/pliny_e.html">
Pliny the Elder</a>, who died of asphyxiation after
observing the destruction of Pompeii by the
79 A.D. eruption of Mount Vesuvius.
</BLOCKQUOTE>
```

In this lesson you will use the Internet to research information on volcanoes and then write a report on your results.

and replace it with:

```

<b><I><font size=+1>
"Nature raves savagely, threatening the lands"
</font></I></b><br>
```

```
-- <a href="http://www.livius.org/pi-pm/pliny/pliny_e.html">
Pliny the Elder</a>, who died of asphyxiation after
observing the destruction of Pompeii by the
79 A.D. eruption of Mount Vesuvius.
<p>
<b><font face="Arial,Helvetica" size=+4 color=#FF66FF>V</font>
<font face="Arial,Helvetica" size=+3 color=#DD0055>OLCANO
WEB</font></b>
<p>
In this lesson you will use the Internet
to research information on volcanoes and then write a report on your
results.
<br clear=left>
```

3. **Save and Reload** in your web browser.

NOTE: Everything between the <img... align=left> tag and the <br clear=left> tag will be placed adjacent to the picture -- the image is aligned left and the other HTML fills the empty space.

We also put the quotation at the top to attract attention. With this new layout, the <blockquote> tag is not effective, so it was removed.

4.1. Basic Table Tags

The HTML for the basic table structure is shown below:

```
<table border=1>
<tr>
<td>Row 1 col 1</td>
<td>Row 1 col 2</td>
</tr>
<tr>
<td>Row 2 col 1</td>
<td>Row 2 col 2</td>
</tr>
<tr>
<td>Row 3 col 1</td>
<td>Row 3 col 2</td>
</tr>
</table>
```



4. TABLES

Tables were introduced into HTML 3.0 and further enhanced by Netscape to add another dimension to web page design. They provide a structure for organizing other HTML elements into "grids" on the page. One of the more obvious uses of tables is when you have to format... columnar tables of text! But, tables also open up the door for many other page layout options.

The HTML for tables can look very complex -- but we will start simple and build up some tables for our Volcano Web lesson.

For starters, keep in mind this concept:

Tables start being built from the top left, then across the columns of the first row, then to the second row, across the columns of the second row...



We will call each grid in a table a **cell**.

4.1.Basic Table Tags

The HTML for the basic table structure is shown below:

HTML

Result

```
<table border=1>
```

```
<tr>
```

```
<td>Row 1 col 1</td>
```

```
<td>Row 1 col 2</td>
```

```
<td>Row 1 col 3</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Row 2 col 1</td>
```

```
<td>Row 2 col 2</td>
```

```
<td>Row 2 col 3</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Row 3 col 1</td>
```

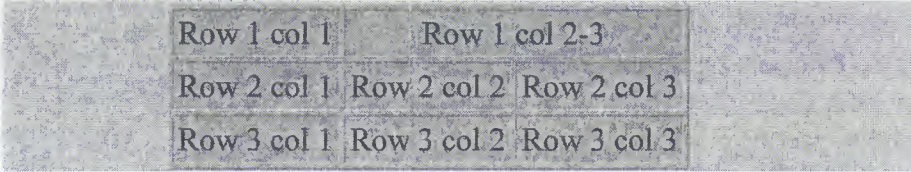
```
<td>Row 3 col 2</td>
```

```
<td>Row 3 col 3</td>
```

```
</tr>
```

```
</table>
```

Row 1 col 1	Row 1 col 2	Row 1 col 3
Row 2 col 1	Row 2 col 2	Row 2 col 3
Row 3 col 1	Row 3 col 2	Row 3 col 3

HTML	Result
<pre> <table border> <tr> <td>Row 1 col 1</td> <td align=center colspan=2> Row 1 col 2- 3</td> </tr> <tr> <td>Row 2 col 1</td> <td>Row 2 col 2</td> <td>Row 2 col 3</td> </tr> <tr> <td>Row 3 col 1</td> <td>Row 3 col 2</td> <td>Row 3 col 3</td> </tr> </table> </pre>	<p>** Note the attribute for the second cell of the first row -- it spans 2 columns. We have also aligned the text in the center of this cell.</p> 

There is still quite a bit more to cover, but let's stop looking at these boring examples and work on our web page...

4.3.A Data Table

1. Open up the **intro.html** file in your text editor.
2. Delete everything inside and including the **<pre>...</pre>** tags.
3. In the same place put:

```

<table border>
  <tr>
    <th>Eruption</th>
    <th>Date</th>
    <th>Volume in km<sup>3</sup></th>
  </tr>

  <tr>
    <td>Paricutin, Mexico</td>
    <td align=center>1943</td>
    <td align=center>1.3</td>
  </tr>

```

```

<tr>
<td>Mt. Vesuvius, Italy</td>
<td align=center>79 A.D.</td>
<td align=center>3</td>
</tr>

<tr>
<td>Mount St. Helens,<br>Washington</td>
<td align=center>1980</td>
<td align=center>4</td>
</tr>

<tr>
<td>Krakatoa, Indonesia</td>
<td align=center>1883</td>
<td align=center>18</td>
</tr>

<tr>
<td>Long Valley, California</td>
<td align=center>pre-historic</td>
<td align=center>&gt;450 & &lt;700</td>
</tr>

<tr>
<td>Yellowstone, Wyoming</td>
<td align=center>pre-historic</td>
<td align=center>400</td>
</tr>
</table>

```

4. **Save** and **Load** into your web browser.

NOTE: The table may not be completely distinct as it sits on a solid black background.

4.4.Invisible or "Phantom" Tables

A table with borders is useful for charts and data but other times we want to create a grid-like layout that does not have the borders. We like to call these "phantom" tables because to the reader it may not be obvious that they are looking at a table!

A phantom table is built in the same manner as the table we built above except the

<table> tag looks like:

```
<table border=0>
```

Note that the right hand column also has an adjacent picture that is a hyperlink to a full screen image.

1. Open up the file **usa.html** in your text editor.
2. Find the section that looks like:

```
<font size=+1><b>Mount St Helens</b></font><br>
```

```
On May 18, 1980, after a long period of rest,  
this quiet mountain in Washington provided  
<a href="msh.html">detailed observations</a> on  
the mechanics of highly explosive eruptions.
```

```
<p>
```

```
<font size=+1><b>Long Valley</b></font><br>
```

```
This field seismometer measures earthquakes  
associated with subsurface volcanic forces and  
may help to predict future events. It sits on a  
plateau known as the "Volcanic Tableland" formed  
by a major eruption 600,000 years ago.<p>
```

```
<a href="../pictures/seismo.jpg">
```

```

```

```
-- [full size image] --</a>
```

and replace it with the following HTML:

```
<table border=0 cellpadding=6 cellspacing=2>
```

```
<tr>
```

```
<td><font size=+1><b>Mount St Helens</b></font></td>
```

```
<td colspan=2><font size=+1><b>Long Valley</b></font></td>
```

```
</tr>
```

```
<tr>
```

```
<td valign=top>On May 18, 1980, after a  
long period of rest, this quiet mountain  
in Washington provided <a href="msh.html">  
detailed observations</a> on  
the mechanics of highly explosive eruptions.
```

```
</td>
```

```
<td valign=top>
```

```
This field seismometer measures earthquakes  
associated with subsurface volcanic forces  
and may help to predict future events. It  
sits on a plateau known as the  
"Volcanic Tableland" formed by a major  
eruption 600,000 years ago.
```

```
</td>
```

```
<td valign=top><a href="../pictures/seismo.jpg">
```

```
</a>
```

```
</td>
```

```
</tr>
```

```

<tr>
<td colspan=3 align=right>
<a href=../pictures/seismo.jpg">
-- [full size image] --</a></td>
</tr>
</table>

```

NOTE: Look carefully at the HTML here. We actually are using a 3 column table -- the first paragraph (Mount St Helens) becomes the left column. The right column includes one column of text and another column for a small image. A bottom row, aligned right and spanning 3 columns, is used to hold the hypertext link that leads to the same graphic as the thumbnail image

3. **Save** and **Reload** again into your web browser.

4.5.Coloring Tables

Most web browsers now support HTML to color tables, rows, and individual table cells. In fact, we have used it throughout this tutorial and throughout the lessons when we display HTML examples.

This is an effective means to add graphic/color elements to a web page without attaching a lot of bandwidth consuming images.

NOTE: If your computer display is running at less than 24-bit "True Color" settings, e.g. at 256 colors, then you may not be able to see all of the colors used in this section. Most computers sold since 1999 are capable of displaying at 24-bit color.

.It is as simple as inserting **bgcolor=#FF0000** as an attribute to the different **<table>** tags:

Table Part	HTML
table color the area behind the entire table	<table bgcolor=#880000>
row color the area behind a single row	<tr bgcolor=#880000>
cell color the area behind a single cell	<td bgcolor=#880000>

Now we will add some color to the data table you created for the Introduction page. We will not add great gobs of colors (but feel free to experiment on your own pages). In our

case, we will simply add the HTML to make the cells that hold the row and column headings a lighter shade of gray than the background black.

1. Open your **intro.html** file in your text editor.
2. First find all of the **<th>** tags that hold the column headings:

```
<th><font color=#EE8844>Eruption</font></th>
<th><font color=#EE8844>Date</font></th>
<th><font color=#EE8844>Volume in km<sup>3</sup></font></th>
```

and add the attribute to color those cells grey (#222222):

```
<th bgcolor=#222222><font color=#EE8844>Eruption</font></th>
<th bgcolor=#222222><font color=#EE8844>Date</font></th>
<th bgcolor=#222222><font color=#EE8844>Volume in
km<sup>3</sup></font></th>
```

3. Now, find the two tags that format the row labels and add the same color tag so that they read:

```
<td bgcolor=#222222 rowspan=4>
<font color=#EE8844>
<i>eruptions<br>
observed<br>
by humans</i>
</font></td>
:
:
:
<td bgcolor=#222222 rowspan=2>
<font color=#EE8844>
<i>inferred<br>
by study<br>
of deposits</i>
</font></td>
```

4. Save and Reload in your web browser. You can compare your attempt with this sample of how the table should look at this point.

And you can even do more than use solid color backgrounds for table cells. We could use a tiled image (a graphic image that can repeatedly fill a space) as a background for an entire page via the **BODY** tag. You can use a similar format to designate that table cells are filled with repeating patterns. You should be aware of the differences in how NetScape and Internet Explorer tags handle this modifier:

Table Part	HTML	Notes
table fill all cells with the same pattern	<code><table background="image.gif"></code>	In NetScape browsers, this will fill all cells in the table; in Internet Explorer, the entire table area (including cell walls) will be covered with the pattern.
row fill all cells in one row same the>	<code><tr background="image.gif"></code>	Will not work in Internet Explorer
cell fill a single cell a same pattern	<code><td background="image.gif"></code>	works the same in NetScape and Internet Explorer.

If you look at the table at the top of this lesson page, you can see that some cells have solid color backgrounds, but the cell that spans the second row uses a graphic to fill the text behind the word **table** with a pattern or crumpled paper:



4.6. Adding Some Form To Our Webs

Top of Form

Forms are used to add another level of interactivity to your web pages, to allow communication between your viewers and your web site, to gather information, and to offer different means of navigation.

The role of forms is to gather different kinds of user input, i.e. fields to type in text, menus to select items from, radio buttons to choose items. The web browser takes this information, and wraps it up into a packaged format that can be sent directly to a web server, where there is a customized program sitting and waiting for the form information. These programs can unpackage the information, manipulate it, store data, and send a feedback page back to the viewer.

We will learn how to write the HTML to display different form elements, like the ones displayed at the top of this lesson page. After that, we will show you first how you can make the forms work by emailing the content directly to you as well as how it can be processed with one of those web server ("CGI") programs. Finally, we will show you how you can use JavaScript to provide some of the same functionality as CGI programs, without having to deal with messy programming or running a web server.

4.6.1. Forming Forms

- text fields
- password fields
- text area fields
- radio buttons
- checkboxes
- menu selections
- buttons

We will introduce the basic web form elements that you might use in your pages. They will not actually **do** anything until the next lesson.

A web page form is defined by a set of **<form>...</form>** tags where everything in between includes HTML to code the different text fields, buttons, and drop down menus that are used to store selections from the page viewer. You can also have other HTML code inside the form that serve as labels for your form elements.

We will talk more in the next lesson about the meaning of the options in the **<FORM>** tag. For now think of the value for **ACTION=...** as something that tells the browser the location of a script or program that will process the data sent by the browser via the selections in the form. The two values for **METHOD=...**, **POST** or **GET** define one of two ways the data from the form is sent to the program that will process the data. Now we will review the different form elements you can use. All of the elements inside the **<FORM>** tags can send some information about their contents and whether or not they have been activated by the web page viewer. Each element includes a defined "type" plus a unique indentifying name for that element. When the form data is sent to the web server, each element sends its name and its current state or value.

4.6.2. Text Input Elements (type="text")

... are used to create one line fields that viewers can type text. The default width is 20 characters, and you can create fields of other sizes by the value in the **size** option. You can limit the number of characters by the value of the **MAXLENGTH** option. Text input fields will be empty when the page loads, unless you provide an initial text string for its **VALUE** option.

sample web page
<p>A text field named "text1" that is 30 characters wide.</p> <pre><input type="text" name="text1" size="30"></pre> <input type="text"/>
<p>A text field named "text2" that is 30 characters wide but will only accept 20 characters.</p> <pre><input type="text" name="text2" size="30" maxlength="20"></pre> <input type="text"/>
<p>A text field named "text3" that is 40 characters wide with default value.</p> <pre><input type="text" name="text3" size="40" value="We are not alone"></pre> <input type="text" value="We are not alone"/>

4.6.3 Password Input Elements (type="password")

... are exactly the same as text input elements, except that when the viewer types in, they see "bullet" characters rather than the letter they are typing. Password text is scrambled during transmission and then unscramble when the form data is received at the server end. See the difference between typing in the fields below and the ones in the previous section.

sample web page
<p>A password field named "pass1" that is 30 characters wide.</p> <pre><input type="password" name="pass1" size="30"></pre> <input type="password"/>
<p>A password field named "pass2" that is 30 characters wide but will only accept 20 characters.</p> <pre><input type="password" name="pass2" size="30" maxlength="20"></pre> <input type="password"/>
<p>A password field named "pass3" that is 40 characters wide with default value.</p> <pre><input type="password" name="pass3" size="40" value="We are not alone"></pre> <input type="password" value="We are not alone"/>

4.6.4. Text Area Input Elements (type="textarea")

... are text fields that have more than one line and can scroll as the viewer enters more text. The tag options define the size of the field by the number of rows and character columns. By adding the option **WRAP=VIRTUAL**, the text entered will automatically wrap at the right hand side of the field. You can also include default text to appear in the field.

sample web page

A textarea field named "comments" that is 45 characters wide and 6 lines high.

```
<textarea name="comments" rows="6" cols="45" wrap="virtual">
```

The first time I ever saw a web page, I thought.... (continue)

```
</textarea>
```

The first time I ever saw a web page, I thought.... (continue)

4.6.5. Radio buttons (type="radio")

... are sets of controls that are linked so that only one radio button among each set is selected at a time; if you click one radio button, the others in the set are automatically de-selected. A set of radio buttons is defined by providing them the same name. The value sent in the web form is the value of the radio button that was last selected. Adding the option **CHECKED** to one of the buttons in a set will make that button highlighted when the page loads.

sample web page

4 radio buttons with default selection

```
<input type="radio" name="food" value="hotdogs" checked> hotdogs are my favorite food<br>
```

```
<input type="radio" name="food" value="hamburgers"> i like hamburgers<br>
```

```
<input type="radio" name="food" value="steak"> steak is tasty<br>
```

```
<input type="radio" name="food" value="beans"> beans are for veggie-lovers<br>
```

☒ hotdogs are my favorite food

☐ i like hamburgers

☐ steak is tasty

☐ beans are for veggie-lovers

3 radio buttons with no default selection

```
<input type="radio" name="spread" value="ketchup">
ketchup<br>
<input type="radio" name="spread" value="mustard">
mustard<br>
<input type="radio" name="spread" value="mayo">
mayonnaise<br>
```

☐ ketchup

☐ mustard

☐ mayonnaise

4.6.6. Check Boxes (type="checkbox")

...are similar to radio buttons, but are not affected by other buttons, so you can have more than one in a group checked at a time. Note that every checkbox has a unique name. If there is no check in the box, clicking it will place an X or a check mark there. If the box is checked, clicking it again will remove the mark. The value sent in the web form is the value of the checkbox if it was selected; otherwise the value will be empty. Adding the option **CHECKED** to a checkbox will make that checkbox highlighted when the page loads.

sample web page

4 check boxes with default selections

```
<input type="checkbox" name="food1" value="hotdogs"
checked> hotdogs are my favorite food<br>
<input type="checkbox" name="food2"
value="hamburgers"> i like hamburgers<br>
<input type="checkbox" name="food3" value="steak"
checked> steak is tasty<br>
<input type="checkbox" name="food4" value="beans">
beans are for veggie-lovers<br>
```

☒ hotdogs are my favorite food

☐ i like hamburgers

☒ steak is tasty

☐ beans are for veggie-lovers


```

3 check boxes with no default selection
<input type="checkbox" name="spread1" value="ketchup">
ketchup<br>
<input type="checkbox" name="spread2" value="mustard">
mustard<br>
<input type="checkbox" name="spread3" value="mayo">
mayonnaise<br>
☐ ketchup
☐ mustard
☐ mayonnaise

```

4.6.7.Menu Select (type="select")

... provides drop-down menus that allow the viewer to choose one from a list of choices. The **<OPTION>...</OPTION>** tag defines the text that is displayed in the menu. The value of the option last selected is returned when the form data is transmitted. Adding the **SELECTED** option indicates which element is displayed initially when the page loads; if this is not provided, the first item is selected by default.

sample web page

A four item select menu with the third item selected initially

```

<select name="cheeses">
<option value="colby"> Colby from Ohio</option>
<option value="sharp"> Sharp Cheddar from Oregon</option>
<option value="swiss" selected> Holy Cheese from
Switzerland</option>
<option value="longhorn" > English Longhorn</option>
</select>

```

Holy Cheese from Switzerland ▼

4.6.8.Submit and Reset (type="submit" and type="reset")

... creates buttons on the form. The Submit button tells the web browser to gather up all the selections, values, and entered text in the form elements and send it off to the place defined in the **ACTION** part of the form tag. The Reset button restores the form to its default state, how it looked when the viewer first entered the page. The **VALUE** option defines the text string that is placed on these buttons.

sample web page

Submit button
<input type="submit" value="Send this form data now!">
Send this form data now!

Reset button
<input type="reset" value="Clear the web form">
Clear the web form

We will now create a web page form that uses all of these elements. This is going to be an additional feature of our Volcano Web project portion. The purpose of the form is to provide a place for people who are doing their projects to submit their reports. We could use this in several ways; it could send the reports as email to the instructor, it could write the report data to a file on the web server, or it could generate a formatted web page report for the student which they could then print. There are other things we could do with data sent by a web form and this is but one example.

5.DESIGN WEB PAGE FOR CYPRO CABLE LTD.

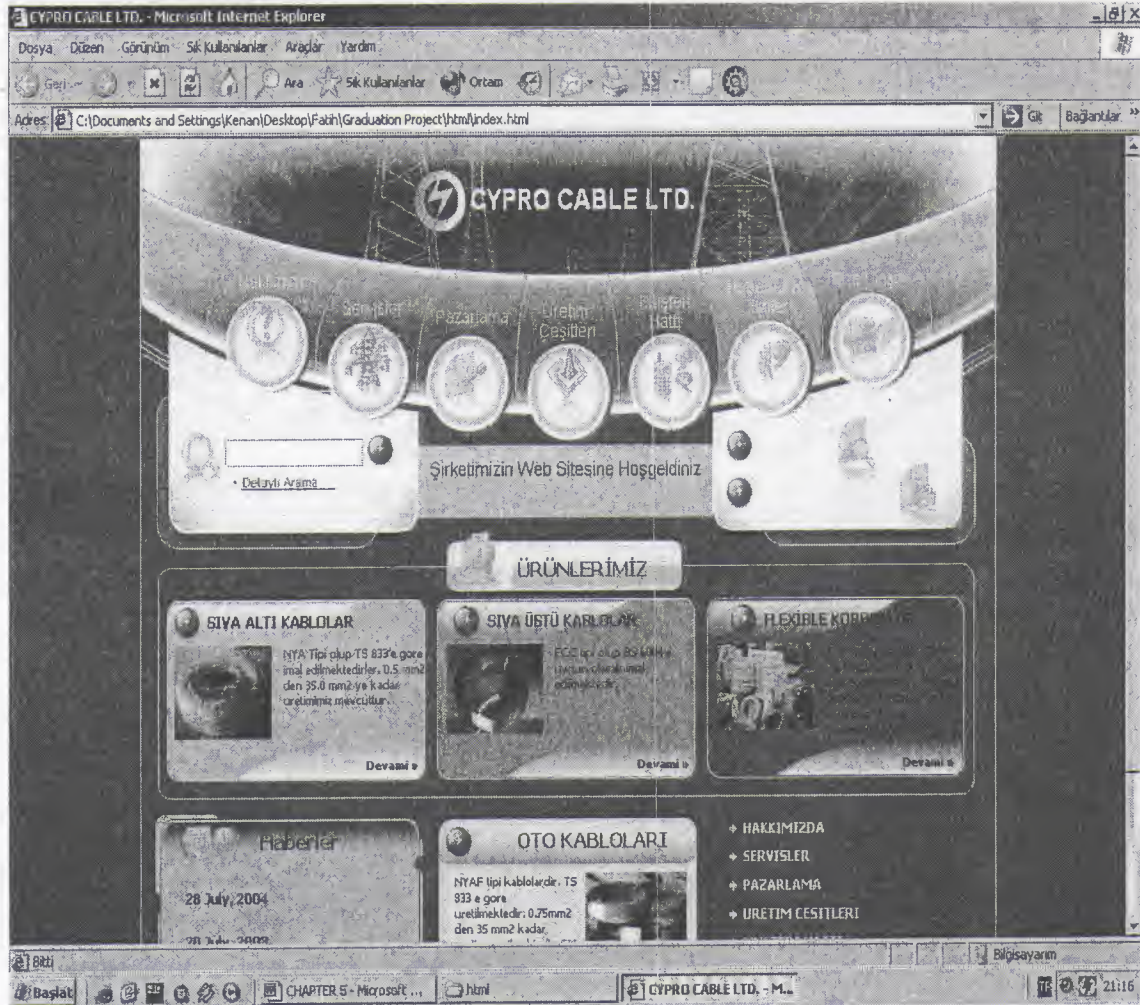
5.1.About Cypro Cable Ltd.

This web site is a company web site.It is Cypro Cable Ltd. which products kinds of cable, PVC profil and PVC waterspout. Cypro Cable Ltd. was organized in 1998. Factory is in Haspolat Industries District in T.R.N.C. It has ten personels in factory.



5.2.Cypro Cable Web Site

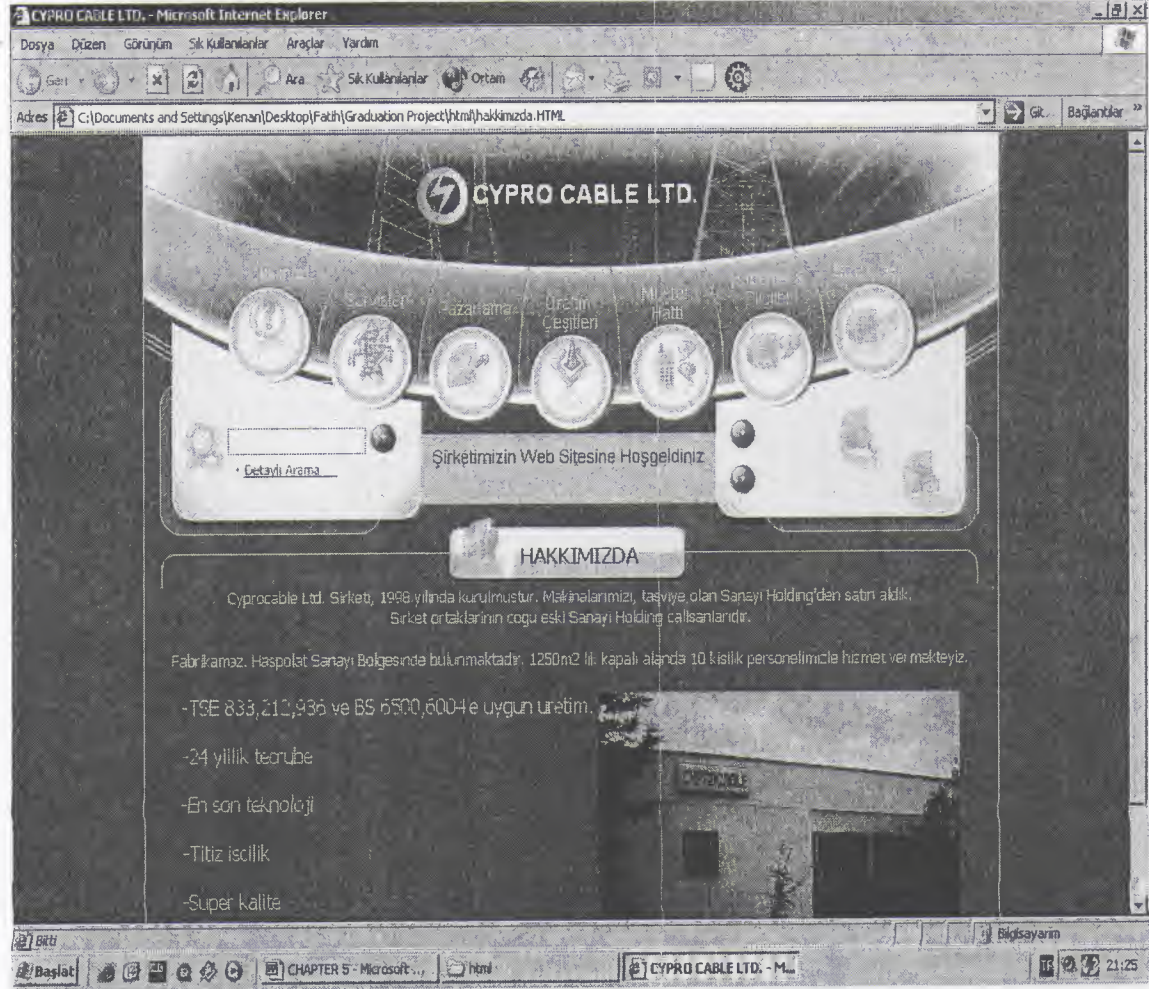
This web page prepared by front page html language. Any where flash used in this page. Web page included index and other pages. Index page is main page. Other pages connected to main page.



Top of the page prepared with macromedia flash. Used table command in html coding. There are seven links. Index Page included search button. For all links top of the page different logos are used. At the table we can see some kinds of some products which produced in Cypro Cable Ltd.'s factory.

5.2.1.Click 'Hakkımızda'

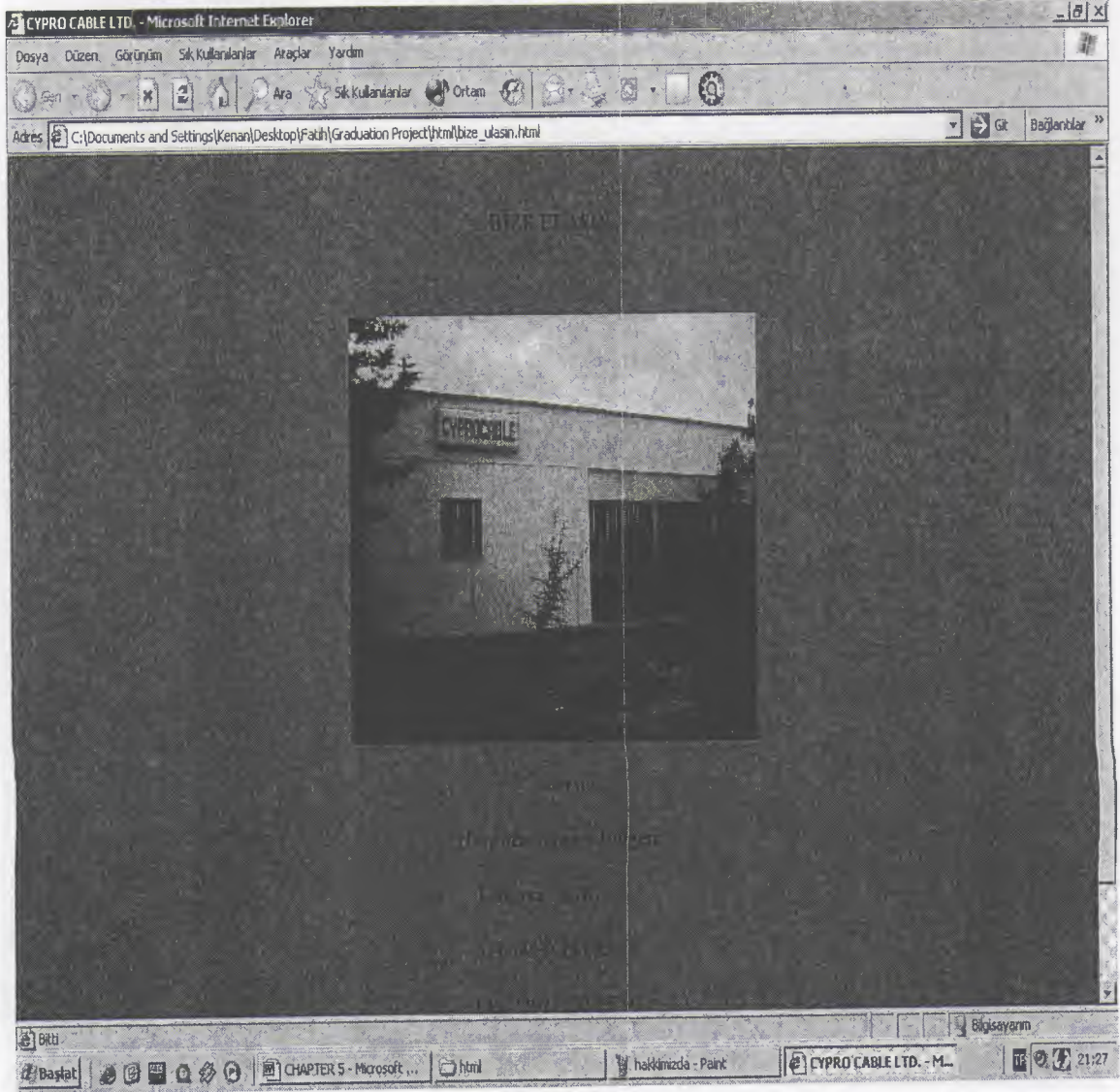
When we click it "Hakkımızda" will show page.



In this page top of the page is the same with index page's top. At the table we can see a photo of Cypro Cable Ltd.'s factory. There are some informations about Cypro Cable Ltd. in this page.

5.2.2.Click ‘Bize Ulasın’

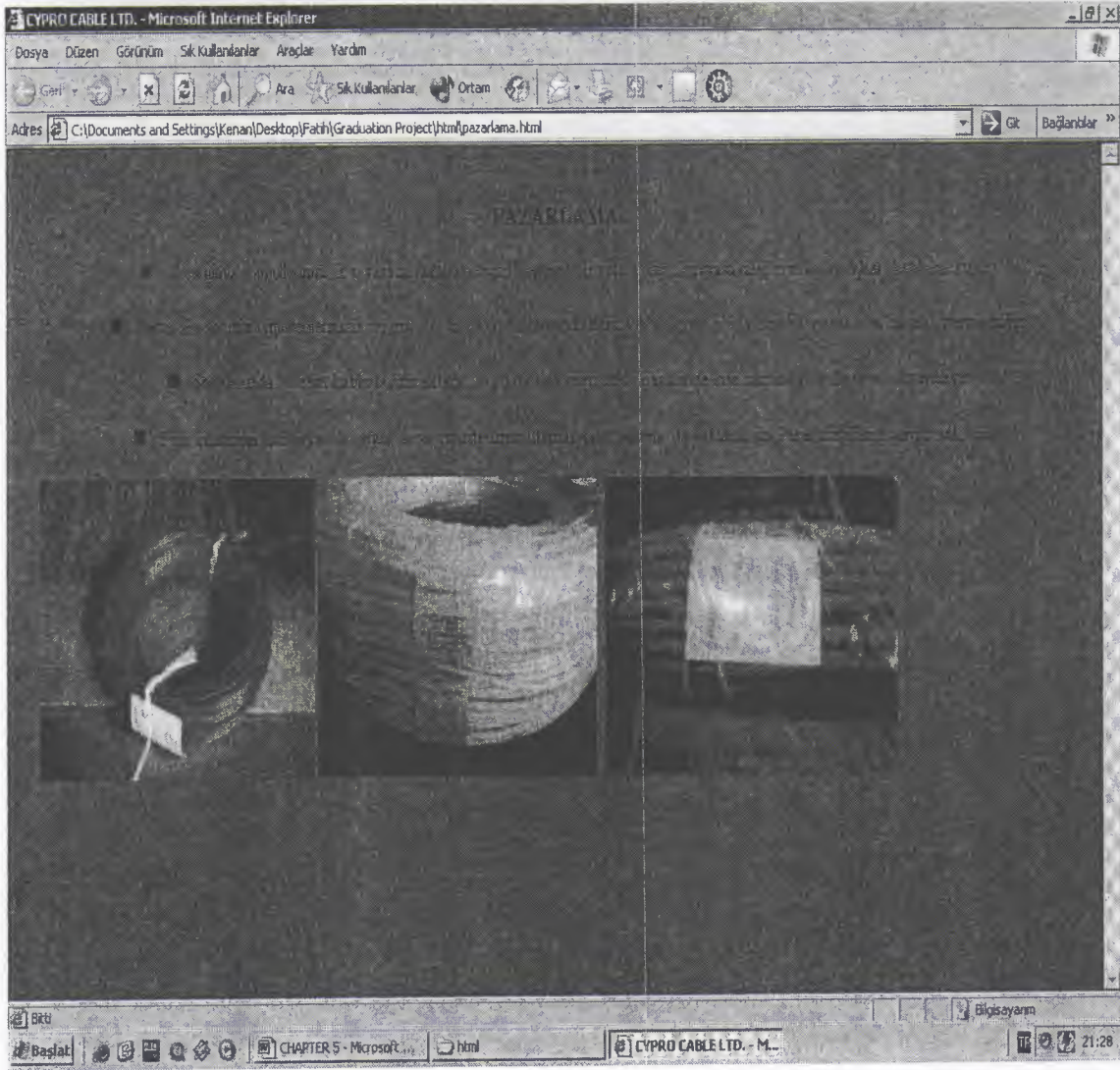
When click it “Bize Ulasın” will show page.



In this page there is a photo of factory. Under the photo we can see address ,phone numbers and fax numbers of Cypro Cable Ltd.

5.2.3. Click 'Pazarlama'

When click it "Pazarlama" will show page.



There are three different cable photos which is produced by Cypro Cable Ltd. Above these photos we can see some informations about marketing.

5.2.4.Click ‘Servisler’

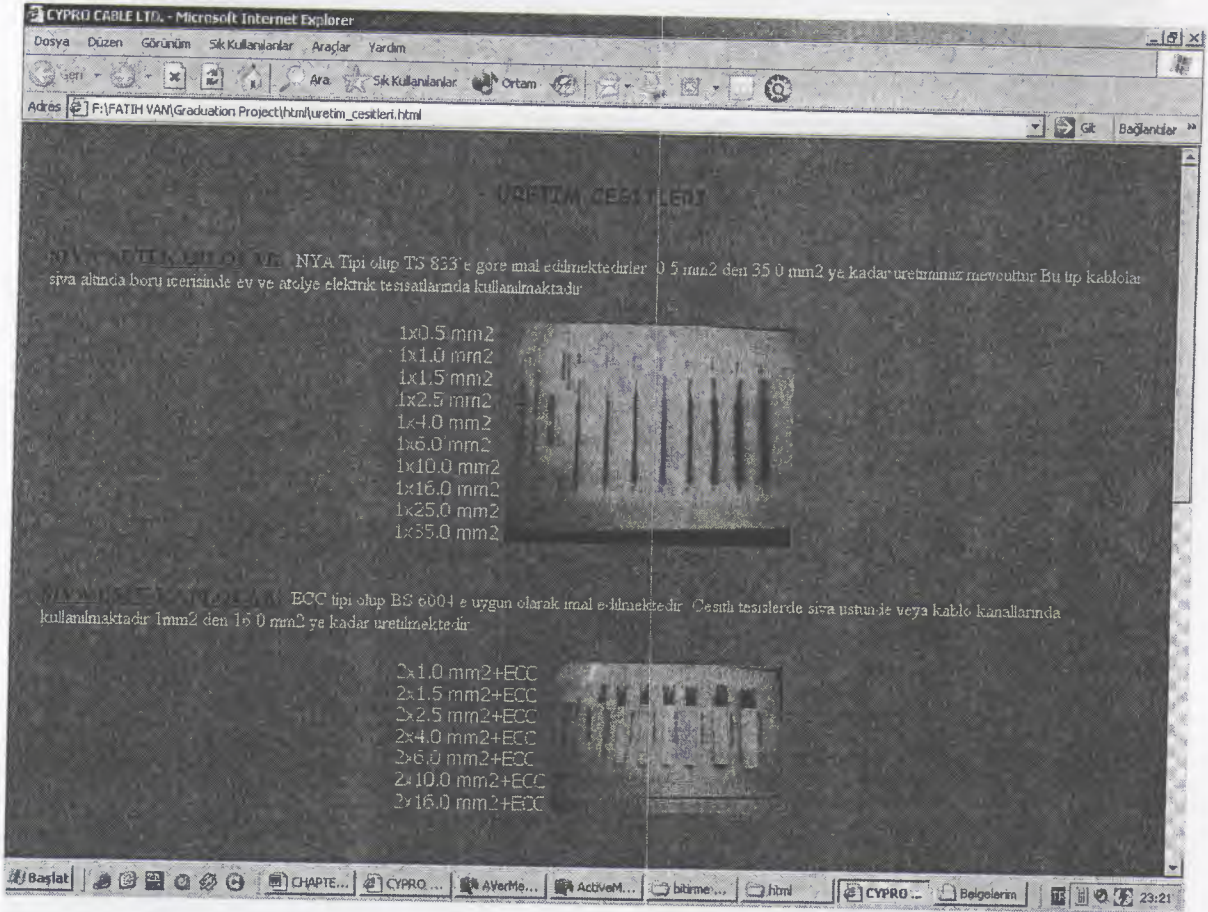
When click it “Servisler” will show page.



In this page there are some writings about company’s quality control. Under the writings there are three photos. These photos are machine photos which are used to production of some cables.

5.2.5.Click ‘Üretim Çeşitleri’

When click it “Üretim Çeşitleri” will show page.



We can find all kinds of production in Cypro Cable Ltd. There are cable photos and specifications of cables under the topics.

5.2.6.Click ‘Müşteri Hattı’

When click it “Müşteri Hattı” will show page.



When we click it, it goes to the “Bize Ulaşın” page. This page is used for two different links.

CONCLUSION

Tried and learned web design with html code. Html code is very useful and simply.

Used pictures,voices,scripts and other things.

This project is a good chance for me.Because it developed me to design a web page.It is real company Cypro Cable Ltd. which web page is prepared for. When designed web site we can use some effects and programs.e.g. macromedia flash and photoshop.These programs are very useful for designing a web site.

For all of the pages we've worked on so far, we have written documents that have hyperlinks, so that clicking the hyperlink loads a new web page, replacing the content that was there. Yes, a viewer can return to a web page using the browser's back buttons.

APPENDIX A

<HTML>

<HEAD>

<TITLE>CYPRO CABLE LTD.</TITLE>

<META HTTP-EQUIV="Content-Type" CONTENT="text/html; charset=windows-

REFERENCES

<style type="text/css">

<http://www.htmlguides.com>

</

<http://www.htmlcode.com>

text-align: left;

<http://www.helpcode.com>

vertical-align: top;

<http://www.bigu.edu/courses/volc.html>

font-size: 10px;

color: 003366;

}

a {

text-decoration: none;

}

a:1 {

text-decoration: none;

color: 000000;

}

all {

font-family: Tahoma;

font-size: 11px;

APENDIX A

<HTML>

<HEAD>

<TITLE>CYPRO CABLE LTD.</TITLE>

<META HTTP-EQUIV="Content-Type" CONTENT="text/html; charset=windows-1251">

<style type="text/css">

<!--

td {

text-align: left;

vertical-align: top;

font-family:Tahoma;

font-size:10px;

color:0E3B82;

}

a {

text-decoration: none;

}

a.1 {

text-decoration: none;

color: 000000;

}

.t11 {

font-family: Tahoma;

font-size: 11px;

```

    font-style: normal;
}

.t12 {
    font-family: Tahoma;
    font-size: 12px;
    font-style: normal;
}

.m14 {
    font-family: Myriad Pro;
    font-size: 14px;
    font-style: normal;
}

.m16 {
    font-family: Myriad Pro;
    font-size: 16px;
    font-style: normal;
}

.m21 {
    font-family: Myriad Pro;
    font-size: 21px;
    font-style: normal;
}

```


-->

</style>

</HEAD>

<BODY BGCOLOR=#4F7EC9 LEFTMARGIN=0 TOPMARGIN=0
MARGINWIDTH=0 MARGINHEIGHT=0>

<center>

<TABLE WIDTH=770 BORDER=0 CELLPADDING=0 CELLSPACING=0>

<TR>

<td rowspan="2" width="1" bgcolor="CFDEF7">

</td>

<TD><object classid="clsid:D27CDB6E-AE6D-11cf-96B8-444553540000"
codebase="http://download.macromedia.com/pub/shockwave/cabs/flash/swflash.cab#ve
rsion=6,0,29,0" width="770" height="299">

<param name="movie" value="flash/0789.swf">

<param name="quality" value="high">

<embed src="flash/0789.swf" quality="high"
pluginspage="http://www.macromedia.com/go/getflashplayer" type="application/x-
shockwave-flash" width="770" height="299"></embed></object></TD>

<td rowspan="2" width="1" bgcolor="CFDEF7">

</td>

</TR>

<TR>

<TD><TABLE WIDTH=770 BORDER=0 CELLPADDING=0 CELLSPACING=0>

<TR>

```

<TD>
<TD> <IMG SRC="images/t13.gif" WIDTH=259 HEIGHT=53
ALT=""></TD>
<TD WIDTH=244 HEIGHT=53 background="images/t14.gif"
class="m16" ALT="">
<div style="padding-top:15pt;padding-left:60pt">

<strong> &Uuml;R&Uuml;NLER&#304;M&#304;Z </strong>

</div>
</TD>
<TD>
<IMG SRC="images/t15.gif" WIDTH=267 HEIGHT=53
ALT=""></TD>
</TR>
<TR>
<TD background="images/t16.gif" WIDTH=259 HEIGHT=31
ALT="">
<div style="padding-top:7pt;padding-left:45pt">
<strong><span class="t12"><font color="0E3B82">SIVA ALTI
KABLÖLAR</font></span></strong><span class="t12"></span>
</div>
</TD>
<TD background="images/t17.gif" WIDTH=244 HEIGHT=31 ALT="">
<div style="padding-top:7pt;padding-left:40pt">
<strong><span class="t12"><font color="0E3B82">SJVA
&Uuml;ST&Uuml; KABLÖLAR</font></span></strong><span class="t12"></span>
</div>

```



```

</TD>

<TD background="images/t18.gif" WIDTH=267 HEIGHT=31 ALT="">

    <div style="padding-top:7pt;padding-left:45pt">

        <strong><span class="t12"><font
color="0E3B82">FLEX&#304;BLE KORDONLAR</font></span></strong><span
class="t12"></span>

    </div>

</TD>

</TR>
<TR>

<TD background="images/t19.gif" WIDTH=259 HEIGHT=110
ALT="">

    <div style="padding-top:0pt">

        <table width="100%" border="0">

<tr>

<td><div style="padding-left:20pt">

    </div></td>

    <td><div style="padding-left:5pt;padding-right:0pt">NYA Tipi olup TS 833'e gore
imal edilmektedirler. 0.5 mm2 den 35.0 mm2 ye kadar uretimimiz mevcuttur.

<br>

<br>

<br>

    <div align="right" style="padding-top:10pt;padding-right:5pt">

        <a href="urunlerimiz.html" target="_blank"><font
color="0E3B82"><strong>Devami</strong></font>&nbsp;</a>

    </div>

```

</div>

</td>

</tr>

</table>

</div>

</TD>

ALT="">

<TD background="images/t20.gif" WIDTH=244 HEIGHT=110

<div style="padding-top:0pt">

<table width="100%" border="0">

<tr>

<td><div style="padding-left:10pt">

</div></td>

<td><div style="padding-left:5pt;padding-right:0pt">ECC tipi olup BS 6004 e uygun olarak imal edilmektedir.

<div align="right" style="padding-top:10pt;padding-right:5pt">

Devami

</div>

</div>

</td>


```

</tr>
</table>

</div>

</TD>
<TD background="images/t21.gif" WIDTH=267 HEIGHT=110
ALT="">
<div style="padding-top:0pt">
<table width="100%" border="0">
<tr>
<td><div style="padding-left:10pt">
</div></td>
<td><div style="padding-left:5pt;padding-right:20pt">TTR tipi kablolardir. TS 916
ve TS 212'ye uygun olarak imal edilmektedir. 0.75 mm2 den 6 mm ye kadar cesitli
ebatlarda Uretim yapilmaktadir.
<div align="right" style="padding-top:10pt;padding-right:5pt">
<a href="urunlerimiz.html" target="_blank"><font
color="0E3B82"><strong>Devami</strong></font>&nbsp;</a>
</div>
</div>
</td>
</tr>
</table>

```

</div>

</TD>

</TR>

<TR>

<TD background="images/t22.gif" WIDTH=259 HEIGHT=262
ALT="">

<div class="m16" style="padding-top:25pt;padding-left:80pt"><font
color="0E3B82">Haberler</div>

<div style="padding-left:30pt;padding-top:20pt;padding-right:5pt">

28 July, 2004

<div align="right" style="padding-top:5pt;padding-right:15pt">

</div>

<div style="padding-top:10pt">

20 July, 2003

<div align="right" style="padding-top:5pt;padding-right:15pt">

</div>

2003 15 July,

<div align="right" style="padding-top:5pt;padding-right:15pt">


```

</div>
</div>
</div>
</TD>
<TD background="images/t23.gif" WIDTH=244 HEIGHT=262
ALT="">
<div style="padding-top:25pt;padding-left:60pt">
<strong><font color="0E3B82"><span class="m16">OTO
KABLOLARI</span></font></strong> </div>
<div style="padding-top:10pt">
<table width="100%" border="0">
<tr>
<td width="57%"><div style="padding-left:15pt;padding-right:2pt">NYAF tipi
kablolardir. TS 833 e gore uretilmektedir. 0.75mm2 den 35 mm2 kadar uretim
yapilmaktadir. BU kablolar araba tesisatlari ile cesitli araba akulerinde
kullanilmaktadir.<br>
<br>
<br>
<br>
</div>
</td>
<td width="43%"></td>
</tr>
</table>

```

```

        <div align="right" style="padding-top:5pt;padding-right:5pt">
            <a href="urunlerimiz.html" target="_blank"><font
color="0E3B82"><strong>Devami</strong></font>&nbsp;</a>
        </div>
</div>

</TD>

<TD background="images/t25.gif" WIDTH=267 HEIGHT=262
ALT="">
    <div style="padding-top:20pt;padding-left:20pt"><a
href="hakkimizda.html" target="_blank">
        &nbsp;  
        <font color="ffffff"><strong><span class="t1 l">HAKKIMIZDA
</span></strong></font></a>
        <div style="padding-top:7pt">
            <a href="servisler.html" target="_blank">
                &nbsp;  
                <font color="ffffff"><strong><span class="t1 l">SERVISLER
</span></strong></font></a>
            </div>
        <div style="padding-top:7pt">
            <a href="pazarlama.html" target="_blank">
                &nbsp;  
                <font color="ffffff"><strong><span class="t1 l">PAZARLAMA
</span></strong></font></a>
            </div>
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 URETIM CESITLERI

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MUSTERI HATTI

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HABERLER & BILGILER

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BIZE ULASIN

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