Chapter 4: Additional Tricks in HTML

In this Chapter, you will learn additional HTML tags that allow you to control the format of the displayed Web page. In addition, this chapter will explain how to create tables and to use frames to organize how information is displayed in the window.

A. Comments in HTML

Anything placed between `<! ..... and ...>` will be not be displayed by the browser unless you view the HTML source.

Sometimes, it is helpful to put comments that are not displayed into HTML pages. When making experiments on the web, you'll need to remember why you did what you did, or when you did it. Including comments in your pages will save you the work of trying to figure out why you did that. It will also be easier to read other Web pages, now that you know that anything written inside these marks has no effect.

B. Creating a Horizontal Rule

The tag, `<HR>` creates a horizontal line or "rule." This feature can separate sections of a document, or improve the appearance of a page. This is one of the exceptions in HTML, in that it does not have a closing tag.

```
<HR>
```

C. Controlling the Appearance of Text

As noted earlier, `<PRE> </PRE>` puts text into mono-spaced font and preserves formatting such as tabs and line breaks, as in *Ch4_ex1.htm*, the first part of which is shown in Figure 4.1. Insert Figure 4.1 about here.

Figure 4.1. Preformatted text will preserve spaces, tabs, and line returns.

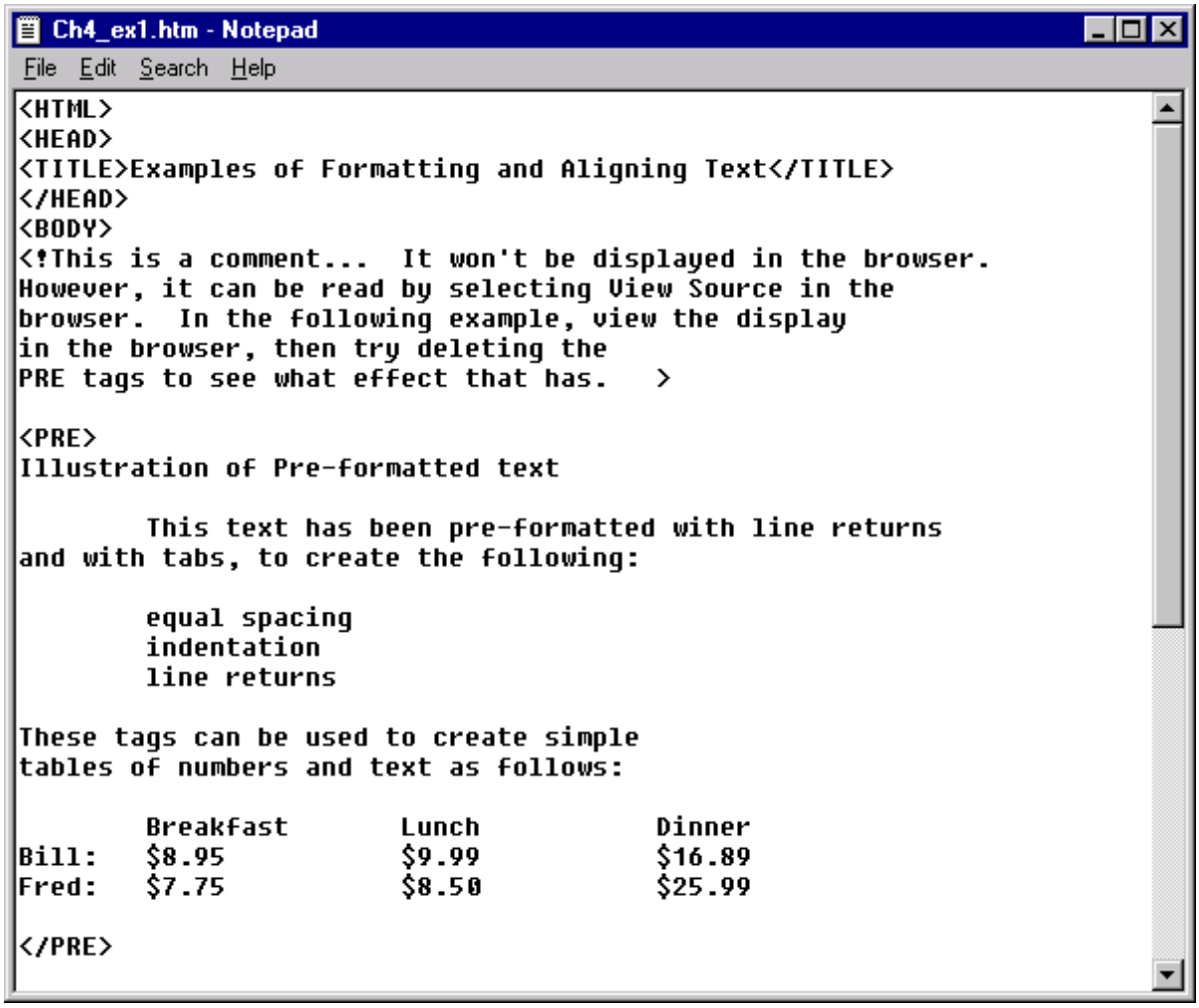
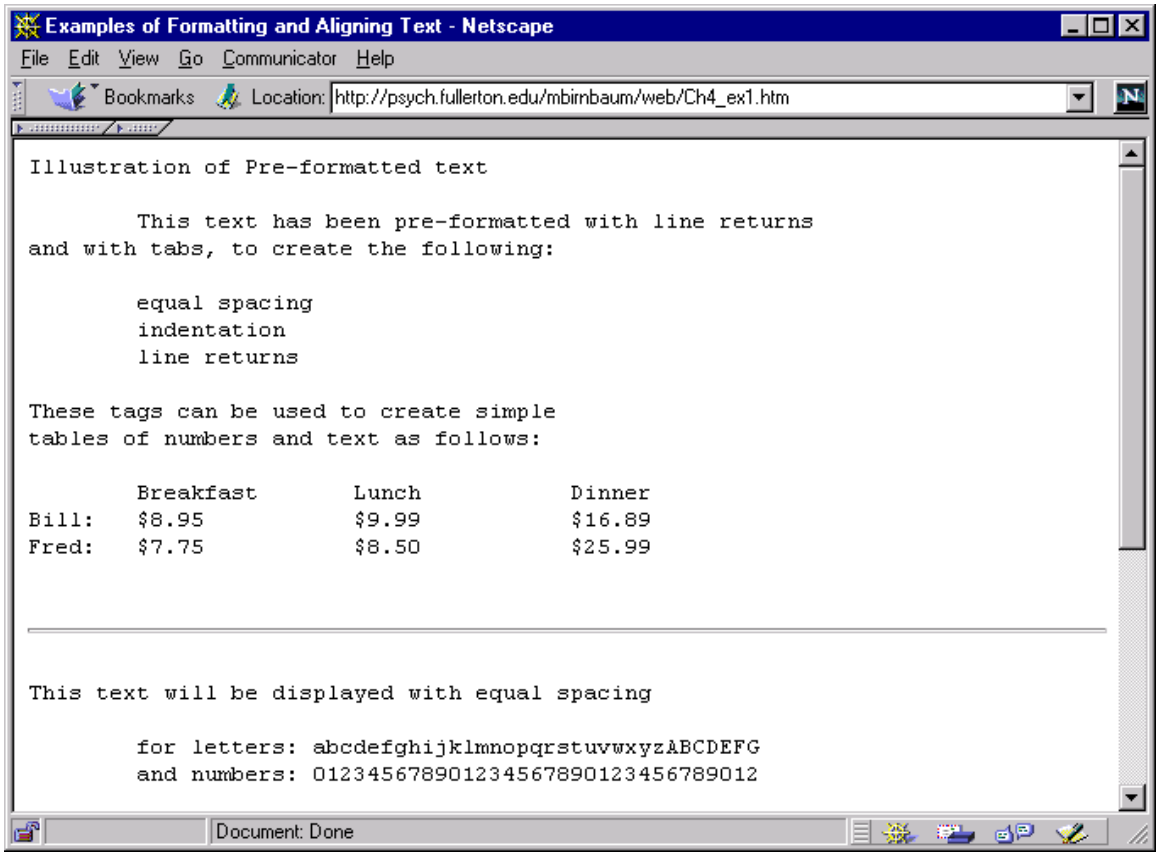


Figure 4.2. This figure shows how the preformatted text of Figure 4.1 will appear in the browser. To experiment with the effect of the `<PRE></PRE>` tags, delete the tags, save the change, and reload the file. [Keep your text editor and browser running at the same time. After you delete the tags, save the changes in your text editor to your hard drive, and remember where you put it. Then go back to the browser and reload (or refresh) the page to see the effect of the change. To see the effect, you must save the changes *and* reload the page.]



The <TT> and </TT> tags put text into mono-spaced font without preserving formatting, also from the file, *Ch4_ex1.htm*:

```
<TT>This text will be displayed with equal spacing
      for letters
      and numbers.
However, formatting will not be preserved.</TT>
```

To put text into bold type, use <B> and </B>, as follows:

```
<B>This text will be displayed in bold type</B>.
```

To put text into italics, use <I></I>, as in the following example:

```
<I>This text will be displayed with Italics</I>.
```

To underline text, use the tags, <U> and </U>, as in the following example:

```
<U>This text will be displayed with Underlining</U>.
```

These features can be nested to create combinations, as in the following examples:

```
<I><B>This will be <U>underlined</U>, and displayed in bold</B>and
italics</I>.
```

To create a subscript, use _{and}; to create a superscript, use ^{and}. The following example illustrates the use of subscripts and superscripts:

```
<PRE>Suppose judgments of ratios satisfy the following equation,
      R<SUB>ij</SUB> = e<SUP>(s<SUB>i</SUB>-s<SUB>j</SUB>) </PRE>
```

The <FONT> tag can be used to set the font face, size, and color. For example, to set the font to *Times*, use <FONT FACE="Times"></FONT>. Because the viewer's browser and system must supply the font, you may wish to include a second choice font, as in the following example: <FONT FACE="Times,Garamond"></FONT>. To set the font, size, and color of the font, use the method in the following example:

```
<FONT FACE="Times, Garamond" SIZE="5" COLOR="purple">
Hi! I'm Interested in Research on Twins on the Internet</FONT>
```

Try experimenting with the `<FONT>` command to achieve different effects. By nesting HTML tags, one can combine fonts with italics, bold, underlining, and other features. These effects are shown in Figures 4.3 and 4.4. Insert Figure 4.3 and 4.4 about here.

Figure 4.3. Appearance of *Ch4_ex2.htm* in Navigator. This example illustrates subscripts, superscripts, bold, and italics.

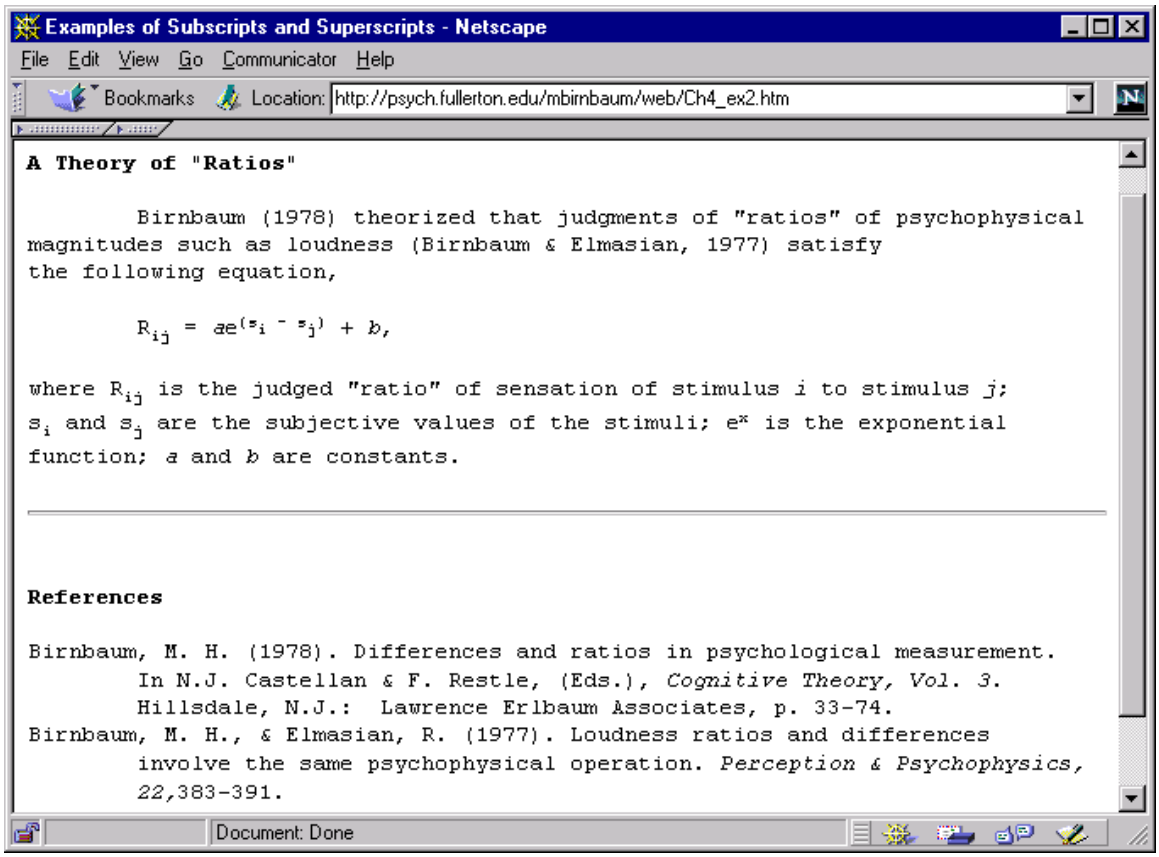
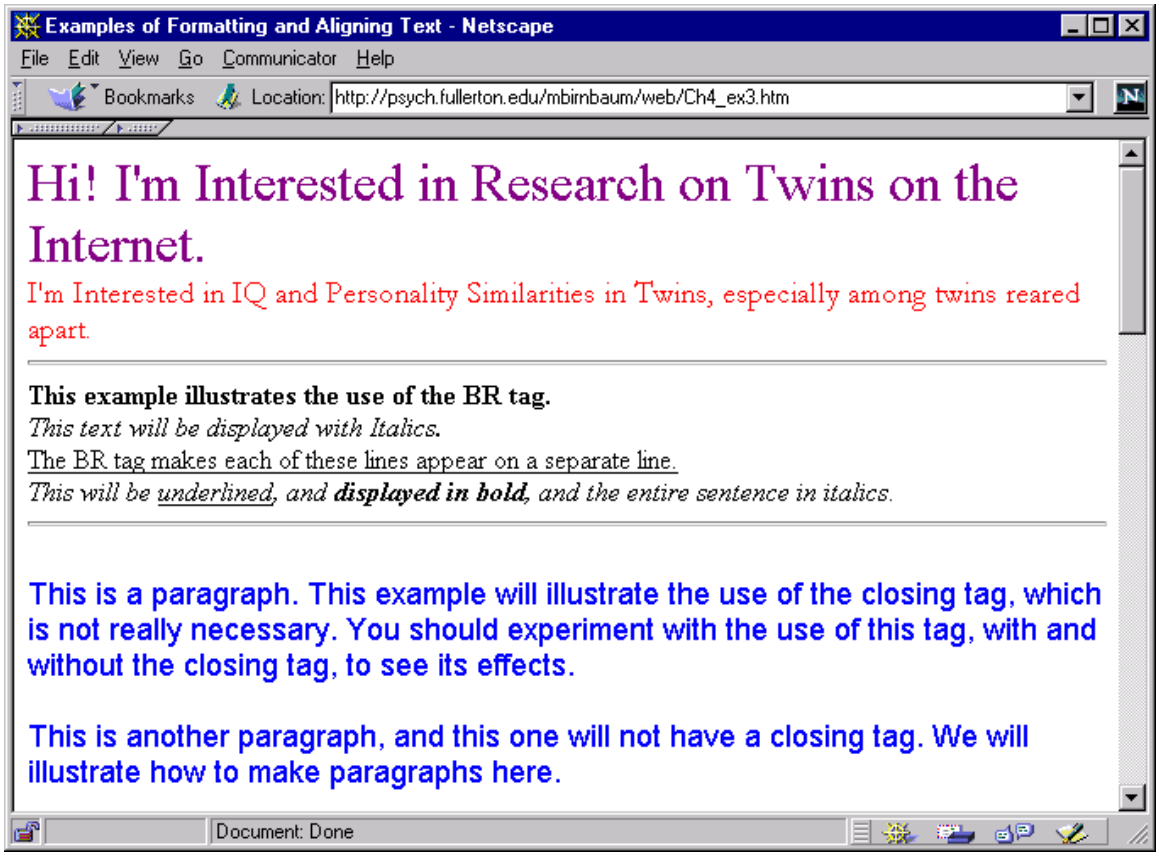


Figure 4.4. Appearance of fonts of different types and colors, in *Ch4_ex3.htm*.



D. Aligning and Formatting Paragraphs

You will notice that except for the use of the <PRE> tag, the material is displayed unformatted. Even though the lines with different styles of type were on separate lines, with line returns typed in the file, the browser displays these sentences run together, ignoring blank lines, line returns, and multiple spaces.

When you are not using preformatted text, you will need ways to separate paragraphs, and to make line returns. To produce a line return, use
. Try adding this tag at the end of each sentence illustrating styles. The
 tag, like the <HR> tag, does not take a closing tag.

The paragraph tag, <P>, is also a bit of an exception in HTML because the closing tag, </P>, is optional. To format paragraphs, use the <P> and </P> tags at the beginning and end of the paragraph. If you leave out the ending tag, the next <P> establishes the next paragraph. This tag also creates a gap between the text of paragraphs. Example 3 (*Ch4_ex3.htm*) illustrates how to use the paragraph tag. One can also center, align left, or right with the paragraph tag; for example, <P ALIGN="center"> will center the text in a paragraph, for example, as illustrated in *Ch4_ex3.htm*.

```
<P ALIGN="right">This paragraph was formatted with the ALIGN="right".
```

The default is to ALIGN="left", so no specification, <P>, will produce the usual left-aligned text.

```
<P ALIGN="Center">This paragraph was formatted with ALIGN="center."
```

Try changing the shape of your browser's window, to see the effects on both preformatted text, and on paragraphs formatted with differently aligned paragraph tags. When you change the shape of the window, notice the effects on the paragraphs formatted with different alignment.

You'll find that preformatted text is frozen under the window (you have to use the scrollbar to see everything), but paragraphs formatted with the <P> tag adjust their shape to fit the window.

You can also align sections of text, including multiple paragraphs, and including titles and figures by the *division* tag, as in the following example:

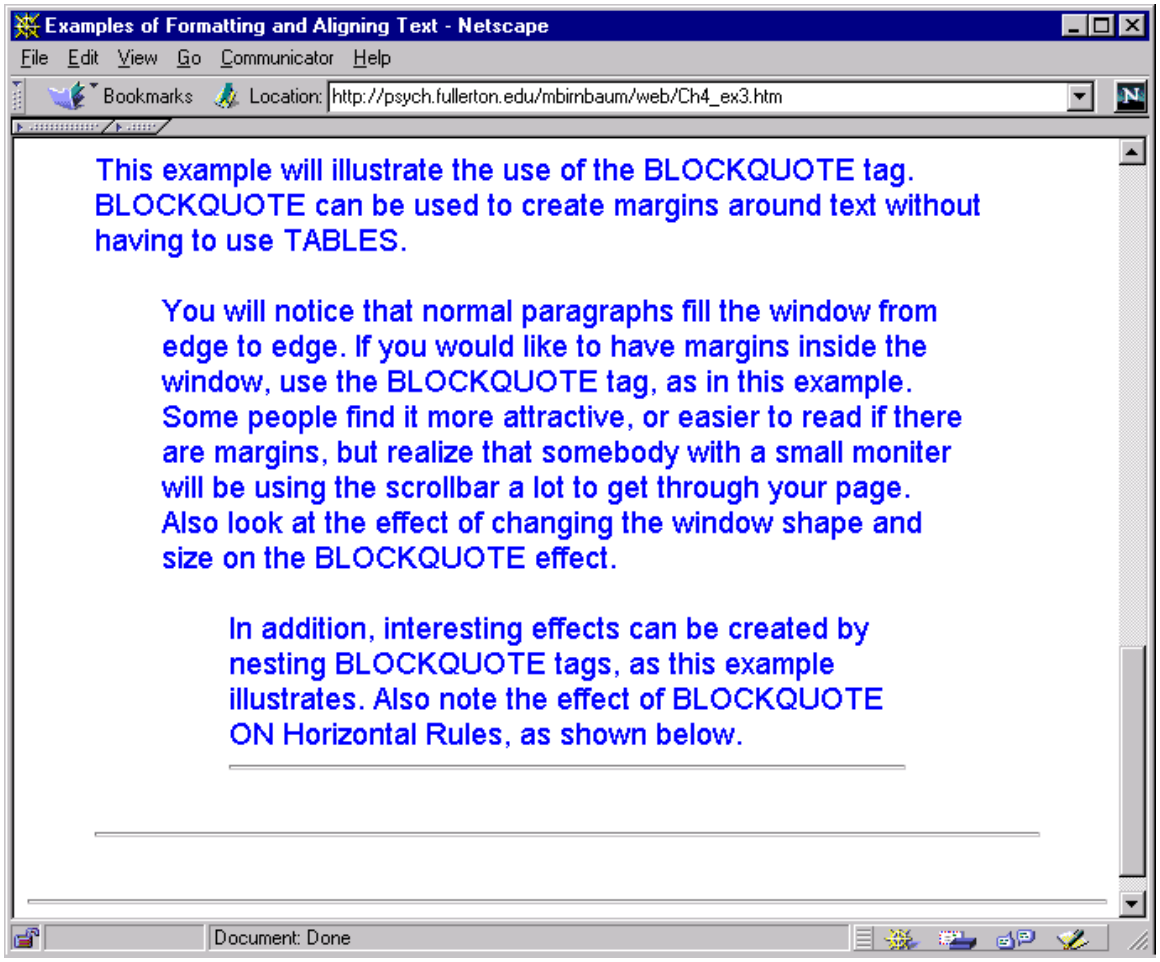
```
<DIV Align="right">This text will also be aligned right  <P>
The DIV tag will carry over from one paragraph to the next, as this
paragraph illustrates.  The closing tag is needed to end the
formatting</DIV>.
```

The <BLOCKQUOTE>and </BLOCKQUOTE> tags can be used to create margins around text without having to use tables.

```
<BLOCKQUOTE>This material will be centered, indented with margins on
both the left and the right.</BLOCKQUOTE>
```

Some people find it more attractive, or easier to read if there are margins, but realize that somebody with a small monitor will be using the scrollbar a lot to get through your page. Also experiment with the effect of changing the window shape and size on how the text inside BLOCKQUOTE tags is displayed. Nesting BLOCKQUOTE tags, as illustrated in the example on the CD can create interesting effects, as illustrated in Figure 4.5. Insert Figure 4.5 about here.

Figure 4.5. Illustration of BLOCKQUOTE tag.


Examples of Formatting and Aligning Text - Netscape
File Edit View Go Communicator Help
Bookmarks Location: http://psych.fullerton.edu/mbirnbaum/web/Ch4_ex3.htm
This example will illustrate the use of the BLOCKQUOTE tag. BLOCKQUOTE can be used to create margins around text without having to use TABLES.
You will notice that normal paragraphs fill the window from edge to edge. If you would like to have margins inside the window, use the BLOCKQUOTE tag, as in this example. Some people find it more attractive, or easier to read if there are margins, but realize that somebody with a small moniter will be using the scrollbar a lot to get through your page. Also look at the effect of changing the window shape and size on the BLOCKQUOTE effect.
In addition, interesting effects can be created by nesting BLOCKQUOTE tags, as this example illustrates. Also note the effect of BLOCKQUOTE ON Horizontal Rules, as shown below.
Document: Done

E. Headings and Lists

To create bold headings of different sizes, use the <H1></H1> to <H6></H6> tags. These are illustrated in the following examples:

```
<H1>This is an H1 Heading</H1>
<H4>This is H4 Size Heading</H4>
<H6>This is H6 Size Heading</H6>
```

To center a heading, or right-align it, nest it inside the DIV tag, as in the following example:

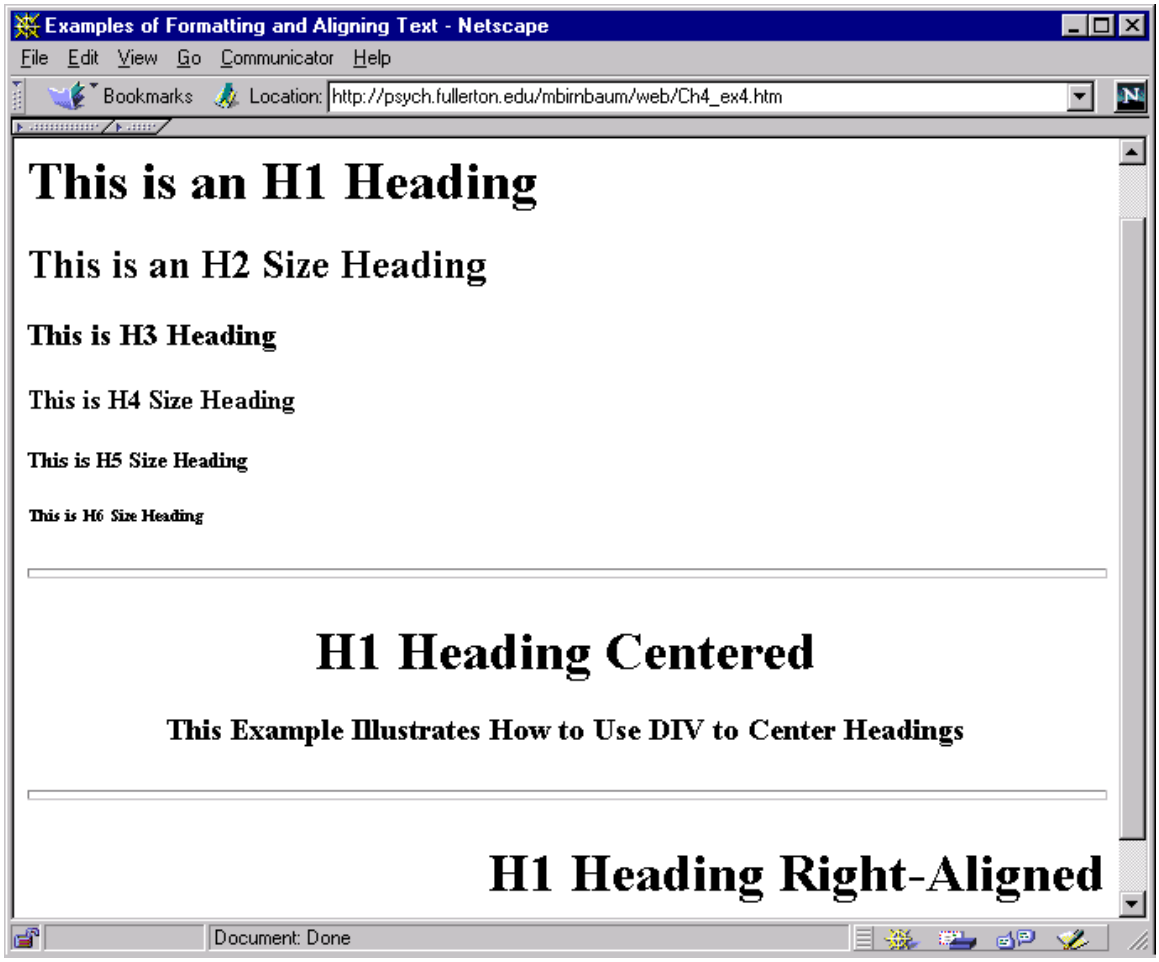
```
<DIV ALIGN="Center"><H1>H1 Heading Centered</H1>
<H3> This Example Illustrates How to Use DIV to Center Headings</H3>
</DIV>
<DIV ALIGN="Right"><H1>H1 Heading Right-Aligned</H1></DIV>
```

You can load *Ch4_ex4.htm* to examine the effects of these tags, which are displayed in Figure 4.6.

Insert Figure 4.6 about here.

Use <UL> and </UL> to create an unnumbered list of bulleted, indented paragraphs. Begin each paragraph with <LI>. The list item tag <LI> is another of those tags that does not require a closing tag. One can nest these <UL> </UL> lists inside one another. The list of examples illustrates how these lists appear. The examples for Chapter 4 illustrate a list within a list.

Figure 4.6. Headings of different sizes, as displayed in Netscape. Headings are left, center, or right-aligned.



F. Tables

Load *Ch4_ex5.htm*, which illustrates the tags used to create tables. The HTML to create the table is shown in the example below.

```
<TABLE BORDER=12 CELLSPACING=12 CELLPADDING=12>
<TR><TD>     </TD> <TD ALIGN=center COLSPAN=2>Column Factor Level</TD></TR>
<TR><TD ALIGN=center>Row</TD><TD>Column=1</TD>    <TD>Column=2</TD></TR>
<TR><TD>Row=1</TD>           <TD> Row 1 Col 1</TD><TD>Row 1 Col 2</TD></TR>
<TR><TD>Row=2</TD>           <TD> Row 2 Col 2</TD><TD>Row 2 Col 2</TD></TR>
</TABLE>
```

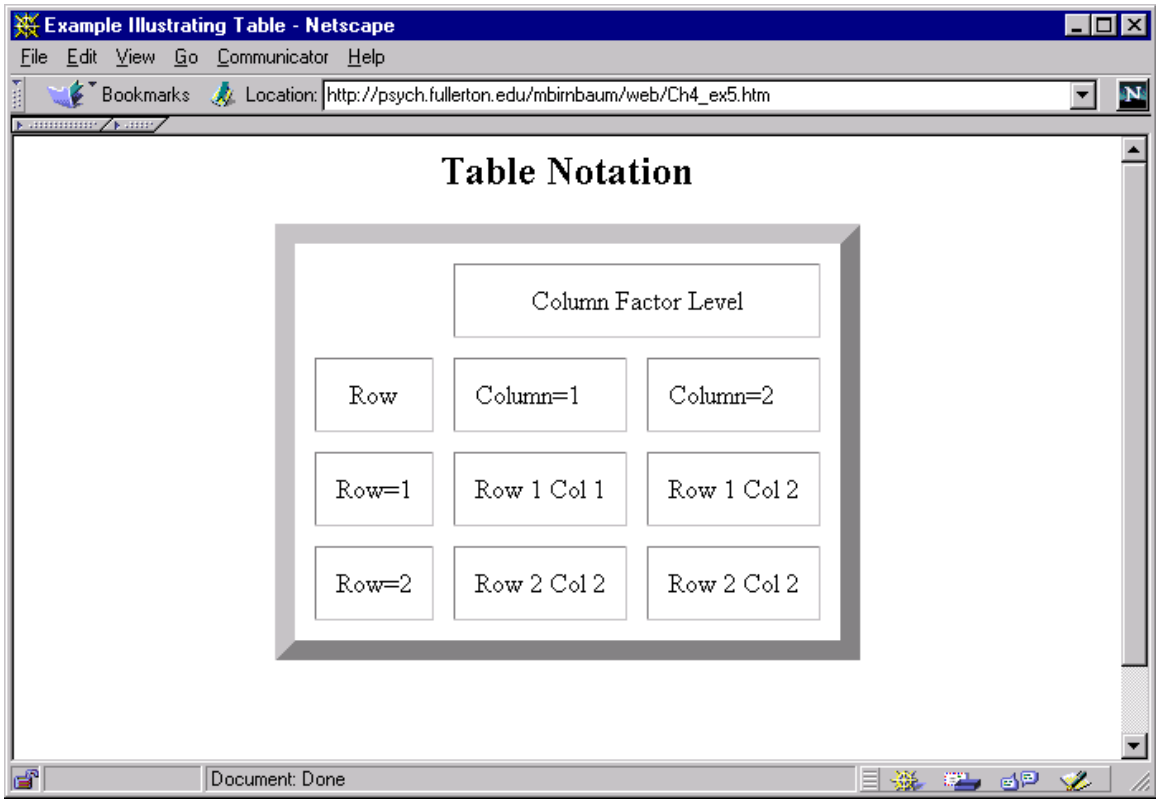
The `TABLE` tag in the example,

```
<TABLE BORDER=12 CELLSPACING=12 CELLPADDING=12>
```

creates a table with large borders, large gaps between the cells, and large space within the cells. To examine the effects of `BORDER`, `CELLSPACING`, and `CELLPADDING`, change each one to zero (one at a time), save to disk, and load from disk into your browser. If you change only one attribute at a time, you'll understand the effect of each of these attributes.

For each new row of the table, use the tags, `<TR>` and `</TR>`. For each table datum, use `<TD>` and `</TD>` tags. To make one cell span two rows, use `<TD ROWSPAN=2>`. To have one datum span two columns, use `<TD COLSPAN=2>`, as illustrated in the example, shown in Figure 4.8. Insert Figure 4.8 about here.

Figure 4.7. Illustration of table. Try changing the attributes of the table and observe their effects on the display.



G. Frames

The technique of frames allows one to subdivide the window. Frames offer some additional power over tables, because it is possible to display one HTML file in one frame, and another HTML file in another frame. In addition, one can have links in one frame cause files to be displayed in another frame.

Frames are created and controlled by the <FRAMESET></FRAMESET> and <FRAME> tags. The <FRAMESET> tag can be used to subdivide the screen into two or more pieces, as in the following example:

```
<FRAMESET ROWS="20%,80%">
```

This tag divides the screen into two rows, the first of which occupies 20% of the window. By changing ROWS to COLS, you can also split the screen into two columns. It is also possible to specify the pixel size of the row, as follows:

```
<FRAMESET ROWS="75,100,* ">
```

This tag will subdivide the screen into three pieces, the first of 75 pixels, the second of 100 pixels, and the third (*) taking up the remainder.

The FRAME tags are nested inside the <FRAMESET></FRAMESET> tags. Each FRAME tag defines what file is to be displayed in that frame. The FRAME tag does not require a closing tag. If there are fewer FRAME tags than frames defined in the FRAMESET tag, then the remaining frames will be blank. An example FRAME tag is as follows:

```
FRAME SRC="filename.htm" NAME="AnyName">
```

The filename.htm can be any valid URL. The NAME attribute, which is optional, is used so that links can be used to specify where a document will appear.

Example 6 of Chapter 4 actually uses three files, *Ch4_ex6.htm*, *Ch4List.htm*, and *Ch4_ex1.htm*. The first file, *Ch4_ex6.htm*, contains the FRAMESET and FRAME tags, as shown below:

```
<HTML>
<HEAD><TITLE>Frames Example</TITLE></HEAD>
<FRAMESET COLS="20%,*" FRAMEBORDER=yes BORDER=20 >
      <FRAME NAME="Lside" SRC="Ch4List.htm">
      <FRAME NAME="Rside" SRC="Ch4_ex1.htm">
</FRAMESET>
</HTML>
```

Note that there are no <BODY></BODY> tags here. Instead, the FRAMESET defines two columns, one of which is 20% of the window. The two frames have been given names that will make it easier to remember which is which.

The links are contained in *Ch4List.htm*. The links now include the attribute TARGET. The TARGET attribute can be associated with any link. Because the links are named, the TARGET can specify where to display the linked document. That allows links in one frame to control the appearance of the other frame. One can get "stuck" in a frame. Using TARGET="_blank" creates a new page, which leaves the previous browser window with its frames behind. The following example illustrates this type of link:

```
<A HREF= "filename.htm" TARGET="_blank">Click here</A>
```

TARGET="_top" also displays the document at the top of the window, but it does not create a new browser window. To keep a page always at the top, one can include the following little JavaScript routine to break out of FRAMES no matter what document called the file:

```
<BODY OnLoad="if(self !=top) top.location=self.location">
```

This line basically says that when the body of the page loads, if the document is not at the top of the page, then its location should be the top. You will find that any link to the page of examples will break free of the FRAMES, even though the link did not specify `TARGET="_top"`.

Frames can be useful in certain circumstances. However, in many applications, they can be quite annoying. They limit the effective size of the window, and one can get stuck in frames within frames. Use them carefully. An example use is in Chapter 14, where it is desired to keep a stimulus on the screen in one frame while the participant makes judgments in another frame.

H. Summary

Formatting Tags

Tag	Description
`<! Comments go here...>`	Comment. Everything in here has no effect.
`<HR SIZE="s">`	Horizontal rule. Creates a horizontal line. Size (optional) creates different widths.
`<PRE></PRE>`	Preformatted text
`<TT></TT>`	Mono-spaced text.
`<B></B>`	Bold text.
`<U></U>`	Underlined text
`<I></I>`	Italics
`<SUB></SUB>`	Subscript
`<SUP></SUP>`	Superscript
`<FONT FACE="font"></FONT>`	Font style. Also use SIZE= and COLOR= to affect size and color of font.
`<P></P>`	Paragraph. Closing tag is not required. Use ALIGN to right-align or to center a paragraph.
` `	Line return.
`<BLOCKQUOTE></BLOCKQUOTE>`	Indents margins around text on both sides.
`<DIV ALIGN="center></DIV>`	Divides a page and specifies alignment.
`<H1></H1> to <H6></H6>`	Headings of different sizes.

Tables and Frames

Tag	Description
`<TABLE BORDER=10></TABLE>`	Establishes a table with wide border. Also use `CELLSPACING` and `CELLPADDING` to change the appearance of the table.
`<TR></TR>`	Defines a Table Row
`<TD></TD>`	Table Datum. Use `ALIGN=center` to center text within a cell.
`<FRAMESET ROWS="100,*">`	Divides the window into two horizontal frames.
`<FRAME NAME=`*name* `SRC=`*URL*`>`	Names the frame and defines the file to be loaded into that frame.

I. Exercises

1. Open the file, *Ch4_ex1.htm*, in your browser. Now open the same file in your text editor (e.g., NotePad or SimpleText). Try making changes in the text file, saving the changes, and reloading the page in your browser to see the effects of your changes.
   a. Experiment by removing the <PRE></PRE> tags at the beginning of the file.
   b. Now replace the <PRE> tag, and move the </PRE> tag to just before the </BODY> tag, to see the effect on the text.
2. Try removing the <! from the comment in *Ch4.ex1.htm*. What happens?
3. Open *Ch4_ex2.htm*. Remove the <PRE></PRE> tags, and then use other formatting to arrange the formatting of the file, so that the equation is displayed. Hint: use <BLOCKQUOTE> to display the equation.
4. Write the following equation with subscripts and superscripts:

$$y_{ij} = a_j b^{1.5} + c_0 + e_i$$

5. Write the HTML to display the following reference:

   Smith, J. B. (1999). The meaning of everything. Journal of the Association of Psychonomics, 23, 1-46. Put the underlined text in underlined and italics.

   Now put the last name in bold type.
6. Load *Ch4_ex3.htm* and *Ch4_ex4.htm* in both the browser and the text editor. Study the examples, to make sure you know how each of the tags works. Now take any page from a book or journal, and see if you can make it display properly by means of the HTML tags in Chapters 2—4.
7. Use the tags of this chapter to create two pages, (1) a personal Web page (for yourself) and (2) a page inviting people to participate in an (imaginary) experiment.

In your home page, include a link to your experiment's page. In your experiment page, include a link to return to the home page. In both pages, include a link to email. Load each in your browser to view it, and correct your errors until each file displays as you wish. Then upload them to your Web site. Illustrate the links with images, if you like.

8. Take the example of Chapters 2 and 3 (Ann E. Student). Add a centered, size 2 heading to her page. Also, make the font in Helvetica. Now, see if you can add some material that allows you to use all of the tags in Chapters 2—4.