

An Introduction to HTML

Basic Tags through Tables

by

Elizabeth T. Hobbs

<i>Introduction to HTML</i>	3
<i>Tags</i>	3
<i>Basic Format of an HTML Document</i>	4
<i>Time to Say Something</i>	5
<i>More Fancy Looking</i>	8
<i>Colors</i>	11
<i>Pictures</i>	12
<i>Links</i>	14
<i>Still More Fancy Formatting</i>	16
<i>Other Options</i>	23

Introduction to HTML

HTML means “Hypertext Markup Language”. A “hypertext” is a collection of pages connected with links. A “markup language” is a series of instructions included with the document text that tells something how to format the text. In this case, the something is a web browser like Internet Explorer (IE) or Netscape Navigator (NN). HTML consists of the text you want to appear on the page, the images, plus instructions to the browser on how to display your text and images. The instructions are called tags.

Tags

The markup language of HTML is made up of tags. A tag begins with a < and ends with >. For example:

```
<HTML>  
<html>  
<Head>  
<body>  
<TABLE>  
<p>  
<B>
```

Example Tags

Tags can be upper or lower case, or a combination of the two.

Most tags come in pairs. That is, they have a matching closing tag.

```
</HTML>  
</head>  
</BODY>  
</table>  
</p>  
</b>
```

Example Closing Tags

As you can see the closing tag has the same word as the opening tag, but is prefixed with a /. So <HTML> gets paired with </html>. (Remember the case of the letters doesn't matter.)

There are a few tags that do not have a closing companion. And sometimes the closing tag is optional.

Basic Format of an HTML Document

Your web page document should always begin with:

`<HTML>`

and end with:

`</HTML>`

Browsers do the best they can to interpret a document, so you will see documents that are missing some of these tags. But it is best to always use them. That way the browser doesn't have to guess what kind of document you have – you will tell it up front.

Inside of the HTML tags, the document has two sections – a head and a body.

```
<HTML>
<HEAD>

</HEAD>
<BODY>

</BODY>
</HTML>
```

HTML Tags for Document Sections

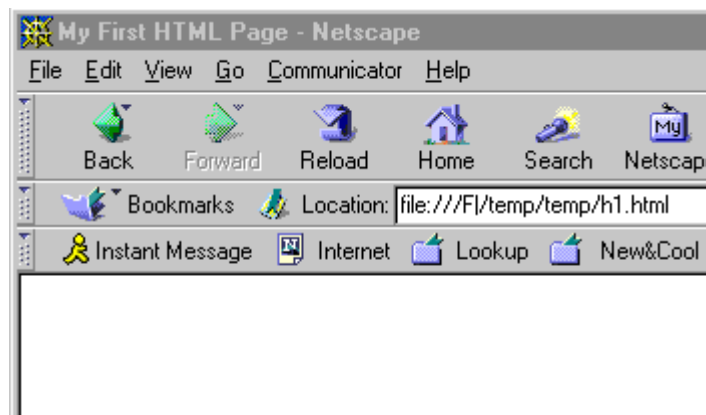
Inside of the HEAD tags, you can put various other tags that describe the document. The only one that you should always use is the TITLE tag. This tag tells the browser what to put in the top of the window. The following HTML will create an empty document with the title “My First HTML Page” in the browser window.

```
<HTML>
<HEAD>
<TITLE>My First HTML page</TITLE>
</HEAD>
<BODY>

</BODY>
</HTML>
```

HTML for First Page

All of these tags come in pairs, so remember to use the closing tags. This is part of the browser window with the above document as the HTML page.



First HTML Page

Time to Say Something

The above example HTML will work fine in a browser, but will simply give you a blank page. But the reason for creating HTML documents is to say something. What you want to say goes in the BODY.

```
<HTML>
<HEAD>
<TITLE>My First HTML Page</TITLE>
</HEAD>
<BODY>
This is my first sentence in the page.

Now we have line    two.

This is another paragraph.
</BODY>
</HTML>
```

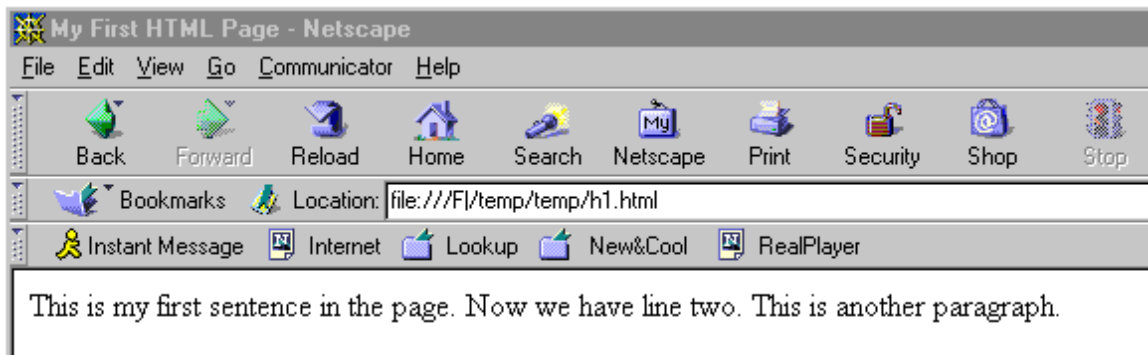
HTML Page with Text

Important point: the following text that is in the BODY looks like this in the editor:

This is my first sentence in the page.
Now we have line two.

This is another paragraph.

But will look like this in the browser:



Example Showing Text Output

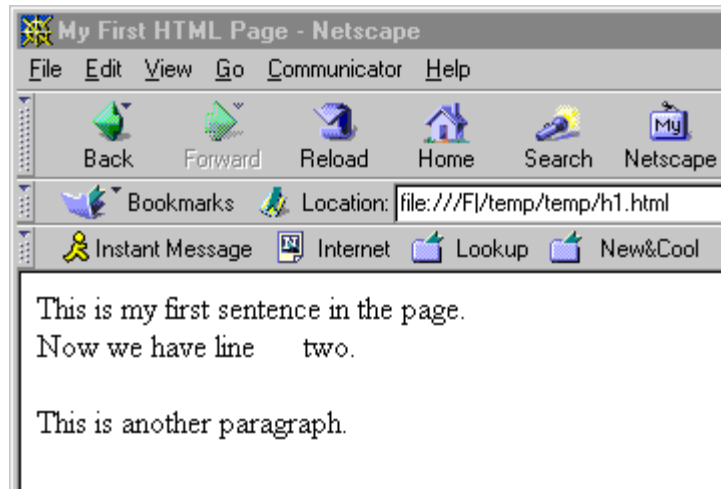
What happened to the formatting? Browsers don't pay any attention to carriage returns, blank lines, or even a series of spaces. The browser will run all that together. If you want specific formatting, you have to tell the browser that you want it. After all, the markup language is there to instruct the browser on how to format your text.

To get the browser to end a line, use `<BR>`. (`<BR>` has no closing tag.) To skip down a line use `<P>`. (`</P>` is optional, and you generally won't see it used unless special paragraph formatting is being used, but that's a topic for a later lesson.) To insert spaces, use the goofy looking ` ` -- don't forget the `&` and the ending `;` .

[illegible]

Simple Formatting

Try it out. You can create a text file on your PC (using NOTEPAD, for example) and enter the above text. Save the file with the ending .html. You should be able to just double click on the filename to see your file displayed in the browser. If not, bring up either NN or IE, go into the File Menu, choose Open Page (or Open), then Browse to your file and Open it.



Output Using Simple Formatting

Comment: if you put a bunch of `<P>` tags one after the other, like this:

```
<P>
<P>
<P>
```

to try to get a lot of space between two paragraphs, the browser will only pay attention to the first one, so you will only get one blank line instead of three. That's just how the browsers are designed to work. There are ways around this, by putting ` ` after the `<P>`.

```
<P>&nbsp;
<P>&nbsp;
<P>&nbsp;
```

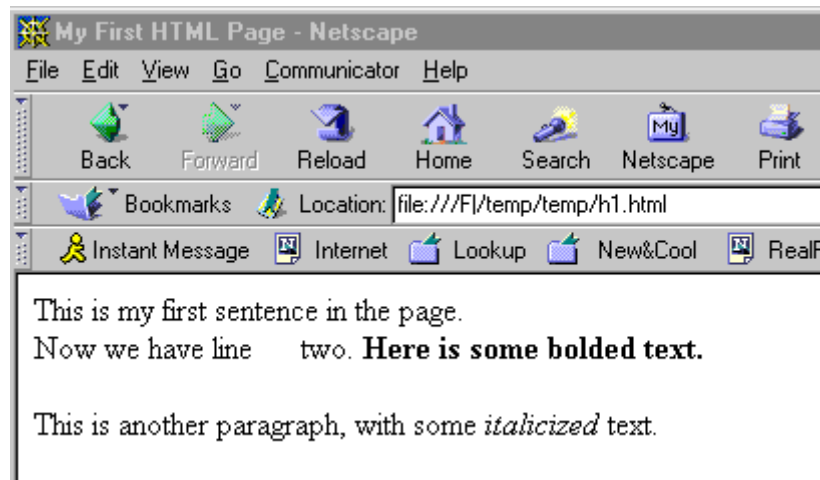
More Fancy Looking

Let's say you want to bold some text, or use Italics. You will use the `<B>`, `</B>`, and the `<I>` and `</I>` tags respectively.

[illegible]

HTML Page with More Fancy Text

Whatever you want bolded, put between the and the tags. Whatever you want italicized, put inside the <I> and </I> tags.



Output Showing Bolding and Italicizing

You can also change the size of the fonts of your text, using the tag. To make a section of text a little bigger, you use this:

This text is a little bigger.

In this example, we see a little something different. The FONT tag has some extra stuff in there, namely SIZE="+1". Some tags take extra stuff. This extra stuff is called an attribute. Most tags have attributes, including some of the tags that we've already discussed. We'll get back to those attributes in a moment.

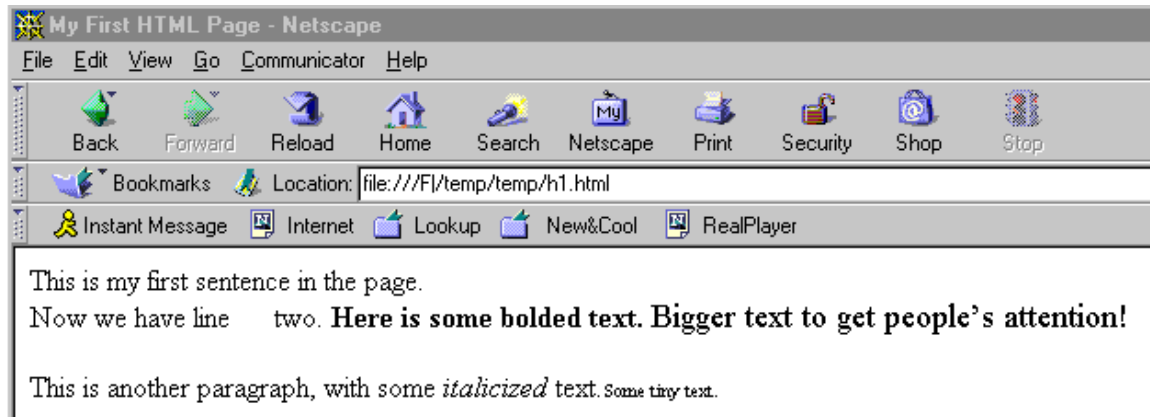
To make text smaller: This text is a little smaller.

In general, you can use “+1”, “+2”, and “+3” for making text bigger. You can also use “-1” and “-2” to make text smaller. I wouldn’t go any smaller than -2.

[illegible]

Using the FONT Tag

Again, don't forget the closing `</FONT>` tag or you'll change a lot more text than you intend to.



Output Showing Different Font Sizes

Colors

You can also add some attributes to the BODY tag. We'll take about a fun one, BGCOLOR. BGCOLOR means the background color of the entire page. Normally, it is white.

First, an explanation of colors in web documents. For some standard colors, you can use predefined words:

RED, GREEN, BLUE, YELLOW, ORANGE, PURPLE, BLACK, WHITE, LIGHTBLUE, LIGHTGREEN

There are quite a few more, but that's enough to get you started.

So you can say:

```
<BODY BGCOLOR="LIGHTBLUE">
```

And you'll get a light blue background. (Some experimentation is needed to determine what color is best for your purpose.)

Colors can also be expressed using a notation that looks like a pound sign followed by 6 digits or letters. The letters must be A through F (no G's or K's!)

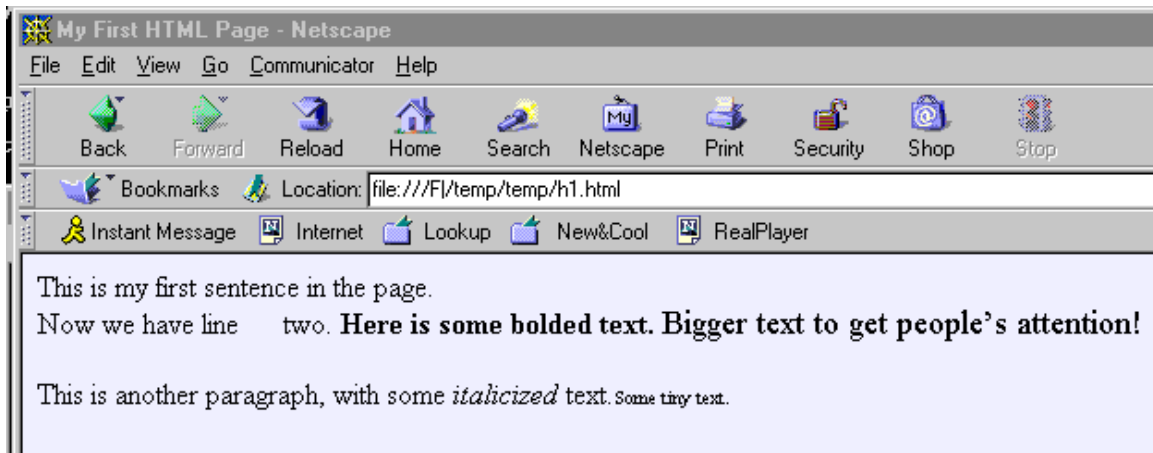
```
#AABBCC  
#000000  
#FFFFFF
```

#000000 is the numeric code for BLACK. #FFFFFF is the numeric code for WHITE. #EEEEFF gives a nice light purple. #FFEEEE is a pale terracotta, peachy shade. (The

exotic colors will look different on different monitors.) There are tables of colors and programs that are available to tell you the numeric code for a given shade. It's also fun to just plug in values and see what you get.

[illegible]

Using a Background Color



Output with Background Color Set

Pictures

Part of the fun of a web page is showing off your pictures. Image files come in different formats. There are two formats that are commonly used in web pages: GIF and JPG.

The difference has to do with how the color information is represented in the file, but for your purposes, all you need to know is that GIF works better for images with few colors, but JPG is better for things like photographs. Also, GIF images can be “transparent”. What that means is you can (with a graphics program like PhotoShop), make one color, like white, be transparent. Then, when the GIF is displayed on the page, all the white areas disappear and you can see the background color of the page where the white color used to be.

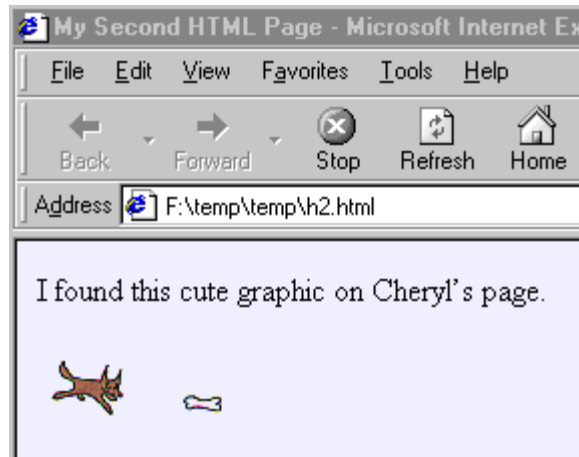
If you have a scanner or a digital camera, you can save your pictures in GIF or JPG. Again, for photos, JPG is normally the way to go.

There are lots of places on the web to get graphics. Some nice drawn artwork can be found at <http://www.artbycheryl.com>. The way you get these images is to put your mouse pointer on the image you want, click the right mouse button, and select Save (the exact menu choice will differ in IE and NN, but it has “save” in it). Then you get a window that allows you to save your image to a particular directory and give it a name.

Let’s say you saved an image file called crit0004.gif in the same directory as your.html file. Here’s how you show it in your page.

```
<HTML>
<HEAD>
<TITLE>My Second HTML
Page</TITLE>
</HEAD>
<BODY BGCOLOR="#EEEEFF">
I found this cute graphic on Cheryl's
page.<p>
<IMG SRC="crit0004.gif">
</BODY>
</HTML>
```

HTML with an IMG Tag



Page with an Image

The tag you use is the tag, with the SRC attribute. If you put in an image tag and you don't see your image, make sure you typed in the right path and file name, and make sure you put in both the opening and the ending double quote around the file.

This example showed what to put if your image is on your hard drive. If you have a web host, you will need to upload the file to your web host machine. Most web host machines are running the UNIX operating system, which means that the paths to the files look different from that on the PC. If you put your image in a directory called /graphics on your web host machine, you will use the following IMG tag.

```
<IMG SRC="/graphics/crit0004.gif">
```

The primary difference is the use of forward slashes instead of backward slashes in the file name. Important: On the PC you can have spaces in filename. This is NOT allowed in UNIX, so don't name your images things like c:\images\gifs\crit 4 from cheryl.gif.

Links

Another fun thing to do is put links to other pages on your page. (Although not too many – you don't want your visitors to leave your page as soon as they arrive!) To add a link, you use the <A> tag, with the HREF attribute. Then you write some text that will show up on the page as a link, then you close the link with a

```
Visit <A HREF="http://www.artbycheryl.com">Cheryl's Page</A>
```

You'll get something like this on the page:

Visit [Cheryl's Page](http://www.artbycheryl.com)

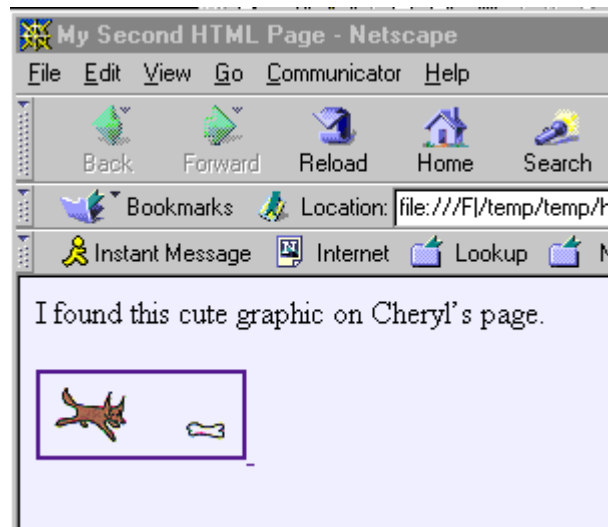
Don't forget to close your quotes around the URL to the place you want to link to ("<http://www.artbycheryl.com>"), and don't forget to close the A tag with the .

You can also put images inside of the <A> tag. That way when you click on the image, you follow the link.

```
<A HREF="http://www.artbycheryl.com"><IMG  
SRC="c:\images\gifs\crit0004.gif"></A>
```

```
<HTML>  
<HEAD>  
<TITLE>My Second HTML Page</TITLE>  
</HEAD>  
<BODY BGCOLOR="#EEEEFF">  
I found this cute graphic on Cheryl's page.<p>  
<A HREF="http://www.artbycheryl.com">  
<IMG SRC="crit0004.gif">  
</A>  
</BODY>  
</HTML>
```

HTML with a Link



Output with an Image that is a Link

Note that a border is drawn around the image when it is a link. This feature is nice because it lets people know that the image is clickable. But sometimes, you don't want the border. In that case use the following line for the image tag:

```
<IMG BORDER=0 SRC="crit0004.gif">
```

Still More Fancy Formatting

As mentioned, the browser will run all of your spaces, carriage returns, and multiple <P>'s together. If you want to lay out your page you will need to use tables.

Early in the life of HTML, tables were intended to for presenting tabular data. Let's say you want to show the number of visitors to your site each month. You want it to look like this:

January	February	March	April
50	100	150	200

This is a table with two rows. Each row has four data elements. Here is how that is done with HTML:

```
<TABLE BORDER=1 CELLPADDING=10 BGCOLOR=LIGHTBLUE
BORDERCOLOR=BLUE>
<TR>
  <TD><B>January</B></TD>
  <TD><B>February</B></TD>
  <TD><B>March</B></TD>
  <TD><B>April</B></TD>
</TR>
<TR>
  <TD>50</TD>
  <TD>100</TD>
  <TD>150</TD>
  <TD>200</TD>
</TR>
</TABLE>
```

HTML for a Simple Table

The spacing is completely optional. If you wanted you could put all of that on one really long line and the browser would display it fine. But for human-readability, it is often a good idea to indent the table's rows and data cells.

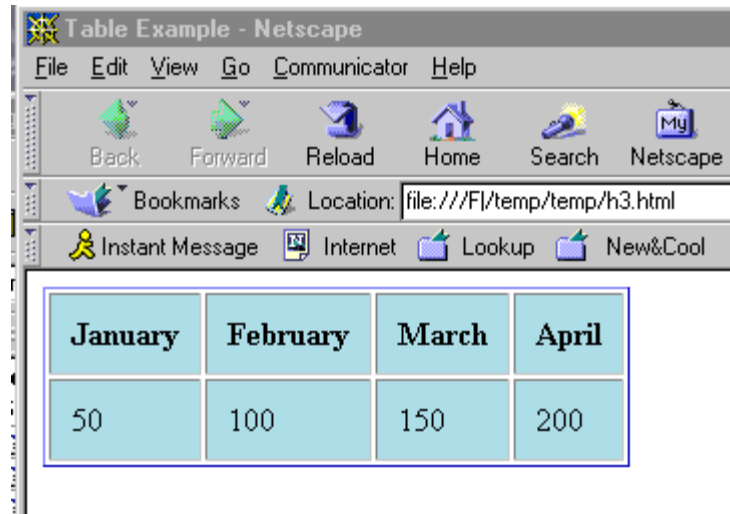
As you can see, a table is started with <TABLE> and ends with </TABLE>. One of the attributes you can use with TABLE is BORDER. If it is 1, the table and its rows and data cells will be outlined with a border. If you use BORDER=0, then there will be no outlining. CELLPADDING puts a little white space around each data cell. This keeps the border from being too close to the data inside the cell. BGCOLOR will set the background color of the table. And BORDERCOLOR will set the color of the outlining

around the table and the data cells. These attributes are all optional, so you don't have to use them, and can let the browser use its default values. For example, if you don't set a BORDERCOLOR, the default is black.

Shorthand: For table headings, like the months in the previous example, you can use <TH> instead of <TD> <TH> will bold the data by default, so you don't have to put in the tags. Here is the complete HTML code, including using <TH> for the table headings.

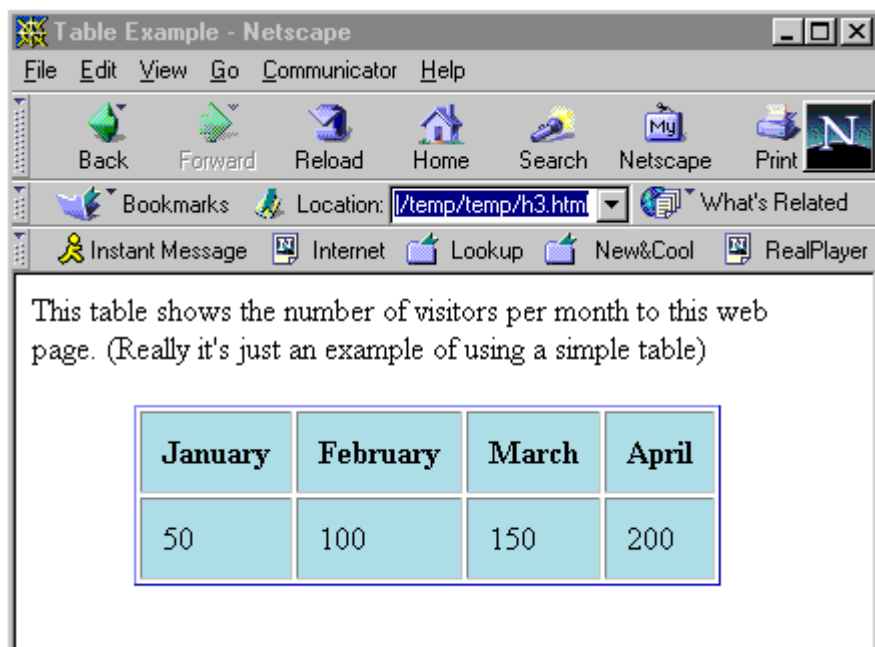
```
<HTML>
<HEAD>
<TITLE>Table Example</TITLE>
</HEAD>
<BODY>
<TABLE BORDER=1 CELLPADDING=10
BGCOLOR=LIGHTBLUE BORDERCOLOR=BLUE>
  <TR>
    <TH>January</TD>
    <TH>February</TD>
    <TH>March</TD>
    <TH>April</TD>
  </TR>
  <TR>
    <TD>50</TD>
    <TD>100</TD>
    <TD>150</TD>
    <TD>200</TD>
  </TR>
</TABLE>
</BODY>
</HTML>
```

HTML Page with a Table



Output with a Simple Table

Notice that the table is stuck right at the top, upper left of the screen. You can type in some introductory text ahead of the table. You can center your table as well. If you do that (and shrink your browser window so you can get a smaller picture!), it will look like this:



The Table Appears after the Text

There are several ways to center information (text, tables, images). The oldest and easiest way is to use the <CENTER> tag.

```
<CENTER>
...whatever you want to center goes in here...
</CENTER>
```

But, the HTML language committee has decided it doesn't like <CENTER> any more, and wants people to use the other ways to do centering. One way is with the <DIV> tag.

<DIV> sets up divisions of your document. You can create a division to center everything that you put between the <DIV> and </DIV> tag.

Here is the HTML for the previous example.

```
<HTML>
<HEAD>
<TITLE>Table Example</TITLE>
</HEAD>
<BODY>
This table shows the number of visitors per month to this web page. (Really
it's just an example of using a simple table)
<p>
<div align=center>
<TABLE BORDER=1 CELLPADDING=10 BGCOLOR=LIGHTBLUE
BORDERCOLOR=BLUE>
  <TR>
    <TH>January</TD>
    <TH>February</TD>
    <TH>March</TD>
    <TH>April</TD>
  </TR>
  <TR>
    <TD>50</TD>
    <TD>100</TD>
    <TD>150</TD>
    <TD>200</TD>
  </TR>
</TABLE>
</div>
</BODY>
</HTML>
```

HTML for Centering Using the DIV Tag

Notice the <div align=center> tag. That tells the browser to center everything until it sees the </div> tag.

You can put stuff other than text in the data cells, like images, links, and even another table. Here is a table that puts the GIF file from the earlier example on the left and the text on the right, with some additional text. No border is used in this example.

One other point. You can also give your tables a fixed size with the WIDTH attribute. Many web pages use a width of 600, which is a good size for most monitors. In my example, I decided to use 300, because I didn't want a very big table. You may need to try different widths to get the size you want.

```
<HTML>
<HEAD>
<TITLE>My Second HTML Page</TITLE>
</HEAD>
<BODY BGCOLOR="#EEEEFF">
<div align=center>
<table width=300 border=1>
  <tr>
    <td><a href="http://www.artbycheryl.com">
      <IMG border=0 SRC="crit0004.gif">
    </a>
    </td>
    <td>I found this cute graphic on Cheryl's page. She has a lot of really
great graphics, including flowers, people, and things.
    </td>
  </tr>
</table>
</div>
</BODY>
</HTML>
```

HTML Table with a Fixed Width and an Image in a Data Cell



Output of Fixed Size Table, with an Image Too

The image tag is inside of an A HREF, so the image is a hot link, even though it is inside of the table.

Sometimes it is nice to offset information like this with a border. But if you put BORDER=1 in the table tag, you'll get this:

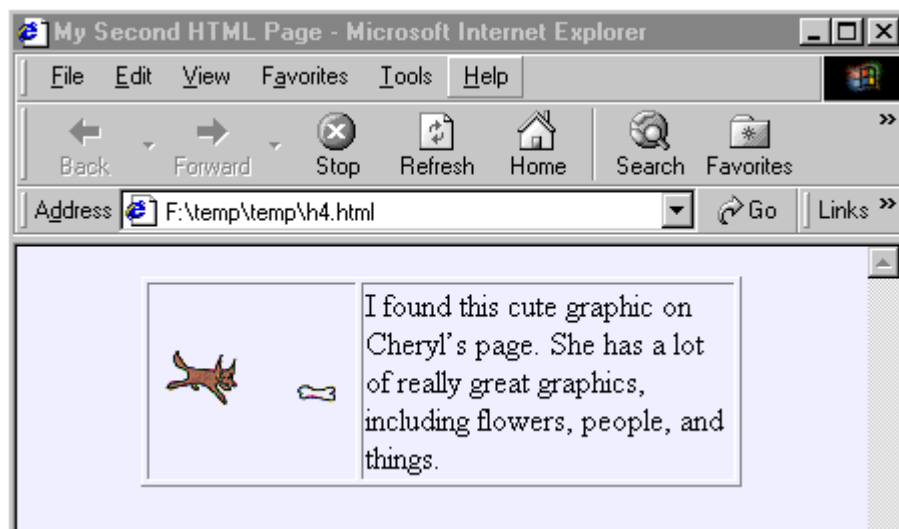


Table with a Border

But, that's not what I had in mind. But, if you nest this table inside of another table and put the border on the outer table, you can just have a line around the outside. Here is the HTML.

```

<HTML>
<HEAD>
<TITLE>My Second HTML Page</TITLE>
</HEAD>
<BODY BGCOLOR="#EEEEFF">
<div align=center>
<table width=310 border=1 bordercolor=blue>
  <tr>
    <td>
      <table width=300 border=0>
        <tr>
          <td><a href="http://www.artbycheryl.com">
            <IMG border=0 SRC="crit0004.gif">
          </a>
        </td>
        <td>I found this cute graphic on Cheryl's page. She has a lot of really
        great graphics, including flowers, people, and things.
        </td>
      </tr>
    </table>
  </td>
</tr>
</table>
</div>
</BODY>
</HTML>

```

Simple Nested Tables

What you have is an outer table with one row and one data cell. By putting a border on that table, you just end up drawing a rectangle. Then the other table with the image and the text goes inside the single data cell of the outer table. Voila!



Output of Nested Tables with Outer Table Having a Border

Other Options

If you don't want to spend all of your time typing in a document using NOTEPAD and html, you can use Microsoft Word for some types of HTML pages. Let's say you type up an article about pruning roses in Word. After you get it the way you want it, you can do File Save As... and change the document type to HTML. Word will output your document as one HTML page, complete with tags. You may want to type up a test document and save it as HTML to give this capability a try. You can view the resulting HTML document in your browser and then look at the HTML code in NOTEPAD or View Source to see what Word did.

(One caution. If you modify the HTML file produced by Word, those changes will be overwritten if you use Word to write the document out to the same .html file.)

Speaking of View Source, one of the best ways to learn HTML is to look at what other people have done. When you have a page in your browser, right click on some text, and then select View Source. You'll get a window popped up containing the source for that web page.

If you don't want to use Word to create your HTML documents, you may want to look at Microsoft's FrontPage or Netscape's Composer. These two products allow you to select HTML components (like an image or a table) and drop them into your page where you want them. It will take some practice to learn to use either of these well, but you should be able to create simple HTML pages fairly quickly.

For more HTML you may want to go through the tutorials at <http://webreference.com/html/tutorials/>.