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## Beginning HTML

Ready to make your own Web site and send your ideas out into the world? Beginning HTML will help you get started, explaining how the Web works and how to go about creating your first Web page.

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### How the Web Works



Before diving right in, let's review how the Web works. By understanding the basics, you'll have a better idea of what's going on behind the scenes of your Web site later on.

- The *Internet* is basically a huge network of connected computers. Since all these computers are connected to one another, all over the world, it's easy for information to be passed from place to place. That's how email works - and chat rooms and newsgroups, etc. People all around the world are using their computers to connect to other computers and exchange data.
- The *World Wide Web* enables colors, pictures, sounds and movies. What makes all this action possible is your Web browser - such as Firefox or Microsoft Internet Explorer. The browser is able to read a certain kind of code and translate it into a Web page.
- That code is called *HTML* (which stands for hypertext markup language), and it's the main thing you'll need to learn to make your own Web site.
- Browsers follow a rule that states that all home pages are named "index.htm" or "index.html." The browser will find the place on the internet where the pages you would like to see are located and they will automatically pull up the one named "index" when you type the address (like [www.google.com](http://www.google.com)) into the address bar.

- Websites cost money. If you are building a site from the ground up you will have a few different costs.
  - The first is the domain name. In order to reserve and use a unique name for yourself you will have to pay a yearly fee for the use of the name. A few places to go to register and purchase a domain name are:
    - ◆ [www.godaddy.com](http://www.godaddy.com)
    - ◆ [www.networksolutions.com](http://www.networksolutions.com)
    - ◆ [www.register.com](http://www.register.com)
  - Another cost is server space from a hosting service. The host company will place your web pages and pictures on their servers for a yearly fee. These servers are always on and connected to the Internet so that anyone can view them at any time. Most of them also provide you with additional features such as an email account, site statistics, technical support, a discussion board, and a blog. To see a lists of service providers go to: <http://hostjury.com/reviews/>
  - An optional cost is the software used to create the site. If you are going to be creating it yourself you will need a program to either type the code into or have the program build the components for you.
    - ◆ Programs used to type code by hand:
      - Notepad
      - UltraEdit
      - Word - save the file as a plain text document and manually enter .htm or .html at the end of the file name.
      - To see an extensive list of other programs visit: [http://en.wikipedia.org/wiki/List\\_of\\_text\\_editors](http://en.wikipedia.org/wiki/List_of_text_editors)
    - ◆ Common Rich Text editor programs:
      - Microsoft FrontPage (now called Microsoft Expression Web)
      - Macromedia Dreamweaver
      - Microsoft Visual Studio
      - To see a list of other programs visit: [http://en.wikipedia.org/wiki/List\\_of\\_HTML\\_editors](http://en.wikipedia.org/wiki/List_of_HTML_editors)
- Websites use bandwidth to transfer files (pages and page content such as pictures) from the server to your personal computer whenever you view a web page. Wikipedia describes bandwidth as such, "In website hosting, bandwidth is the amount of information downloadable from the webserver over a prescribed period of time. In essence, it is the rate [data/time], but the time in this case is not seconds but rather a month or a week. Web hosting companies often quote a monthly bandwidth limit for a website, for example 100 GB/month. If visitors to the website download a total greater than 100 GB in one month, the bandwidth limit will have been exceeded."

## Getting Started

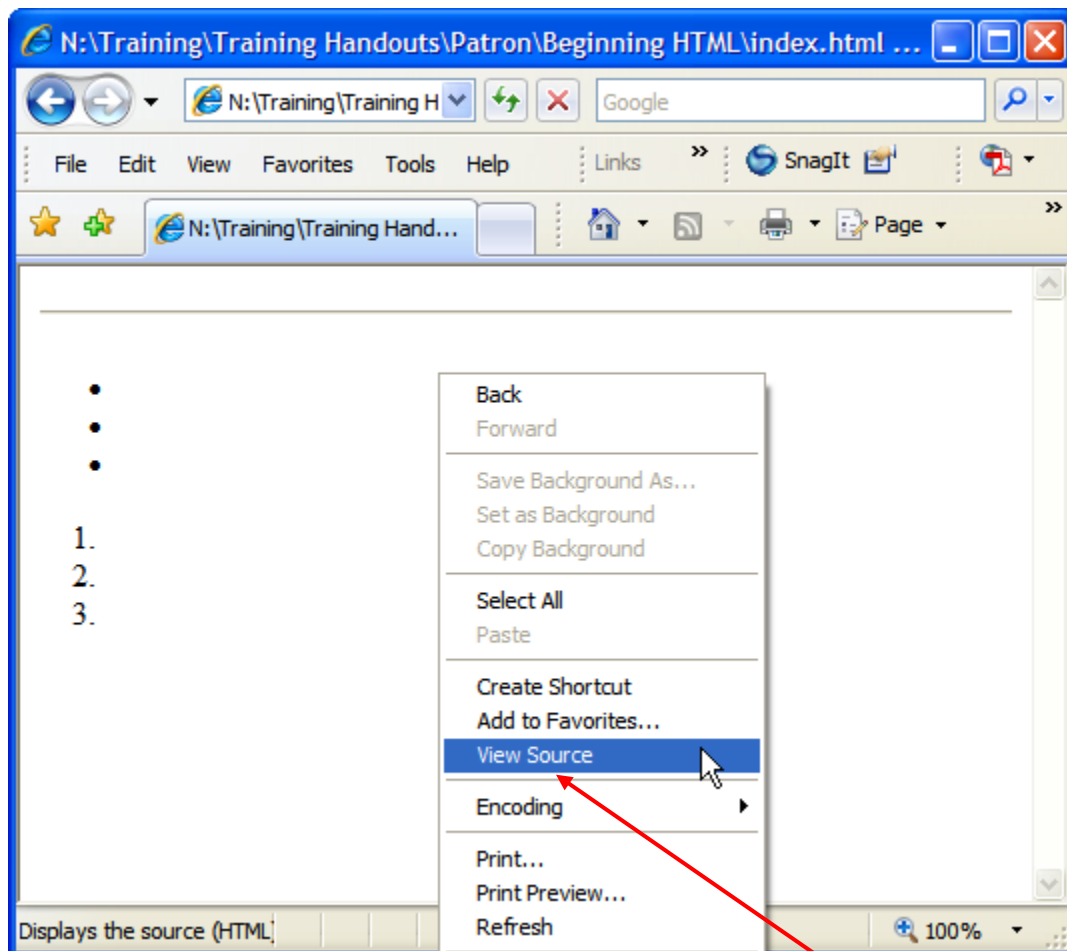


### Creating your First Web Page

In class we will be starting from a pre-existing page so that you can learn about the basic tags. To access it:

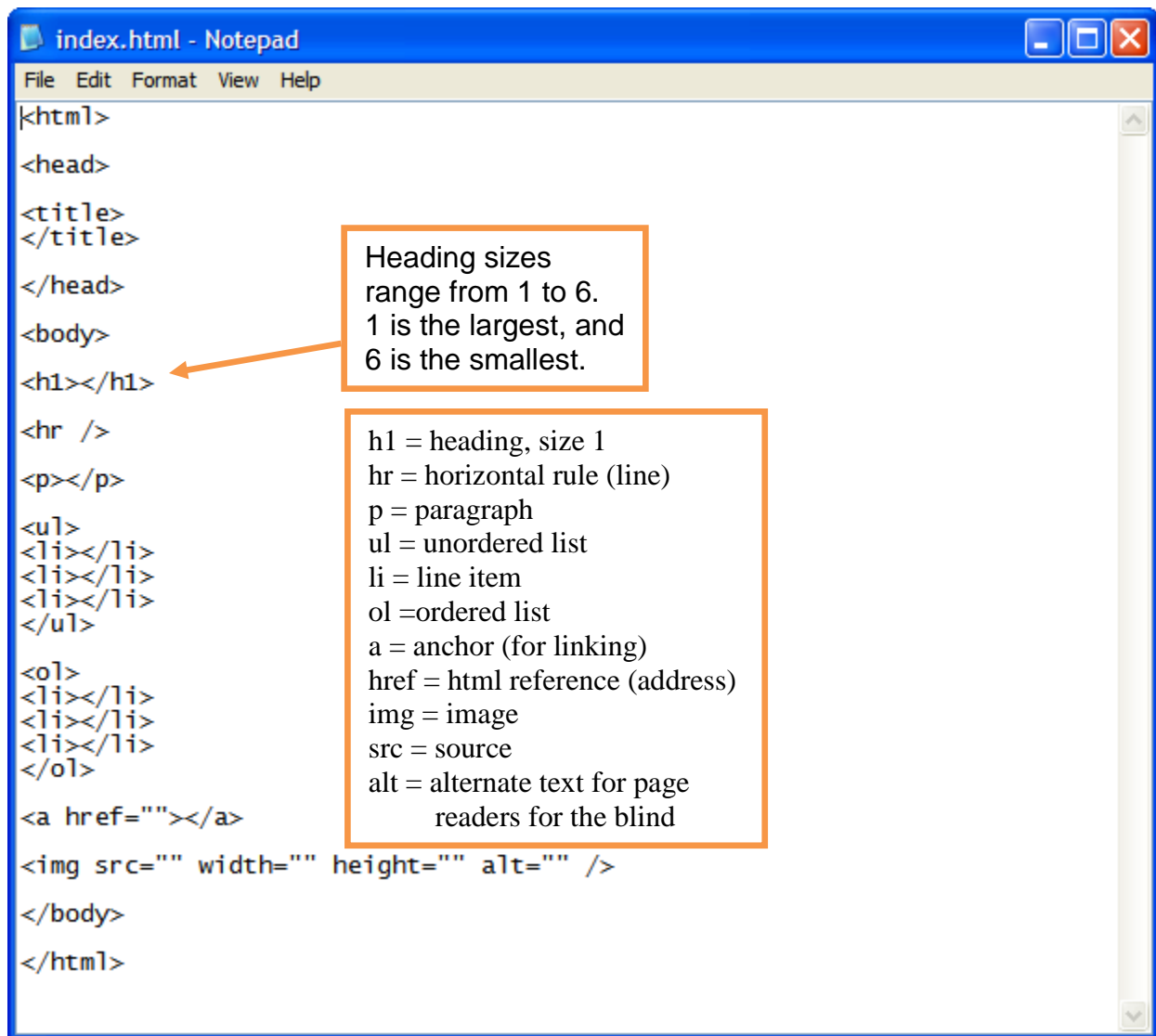
1. Put the disk into the A drive
2. Double click on **My Computer**.
3. Double click on **3<sup>1/2</sup> Floppy (A:)**
4. Double click on **index.html**

The page will open up in your browser window. It should look something like this:



To view the HTML code, right click on the page and select **View Source**.

## Tags



```
<html>
<head>
<title>
</title>
</head>
<body>
<h1></h1>
<hr />
<p></p>
<ul>
<li></li>
<li></li>
<li></li>
</ul>
<ol>
<li></li>
<li></li>
<li></li>
</ol>
<a href=""></a>
<img src="" width="" height="" alt="" />
</body>
</html>
```

Heading sizes range from 1 to 6. 1 is the largest, and 6 is the smallest.

h1 = heading, size 1  
hr = horizontal rule (line)  
p = paragraph  
ul = unordered list  
li = line item  
ol = ordered list  
a = anchor (for linking)  
href = html reference (address)  
img = image  
src = source  
alt = alternate text for page readers for the blind

What HTML does is describe to the browser what your Web page should look like, using *tags*. Tags are letters or words between two brackets, like this: **<tag>**. Learning HTML pretty much means learning all the various tags. Each tag controls a different aspect of the page such as text size, paragraph alignment, and hyperlinks.

Pick the tag that you want to use and put it right in front of the word, or item, that you wish to change:

**<b>Hello</b>**

"B" stands for "bold." Most tags use abbreviations like this, making them pretty easy to remember. The Web browser does what it's told and makes the word bold, like this:

**Hello**

## Rules for using tags:

1. Always use open and close brackets in that order <> (open) </> (closed).
2. Either use all upper case tags or all lower case tags. Never mix and match.
3. Close tags in order throughout the file. See example below:

```
<html>
<head>
<title>Rock Fest 2006</title>
</head>
<body>
<h1>Welcome to Rock Fest 2006</h1>
<p>This year's festival will include such artists as...
<ul>
<li><b>Hammer Sludge</b></li>
<li><i>Green Violet</i></li>
<li><u>Running Souls</u></li>
</ul>
</p>
</body>
</html>
```

Notice that the <li> tag is opened first, then the <b> tag. At the end of the line, the </b> tag is closed first, then the </li> tag.

**Note:** See the Basic HTML tag section for a list of commonly used tags.



Do you want to make something centered? Use the <center> </center> tag.

```
<center><h1>This is the title of my page</h1></center>
```

# This is the title of my page

---

## Font Changes

Basic ways to modify the font:

```
<b>The text here is bold</b>
<strong>The text here is bold</strong>
<i>This text is italicized</i>
<u>A lower case u makes the text underlined</u>
```

There are two ways to format the color, size, and style of your text. The first way uses the font tag and is used if you want to apply just one or two changes. Notice that the font tag is on the inside of the paragraph tags for the blue example. It can also be used on the outside to impact a larger area, like in the purple example.

One way:

```
<p>
<font size="2" face="verdana">
This is a paragraph.
</font>
</p>
<font color="red">
<p>This is another paragraph.</p>
<p>Here is a third paragraph.</p>
</font>
```

Font sizes range from numbers 1 to 7. 1 is the smallest, and 7 is the largest.

“Safe” font faces include: arial, arial black, comic sans ms, courier, courier new, georgia, helvetica, impact, palatino, times new roman, trebuchet ms, verdana

Color names that can be used include the basic ones, like red, orange, yellow, green, blue, purple, pink, white, brown, and black.

The second way to modify font uses a modification of the paragraph tag and is used *only* if you want to change all three elements at the same time.

A second way:

```
<html>
<body>
<p style="font-family:verdana;font-size:80%;color:blue">
This is a paragraph with some text in it. This is a paragraph with some text in it. This is a paragraph with some text in it. This is a paragraph with some text in it.
</p>
</body>
</html>
```

All three elements *must* have a value for this code string to work.

Notice that in this example a percentage was used instead of a font size number. 100% is normal font size, and anything less than that is smaller.

Add the new version to your Notepad document, save your changes, refresh your web page and see what you think.

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## Colors

When you're adding a color to your Web page with HTML, sometimes you can just type in the name of the color. But more often than not, you'll need to use what's called the **hex code**. Hex codes are used when a specific shade of color is used. Hex colors are six digit alpha and numeric characters that begin with the pound sign (#).

If we wanted our background to be red, for example, we'd type bgcolor="#FF0000" into the body tag.

```
<body bgcolor="#ff6600">  
    sets the background color for the page as a whole.
```

```
<body text="#ff6600">  
    sets the text color for the page as a whole.
```

```
<body link="#ff6600">  
    sets the unvisited link color for the page as a whole.
```

```
<body vlink="#ff6600">  
    sets the visited link color for the page as a whole.
```

```
<body alink="#ff6600">  
    sets the activated link color (i.e. the color of the link as users click on it) for the  
    page as a whole.
```

```
<font color="#cc6600"><p>sample text</p></FONT>  
    sets the color of selected text within a page.
```

For tables:

```
<table color="#ff6600">  
    sets the background color for an entire table.
```

```
<td bgcolor="#ff6600">  
    sets the background color for one data cell within a table.
```

It is common to see multiple color attributes in one tag, like this:

```
<body bgcolor="#ff6600" text="white" link="#ffff00">
```

Return to your Notepad document and add the following code in the <body>

```
<body bgcolor="#335021" text="#F7CE96" >
```

Resave and refresh your IE window to see the results. Now use the following list to choose your own colors.

RED= FF0000  
GREEN= 00FF00  
BLUE= 0000FF  
BLACK= 000000  
WHITE= FFFFFFFF  
Aqua = 00FFFF  
Fuchsia = FF00FF  
Gray = 808080  
Green = 008000  
Lime = 00FF00  
Maroon = 800000  
Navy = 000080  
Olive = 808000  
Purple = 800080  
Teal = 008080  
Yellow = FFFF00

Remember to re-save after any changes and then refresh in your web browser to check your work.

This web page has a good, easy-to-read list of hex codes for colors:

<http://www.online-tutorials.com/folder6/603.htm>

Or, you can type "hex codes" into the search box on Google to find many different pages that will show you a list.

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## Create your second web page using Notepad:

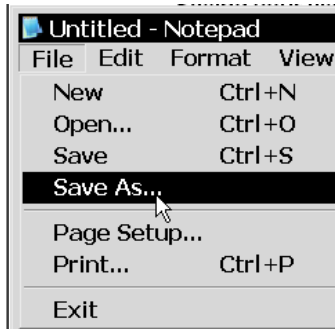
Click on **Start > All Programs > Accessories > Notepad**  
(or **File > New** if you are already in the program)

Type in the HTML code using pages 4 or 5 as an example. (Don't forget the <html></html> and <body></body> tags!)

## Saving your file

Save your file using the following instructions:

Click **File: Save as**

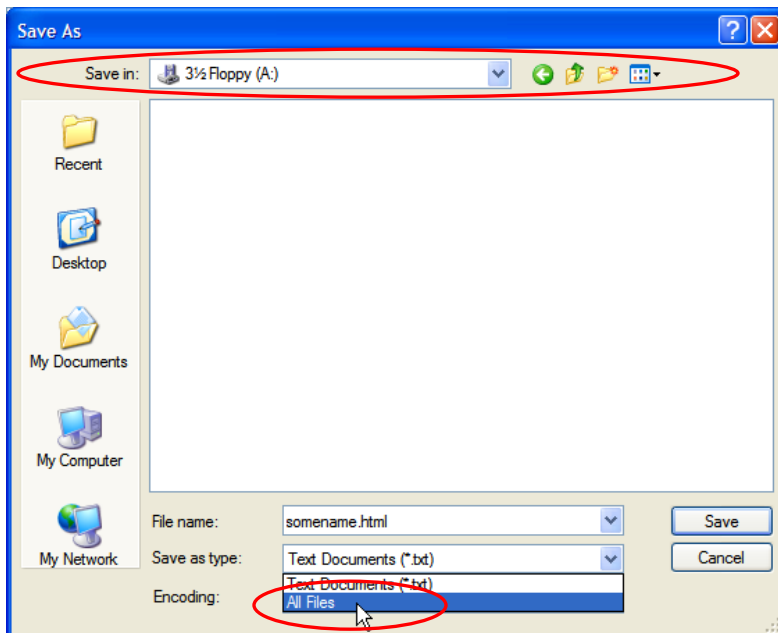


Save in: **3½ Floppy (A:)**

File name: **somename.html** (Web names are case sensitive. It's best to name your file in all lower case letters. **Do not use spaces!!!**)

Save as type: **All Files**

Click **Save**



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## Links

Linking documents and information together is a basic strength of the Web. The very name "browser" comes from this idea. The browser lets you, from your desktop, browse through pages, images, and data around the world. Hypertext is the term that describes linking together content across many different locations.

Making a link is easy. You create it by adding an HTML anchor tag. The anchor tag looks like this: `<a> text </a>`

To add a link to a web page you type:

```
<a href="url">Text to be displayed</a>
```

For example, a link to the library's web page would be:

```
<a href="http://www.akronlibrary.org">Akron - Summit County Public Library</a>
```

The first part tells the **computer** which page to navigate to. The second part lets the *person* know where they will be going.

To have a link open in a new window (instead of changing the page you are on) use:

```
<a href="http://www.akronlibrary.org/" target="_blank"> Akron - Summit County Public Library </a>
```

## Mailto link

Not every link on the Web leads to another Web page. Often, pages include links that let people send email. This type of link is a "mailto," and is just as easy to build as a link to another page.

```
<a href="mailto:myemail@here.com"> creates a mailto  
</a> closes a mailto
```

If your email address were `monkeyboy@webmonkey.com`, your HTML might read:  

```
<a href="mailto:monkeyboy@webmonkey.com"> Send me mail!</a>
```

And on the page it would appear like this:

[Send me mail!](mailto:monkeyboy@webmonkey.com)

Return to your Notepad document and add some links. Remember to refresh in your browser window to see your changes. If you are not connected to the internet a web page will not be found.

Sometimes it's more of a bother to the user to add a mailto link. If the person does not use Outlook or Outlook Express to receive their email, a mailto link does them no good. It's better to just type the email address on the page as regular text.

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## Graphics and Images

To place an image on your page use the tag ``

```
<html>
<head>
<title>Exotic Bird Habitats</title>
</head>
<body>
<p>This site contains cool facts about different types of exotic
birds and their natural habitats. </p>

</body>
</html>
```

**Note:** There is no closing tag for the image tag, only a back slash in the initial tag to let your browser know you are done with that tag.

To align the image on the page:

```

```

To align the image within a line of text:

```

```

**Note:** The image is placed in relation to the natural line that characters rest on. For an example see the following link:

[http://www.w3schools.com/tags/tryit.asp?filename=tryhtml\\_image\\_align](http://www.w3schools.com/tags/tryit.asp?filename=tryhtml_image_align)

To resize the image, change the values of the "height" and "width" attributes.

```

```

Before you can put an image on a Web page, you need to know the name of the image file and where it's stored. The easiest place to save the image is in the same folder or directory as your HTML file, which is where the browser will automatically look for it.

## Tables

Organizing text on a page can be difficult in HTML. Often you can put text in tables to help straighten things out.

Tables are defined with the `<table>` tag. A table is divided into rows (with the `<tr>` tag), and each row is divided into data cells (with the `<td>` tag). The letters `td` stands for "table data," which is the content of a data cell. A data cell can contain text, images, lists, paragraphs, forms, horizontal rules, tables, etc.

Here is some code for a basic table:

```
<table border="1">
<tr>
<td>row 1, cell 1</td>
<td>row 1, cell 2</td>
</tr>
<tr>
<td>row 2, cell 1</td>
<td>row 2, cell 2</td>
</tr>
</table>
```

Border numbers can be any number you would like. The number is a measurement in pixels. The larger the number, the thicker the border. (`border="0"` will get rid of the border.)

`tr` = table row  
`td` = table data

How it looks in a browser:

row 1, cell 1	row 1, cell 2
row 2, cell 1	row 2, cell 2

It's easy to change the color of the border. Just add `bordercolor="whatever"` to the table tag, like this:

```
<table border="1" bordercolor="black">
Hex codes work, too.
```

Add this code to your notepad document then save and refresh your web page to see the table example. You can then take out the words "row 1, cell1" and add some text of your own.

Cell Padding and Cell Spacing will allow you to customize the spacing of your table.

Cell Padding increases the amount of space between the *text and the border of the cell*.

Cell Spacing increases the amount of space between *cells*.

Notice that the code goes in the beginning, table tag:

```
<table cellpadding="10">
```

peaches peaches	cherries cherries
peaches peaches	cherries cherries
peaches peaches	cherries cherries
peaches peaches	cherries cherries
peaches peaches	cherries cherries
peaches peaches	cherries cherries

```
<table cellspacing="10">
```

peaches	cherries
walnuts	almonds

Some websites are constructed entirely *inside* of a table, like this:

```
<html>
<body>

<table border="1" bordercolor="black">

<tr>
<td></td>
<td><center><h1>Heading Of The Page</h1></center></td>
</tr>

<tr>
<td valign="top"><ul>
<li><a href="http://www.google.com">Link 1 to Google</a></li>
<li><a href="http://www.yahoo.com">Link 2 to Yahoo!</a></li>
</ul>
</td>
<td><p>Here is where the content of the page goes.</p>
<p>Many paragraphs can be added.</p>
<p>Pictures, links, and lists.</p>
<p>Tables, too!</p>
</td>
</tr>

</table>

</body>
</html>
```

Alignment inside of table cells is easily achieved.

Horizontal alignment:


```
<td align="left"> Left
<td align="center"> Center
<td align="right"> Right
```

Vertical alignment:

```
<td valign="top"> Top
<td valign="middle"> Middle
<td valign="bottom"> Bottom
```

Mix and match the horizontal and vertical alignment to achieve your goal. Example:  
<td align="center" valign="middle">

This is what it would look like on your page:

	<h2>Heading Of The Page</h2>
<ul style="list-style-type: none"><li>• <a href="#">Link 1 to Google</a></li><li>• <a href="#">Link 2 to Yahoo!</a></li></ul>	<p>Here is where the content of the page goes.</p> <p>Many paragraphs can be added.</p> <p>Pictures, links, and lists.</p> <p>Tables, too!</p>

The table will expand as you add information.

If you would like your table to fit to the size of the window, the code to add looks like this:

```
<table width="100%">
```

The table will be as wide as the person's screen that views that page. This may not work for all tables, as everyone's screen width is different. Your content may not fit properly.

But you can specify width in pixels, as well, so that if the screen width is different, your content is always spaced the same.

```
<table width="500px">
```

A good rule of thumb is to keep table widths between 800 and 1024 pixels. People with older computers have a screen size of 800px. If your page width is 2000px, that person viewing it will have to scroll left and right to see your information.

Another way to specify widths is column-by-column.

```
<table>
<tr>
<td width="200px">Content 1</td>
<td width="700px">Content 2</td>
</tr>
<tr>
<td>Content 3</td>
<td>Content 4</td>
</tr>
</table>
```

It could have also been in percentages:

```
<td width="20%">Content 1</td>
<td width="80%">Content 2</td>
```

These columns would resize depending upon the screen size of the person viewing it.

Notice that the width is only needed on the cells in the first row. The rest of the column will follow suit.

Another trick is to center the table on the page. Just place your <center> </center> tags in-front-of and behind the table tags.

```
<center>
<table>

</table>
</center>
```

---

## Basic HTML Tags

`<!--...-->` - Author comments not seen by the browser.

`<head>...</head>` - Header for document.

`<body>...</body>` - Body of document.

`<title>...</title>` - Title of the document.

`<h1-h6>...</h1-h6>` - Heading sizes.

`<a href="">...</a>` - Link.

`<ol>...</ol>` - Ordered list.

`<ul>...</ul>` - Unordered list.

`<li>...</li>` - Line Item

`<i>...</i>` - Italic.

`<b>...</b>` - Bold.

`<strong>...</strong>` - Bold

`<br />` - Line break.

`<hr />` - Horizontal line.

`<img src="" />` - Image.

`<p>...</p>` - Paragraph.

`<center>...</center>` - Center.

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