

# Fundamentals of Web Design

## CODING MYSTERIES

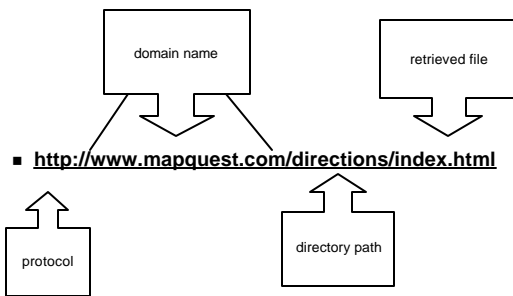
The mystery behind the page – viewing the “SOURCE” then making it work for you!

### Credit's Come First...

- DAN O'Toole (PM FWD class!!) as part of his homework, he sent me to this site!!
- <http://www.howstuffworks.com/web-page1.htm>  
This is the EXACT place I got my content!!
- The content in the PP is not MY ORIGINAL work!
- Only the PRESENTATION of and a comment or two!
- Content has also been added from [HTML for the WWW](#). Castro, Elizabeth. Peachpit Press, 2000. Berkeley, CA.



### URL – Dissection



### Absolute & Relative URLs

An *absolute* URL shows the entire path to the file, including the scheme, server name, the complete path, and the file name itself – JUST LIKE a complete street address, including name, street, and number, city, state and zip code & country. LOCATION of the absolute URL itself has no bearing on the location of the actual file referenced – whether on this/that server. Absolutes are needed for FTP, Gopher & newsgroups - any that doesn't use http protocol.

A relative URL points to the location of the desired file with reference to the location of the file that contains the URL itself. Instead of an address, it may be “three doors down”, or “image xyz that is in the same directory as this file” BUT you could not find the file with out the full path. When working within pages you can reference pages & items within the same directories.

File name	Absolute URL	Relative URL
Index.html	<a href="http://www.site.com/web/index.html">www.site.com/web/index.html</a>	Index.html
Image.gif	<a href="http://www.site.com/web/images/image.gif">www.site.com/web/images/image.gif</a>	images/image.gif
Data.html	<a href="http://www.site.com/info/data.html">www.site.com/info/data.html</a>	../info/data.html

### Web page

- A Web page is a simple text file that contains not only text, but also a set of **HTML tags** that describe how the text should be formatted when a browser displays it on the screen. The tags are simple instructions that tell the Web browser how the page should look when it is displayed. The tags tell the browser to do things like change the font size or color, or arrange things in columns. **The Web browser interprets** these tags to decide how to format the text onto the screen.

### HTML

- HTML stands for **Hyper Text Markup Language**. A “markup language” is a computer language that describes how a page should be formatted. If all you want to do is display a long string of black and white text with no formatting, then you don't need HTML. But if you want to change fonts, add colors, create headlines and embed graphics in your page, HTML is the language you use to do it.



## Creating a Simple Page

- There are many ways to create Web pages. Hundreds of companies have created tools to help with the process in one way or another. Our goal here, however, is to understand how Web pages really work, rather than have a tool hide the process from us. Therefore, we will use the simplest tools possible -- the ones already on your machine.
- On your machine you have a program, or **application**, that can create simple text files. On Windows machines, this application is called **Notepad**. If you cannot find these programs, it is also possible to use a basic word processing program, like WordPerfect or Microsoft Word.



## Guidelines that need to be followed...

- All standard tags are to be contained within a less-than & greater-than symbol (<html>)
- There are no spaces between the symbols and the tag text & no spaces between the letters that denote the tag
- All tags need to have an opening and closing component.
- The opening and closing tags both use the same command word BUT closing tags have a forward slash before the command (</html>)

## Guidelines that need to be followed...

- USE lower case tags in your HTML document -- although HTML is not case sensitive, XHTML requires lowercase tags -- so get used to it - NO YELLING in your tags!
- Use spaces within a tag to separate the command and the attributes or to separate one attribute from another (no extra spaces)
- DO NOT ALTER the structure of an HTML document.
- [www.w3schools.com/html/html\\_reference.asp](http://www.w3schools.com/html/html_reference.asp)
- [www.w3schools.com/xhtml/xhtmll\\_html.asp](http://www.w3schools.com/xhtml/xhtmll_html.asp)

## Here we GO!!! Structure it!

- Once you have the proper program open on your screen, type the following HTML text into the window:

```
<html>
<head>
<title>My First Page</title>
</head>
<body>
Hello there. This is my first page!
</body>
</html>
```

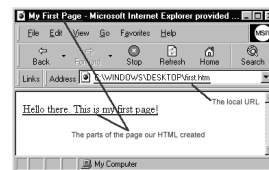


Whether you put the tags and text side-by-side, row-by-row or indented will not make a difference in how the text is displayed in a browser window. Whether you use uppercase or lowercase letters within your tags also does not make a difference.

## Here we GO!!!

- Now you need to save this file somewhere so that you can find it in a moment. Save it to the desktop, or, better yet, to a directory that you set up to hold all of the pages you are going to create. Save it to the filename **first.html**.
- Next, open the page in your Web browser. Open the file **first.html**. When you open it in your browser, it will look something like this...

## Here we GO!!!



Three things are identified in this figure:

- You can see that the page has the title "My First Page."
- You can see that the page's body contains the words "Hello there. This is my first page!"
- You can see that the URL being displayed in the address window is C:\WINDOWS\DESKTOP\first.html from the local hard disk, rather than the usual http://... that a URL would contain if we were receiving the page from a server on the Internet.

By looking at the HTML text that makes up your first page, you can see exactly how the page got its title and body.

## Bold, Italics and Underline

Make any piece of text **bold** by adding the tag: `<b>` to the beginning of the text, and adding the closing tag: `</b>` wherever you want the bold attribute to end.

This is `<b>bold</b>`. This is **bold**.

To **italicize**, use these tags in the same manner: `<i>.....</i>`

This is `<i>italicized</i>`. This is italicized.

To **underline**, use these tags:

`<u>.....</u>` This is `<u>underlined</u>`. This is underlined.

## Breaks and Paragraphs

Although your typed text may contain carriage returns, tabs and extra spaces, browsers will not see them. You will have to use tags in order to create blank space in your HTML documents. `<br>` creates a break between one line and another. You can use several of these tags together to create blank space.

This line is `<br>` broken. This line is broken.

`<p>` creates an extra space between two lines of text. If you place `<br>` in a line of text, it will only break the line; if you use `<p>`, it will both break the line and create an extra space.

This line is `<p>` spaced. This line is spaced.

`<hr>` creates a **horizontal rule**, or horizontal line.

This is a horizontal rule: `<hr>` This is a horizontal rule:

## Breaks and Paragraphs

### Tabs

There is no formal HTML tag to create a "tab" within a document. Many Web designers create tables or use blank images to create space (tables and images are explained later in this article). One way to indent text is to use the tag `<ul>` to make the browser think you are about to create a "list." A list automatically indents text. Close with a `</ul>` to "end" the indentation. The tags `<blockquote>...</blockquote>` will also indent text.

Another alternative is the `<pre>` tag. This tag is used to display **preformatted text** – text displayed "as is." Any spacing created within `<pre>` and `</pre>` tags will appear in the browser as it appears in the source.

## Changing Font Color, Type and Size

- Change the **color** of any text by using the tags: `<font color="color">...</font>`
- The "quote" marks indicate an attribute in HTML
- This is `<font color="red">red</font>`. This is red.

This is `<font color="green">green</font>`. This is green.

- Most standard colors will work. Also try "lights" and "darks" such as "lightblue" or "darkgreen."
- You can also specify a particular **hexadecimal color** number, such as: `<font color="#864086">`. For a list of hexadecimal color codes, visit [this page](#).

## Speaking of COLOR...

- **Web Safe Colors** -
  - a web safe color palette is a palette made up of 216 colors that remains relatively stable from one browser to another, between platforms, and at different monitor color capacities and resolutions.
  - NEVER expect that your pages will look the same on every browser
  - NEVER expect another user to have the same "cool" fonts as you do either!

## Speaking of COLOR...this is an attribute

- Attributes modify the action of a tag.
- Many tags can act alone, but a variety of tags **MUST** have attributes to function.
  - bgcolor – which identifies the background color is an attribute which can be applied in the BODY of the document to change the appearance of the page
  - Attributes are **ONLY** applied to the OPENING tag
  - Values are the defining aspect of attributes which quantify or qualify it in some way #FFFFFF is the value of the attribute bgcolor

## Changing Font Color, Type and Size

If you would like to assign a specific color to the entire text of your page, add text="color" within the <body> tag.  
Example: <body text="blue">

Even if you assign a color to your entire text, you can still change the color of any portion of that text by using the tags you learned above.

Change the **font type** of any text by using the tags:  
<font face="font type"> ... </font>

This is <font face="arial">arial</font>.	This is Arial
This is <font face="geneva">geneva</font>.	This is Geneva

(Note: If the font type you specify is not available in the user's computer, the font type will default to the browser default, usually Courier or Times New Roman; so it is best to stick to standard font types if you want to be able to control what is displayed in the user's browser.)

## Sizes (what size ARE you?)

Change the **size** of any text by using the tags:  
<font size=value>...</font>  
Example: <font size=4>

The default font size on most browsers is "3", so any values larger than 3 will make the text larger, and any values smaller than 3 will make it smaller.

You can also change the font size by adding to or subtracting from the default font size.

Example: <font size=+4>, or <font size=-2>

This font is <font size=+2>increased by 2</font>.	This font is increased by 2.
This font is <font size=+1>increased by 1</font>.	This font is increased by 1
This font is <font size=-2>decreased by 2</font>.	This font is decreased by 2.
This font is <font size=-1>decreased by 1</font>.	This font is decreased by 1.

## Sizes (what size ARE you?)

You can also change the font size by using the tags <small> and <big>:

This is <small>small</small> text.	This is small text.
This is <big>big</big> text.	This is big text.

**Heading tags** also change font size, creating a bold "heading" for a paragraph or story:

<h1> This is an H1 heading.</h1>	<b>This is an H1 heading.</b>
<h2> This is an H2 heading.</h2>	<b>This is an H2 heading.</b>
<h3> This is an H3 heading.</h3>	<b>This is an H3 heading.</b>

End any font element change with the tag: </font>  
Or, by using the coordinating ending pair for the specific tag you used:  
Example: </small>, </big>, </H2>

## Creating Background Color

- Change the background color of your page by adding bgcolor="color" **within** the <body> tag.

Example: <body bgcolor="yellow">

- Again, as was described in the section on changing font color, you can use most standard colors, or use a [Hexadecimal Color Code](#).

## Creating Lists

There are three types of lists you can create: **Unordered**, **Ordered** and **Descriptive**

An **unordered list** looks like this:

- California
- Oregon
- North Carolina

An unordered list is a bulleted list initiated by the tag <ul>. The tag <li> (short for List Item) is used before each item in the list. The closing tag </ul> ends the list. Example:

```
<ul>  
<li>California  
<li>Oregon  
<li>North Carolina  
</ul>
```

The **type** of bullet can be changed to a "circle," "square" or "disc" by adding a specification within the <ul> tag:

<ul type="circle"> <li>California <li>Oregon <li>North Carolina </ul>	<ul style="list-style-type: none"><li>California</li><li>Oregon</li><li>North Carolina</li></ul>	<ul type="square"> <li>California <li>Oregon <li>North Carolina </ul>	<ul style="list-style-type: none"><li>California</li><li>Oregon</li><li>North Carolina</li></ul>
---	--	---	--

An **ordered list** looks like this:

- oranges
- grapes
- cherries

An ordered list is a list of items in a logical, numbered order. Use the tags <ol> and </ol> to start and end this kind of list. Again, the <li> tag is used in front of each item.

Example:  
<ol>  
<li>oranges  
<li>grapes  
<li>cherries  
</ol>

You can change the **type** of organization by adding a "type" designation within the <ol> tag.

<ol type="A"> orders the list by capital letters: (A, B, C...)

<ol type="a"> orders the list by small letters: (a, b, c...)

<ol type="I"> orders the list by Roman numerals: (I, II, III...)

<ol type="i"> orders the list by small Roman numerals: (i, ii, iii...)

If you would like to start your ordered list with a specified value, such as "6," use the following "start" and "value" tags:

```
<ol start=5>  
<li value=6>
```

## Descriptive Lists...

A **descriptive list** creates a list of text items with an indented second line:

```
Marshall Brain
  Founder of HowStuffWorks
```

Use the following tags in this manner:

```
<dl>
<dt>Marshall Brain
<dd>Founder of HowStuffWorks
</dl>
```

The `<dt>` tag should correspond with the text you want lined up on the margin; `<dd>` corresponds with the line you want indented.

## Linking to Other Sites

- One of the best parts about Web pages is the ability to create **links** to other pages on the Web. Using the following **anchor tags**, you can reference other people's work, point to other pages you like, etc:

```
<a href="URL">
```

- Type in the title of the page after the anchor tag, and close the anchor with: `</a>`
- Example: `<a href="http://www.howstuffworks.com">HowStuffWorks </a>`
- This is how it will look on your page:  
[HowStuffWorks](#)
- You can also easily combine bulleted lists with links to create a list of links.

## New Windows

- If you do not want visitors to leave your page when they click on one of your links to another site, add this tag to your anchor tag. When the link is clicked, instead of taking the user away from your site and into someone's else's, it will simply open a new, blank window to display the link's destination:

```
target="_blank"
```

- Example: `<a href="http://www.howstuffworks.com" target="_blank">`

## Link Color & Linking to Receive E-mail

- Blue is the standard default color for links. But you can change the colors of linked information on your page by inserting these tags within your `<body>` tag:

```
link="color"
vlink="color"
```

- `Vlink` stands for "visited link." Links change colors when they have been visited. If you do not want visited links to change color, simply attribute the same color to both links and `vlinks`.  
Example: `<body link="green" vlink="green">`
- If you would like to receive e-mail from people who read your page, use the following **anchor tag**: `<a href="mailto:youremailaddress">`
- Then type your e-mail address (or whatever link text you would like to have shown on your page) again after the tag. Close the string with: `</a>`
- Example: `<a href="mailto:example@howstuffworks.com">E-mail Me </a>`
- This is how it will look on your page: [E-mail Me](#)

## Creating Links to Your Own Page

- Anchor tags** are not only used for linking to pages on the Internet. You can also use them to link to information located within your own page. In this instance, you can omit the prefix "http://www" and just include the html document file name:

```
Example: <a href="company.htm"> Company Information </a>
```

- To link to a **specific** portion of your page, you will need to **name** the section you are referring to, and include that name within the link's anchor tag. Here's how:
  - Name any section of your page by inserting the following tag immediately before the specific section you want the link to refer back to. You can choose any word, letter or character to use as a name:  
`<a name="name">` Example: `<a name="5">`
  - In the anchor tag, you refer to this portion of your page by putting a "#" in front of the name. If the named link refers to a location within the page that contains the link, the anchor tag linking to this named portion would look like this:  
`<a href="http://www.howstuffworks.com/#5"> Company Information </a>`
- If the named link refers to an html document separate from the page the link is located in, include the html document file name as well.  
Example: `<a href="http://www.howstuffworks.com/company.htm#5"> Company Information </a>`

## Adding Images and Graphics

- Place any digital image on your page using the following tag:  
``
- Images on Web pages are either **GIF files** (pronounced "jiff") or **JPG files** (pronounced "jay-peg"). Any image will contain one of those extensions, so if you have an image called "logo," it will be labeled either "logo.gif" or "logo.jpg."
- Be sure to store the images and graphics that you will be displaying on your Web page in the same folder or directory that you have your "html" file stored into. Otherwise, your computer will have trouble finding the picture you want displayed. Also, be sure to type the picture name **exactly** how it is saved into that folder -- file names are case sensitive

## Adding Images and Graphics

- Images play a powerful role in how the website FEELS to the user
- Images can be created in many different formats & are either
  - vector graphics – made of lines & shapes
  - bitmap graphics – made up of pixels
- Images are typically placed in a folder called images- try to put all images there!

## Justification

- By default, your text and images are left-justified when displayed in your browser, meaning that text and graphics automatically line-up on the left margin.
- If you want to "center" any portion of your page instead, you can use the following tag: `<center>`
- You can end the centering with the corresponding closing tag: `</center>`
- You can also code "divisions," anything from a word to a line of text to an entire page, to be justified a certain way.
  - Start your division with the division alignment tag, including the justification you wish the text or images to take on (i.e. right, left, center):

Example: `<div align="center">`  
End the division justification alignment with the tag: `</div>`