

# Web Coding with HTML

Basic Web page Creation using Hypertext Markup Language

## Overview

The purpose of this guide is to serve as an introduction to HTML and Web page creation. This guide outlines basic tags in HTML and explains how to construct a simple Web page. To put the page on the Web using HTML, however, refer to the Using WS-FTP Quick Guide or the Using Fetch Quick Guide to learn how to transfer HTML files to a Web server at Ithaca College.

## What is HTML?

HTML is an acronym for Hypertext Markup Language, a collection of code used to change plain text into the formatted text that can be viewed with a Web browser. HTML formatting uses “tags” to tell the Web browser how to set up the Web page and when to turn on and off formatting changes. HTML tags are usually used in pairs, one to start a formatting or layout option and one to end it. For example, to identify text as being formatted in HTML, the <HTML> tag is inserted at the top of the page, and the </HTML> tag is inserted at the bottom of the page. Everything between these two tags will be identified by a Web browser as HTML. In some cases, an end tag is not needed, as shown later in this guide. Any word processor or text editor that can save unformatted text can be used to write HTML. In fact, simpler text editors such as Notepad and SimpleText work very well, because they do not insert any extraneous formatting into the document.

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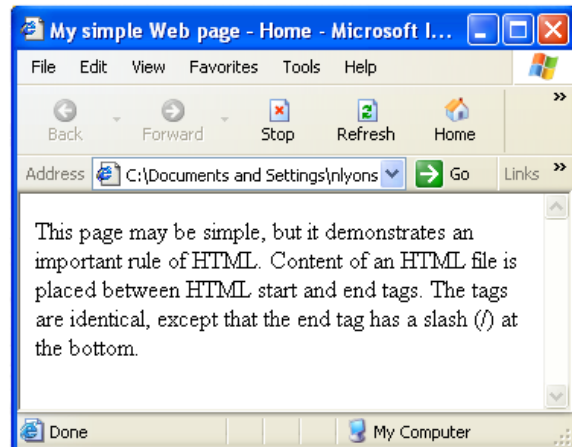
### Related Guides

- Dreamweaver MX: Fundamentals
- WS\_FTP Program
- Fetch FTP Program

## What does HTML look like?

“Raw” HTML is plain code and text, as shown in the simple, but complete, HTML file pictured below.

```
<HTML>
<HEAD>
<TITLE>My simple Web page - Home</TITLE>
</HEAD>
<BODY>
This page may be simple, but it
demonstrates an important rule of HTML.
Content of an HTML file is placed between
HTML start and end tags. The tags are
identical, except that the end tag has a
slash (/) at the bottom.
</BODY>
</HTML>
```



## Quick Guide

## What's going on here?

To start, notice the <HEAD> and <TITLE> tags at the top of the page. These tags, along with their associated end tags, separate the text between them from the body of the page. Certain information can be placed inside the <HEAD> tags that will not be displayed as part of the Web page, but will be used by the browser. In this example, we have included a <TITLE> tag which allows a Web browser to display the title as part of the window title. It also helps Internet search engines to find the page. The <BODY> and </BODY> tags contain all of the rest of the content of the Web page. Other formatting tags are inserted between these tags as needed to format the text in the document.

Above is "My simple Web page" viewed with Internet Explorer. Notice that the text between the <TITLE> </TITLE> tags is inserted directly into the title bar of the browser window. Be aware that spaces, tabs, and word processor formatting in HTML code will not appear in the resulting Web page.

## Formatting text in HTML

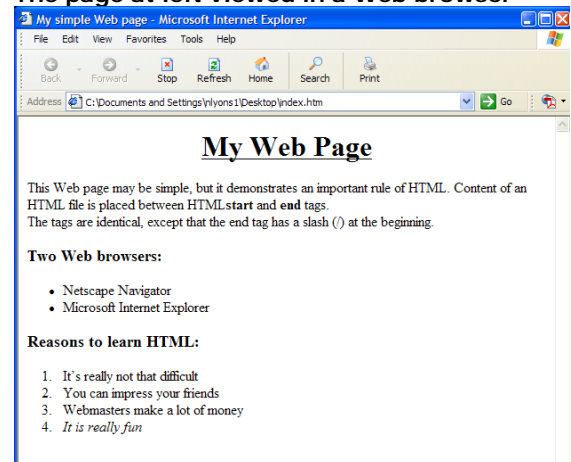
When using HTML to create and edit Web pages, it is important to remember that all text formatting must be done using tags. Whereas the simple Web page on the first page of this guide displays a page without formatting, the page below incorporates HTML formatting tags to apply new attributes to text. Common tags that can be inserted into the body of the HTML document are:

- <B>text</B> - Formats text as bold.
- <I>text</I> - Italicizes the text.
- <U>text</U> - Underlines the text.
- <CENTER>text</CENTER> - Centers text or any other element. (This tag does not have a closing tag)
- <H1>text</H1> - Increases the size of the text. (H1-H6 can be used to vary the size)
- <P>text - Starts the text as a new paragraph.
- <OL>text</OL> - Defines an ordered (numbered) list.
- <UL>text</UL> - Defines an unordered (bulleted) list.
- <LI>text </LI> - Marks a line as a list item. (Used in conjunction with the ordered and unordered lists.)

### The sample code expanded to use the above tags

```
<HTML>
<HEAD>
<TITLE>My simple Web Page</TITLE>
</HEAD>
<BODY>
<CENTER><H1><U>My Web Page</U></H1></CENTER>
<P>This Web Page may be simple, but it demonstrates
an important rule of HTML. Content of an HTML file
is placed between HTML<B>start</B> and <B>end</B>
tags <BR> The tags are identical, except that the
end tag has a slash (/) at the beginning.
<P>
<H3>Two Web Browsers :</H3>
<UL>
<LI>Netscape Navigator</LI>
<LI>Internet Explorer</LI>
</UL>
<P>
<H3>Reasons to learn HTML:</H3>
<OL>
<LI>It's really not that difficult</LI>
<LI>You can impress your friends</LI>
<LI>Webmasters make a lot of money</LI>
<LI><I>It's really fun!</I></LI>
</OL>
</BODY>
</HTML>
```

### The page at left viewed in a Web browser



## Designating colors

In contrast to designating colors in computer-based applications, integrating colors in HTML requires tags with hexadecimal codes. Colors can be assigned within the opening <BODY> tag, using hexadecimal codes such as “#FFFFFF” to represent different colors. Notice that these codes are written in quotes (“...”), and preceded by a “#” sign.

The names of some of the more common colors, such as blue and orange, can be written inside the quotes instead of these hexadecimal codes. For most colors, however, the code must be used. For example, to set the color of the background to light purple, `BGCOLOR="#CCCCFF"` would be typed within the opening <BODY> tag like this: `<BODY bgcolor="#CCCCFF">`.

To set the text color to green, the `TEXT="#99FF00"` would be inserted on the same line after the background color code like this: `<BODY bgcolor="#CCCCFF" text="#99FF00">`. Here are some commonly used colors and their corresponding hexadecimal codes:

- Red – FF0000
- Blood Red – 993300
- Orange – FF6600
- Yellow – FFFF66
- Green – 00FF00
- Medium Green – 009933
- Grassy Green – 669933
- Army Green – 999966
- Moss Green – 336600
- Dark Green – 336600
- Teal – 009999
- Blue – 0000FF
- Light Blue – 00CCFF
- Cobalt Blue – 6699FF
- Medium Blue – 0066CC
- Navy Blue – 336699
- Purple – CC33FF
- Gray – CCCCCC
- Dark Gray – 666666
- Light Brown – 999966
- Black – 000000
- White – FFFFFFFF

## Using tables in HTML

To create a well-designed and easy to use Web page, regardless of whether the construction is in HTML code or a WYSISYG (What You See Is What You Get) program, such as Dreamweaver, tables must be used as layout tools. Unlike Photoshop where objects on the screen can be clicked and dragged to any area on the canvas, data in a Web page, including objects, text, and links can only be organized using tables. To create better Web pages, it is imperative that tables, which can be sized and organized precisely, be used.

### Making a table

HTML creates tables with the <TABLE> </TABLE> tags. Tables can have borders which can be designated using BORDER within the TABLE tag. If tables are only being used as a design tool, the table border should be designated as “0”.

#### A two row, two column table written in HTML

```
<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>
```

The thickness of table borders can be modified using a number preceded by an equal sign (=).

Once the <TABLE> tag is inserted into an HTML document, the table must be built using two separate sets of tags. To create a table row use the <TR> </TR> tags. Every time a <TR> tag is put into the HTML the table expands by one row. To create cells within that table row, the <TD> </TD>, or "table data," tags must be used. Each <TD> tag creates a new cell in the table row that is designated, which means that the <TD> tag creates columns for the table row. To insert data into the cell, the information that would be in a cell would be typed between the <TD> </TD> tags. To end a table, the </TR> tag would be used. Please note, every row within a table must contain the same number of columns or the table will not display properly.

## Table colors

Table cells and rows can be individually assigned colors using BGCOLOR="#hexcode" inside the appropriate tag.

- To set the color of a cell, place the BGCOLOR="#hexcode" attribute inside the <TD> tag.
- To set the color of a row, place the BGCOLOR="#hexcode" attribute inside the <TR> tag.
- To set the color of the entire table, place the BGCOLOR="#hexcode" attribute inside the <TABLE> tag.
- Table row borders can be assigned colors by typing BORDERCOLOR="#hexcode" inside the <TR> tag.

```
A table with a blue border and background
<TABLE BORDER>
<TR BGCOLOR="#3333FF" BORDERCOLOR="#00FFFF">
<TD>Row 1, Cell 1</TD>
<TD>Row 1, Cell 2</TD>
</TR>
</TABLE>
```

## Inserting Images

To insert a picture into a Web page, the <IMG SRC=" " > tag is used; the path and name of the image is inserted inside the quotes (" "). Both GIF and JPG images can be used in HTML. This image needs to be saved on to the Web server along with the HTML document. Here's an example: <IMG SRC="images/cat.jpg" >. This code also tells the browser that the image "cat.jpg" is in a folder called images. Note that this text in quotes is case-sensitive, and would not work properly if written as <IMG SRC="IMAGES/CAT.JPG" >, unless the folder and file name were also capitalized.

## Creating Links

There are four types of links that are used in Web pages; relative, absolute, internal and mail links. Links are designated in HTML with the "<A HREF="linkhere"> The text that s hould be a hyperlink </A>" tags. For relative, absolute, or mail tags in HTML, follow these steps:

- A relative link connects single pages within the same Web site and is used in navigation bars. To create a relative link use the <A HREF=> tag. After the equal sign type the file path for the page that should be linked to. For example, to link to a page called interests.htm, the relative link would appear as: <A HREF="interests.htm">Interests </A>. The text that should be hyperlinked must be typed between the link and the end </A> tag.
- An absolute link is a connection to another Web page that exists outside of the Web page that is being designed. To create an absolute link in HTML, begin with the <A HREF=> tag. After the equal sign type in quotation marks http:// and the name of the Web site the link should connect to. For example, this is how a link to the Ithaca College Home page would look: <A HREF="http://www.ithaca.edu/">Ithaca College</A>.
- A mailto link opens a user's mail client and inserts an email address into a new compose message window. To insert a mail tag in HTML, use the <A HREF=> tag. After the equal sign type "mailto:theemailaddress@ithaca.edu". A link to the ITS email address would look like this: <A HREF="mailto:its@ithaca.edu">Email ITS </A>.

## Anchors and internal links

Anchors are links that are used to mark a place on a Web page that an internal link will target. Anchors are used in longer Web pages to take viewers to a specific part of the page. For example, a “Top” anchor could be placed at the top of a Web page, and “Return to top” links could be placed throughout a lengthy Web page. This type of anchor would allow the viewer of the page to navigate the page more quickly. Links to anchors require that the anchor name be placed in quotes (“ ”), and that a pound sign (#) be placed before the anchor name in the internal link. Here’s an example:

```
<A NAME="pagetop">  
text text text  
text text  
<A HREF="#pagetop">
```

(Notice that the reference is in quotes and has a “#” symbol before the name of the anchor.)

## Creating a Web Page

To create an HTML document, use Notepad for PCs or SimpleText for Macs. Save the document as an HTML file. For example, the first page of any Web site should be index.htm or .html, because Web browsers automatically open a page called index as the homepage. Save all of the pages and documents from the Web site into one folder. To upload a complete Web page use WS\_FTP for PCs or Fetch for Macs. For help uploading a site, reference the WS\_FTP or Fetch Quick Guides.

## Tips and Tricks

Make the code easy to read

Make lines of HTML code short. This allows typographical errors to be found more easily. HTML is not case sensitive, so a tag written as <HTML> could also be written as <html>, or even <hTML>.

Make sure the page can be viewed easily

Use colors that are easy to see. Find complimentary background and text colors. Use a font size that is large enough to be seen on all types of computer displays.

Reduce download time

Use graphics sparingly, as they take much longer to download than text, and can keep a viewer waiting to see a page. Try using large font sizes and/or colors as alternatives. Create links to other related Web sites instead of duplicating their content.

Pay attention to style

When you create links, do so using text that is already present. For example, instead of writing “If you want to go to my new site, Click Here.” write “Go to my New Site.” Keep sentences and paragraphs short. A good Web page is concise and uncluttered.

## For More Information

A variety of support services are available from ITS if you would like additional help:

Computer training on a variety of topics is available to faculty, staff, and students at no charge through the Technology Learning Center (TLC). Check out the current TLC training schedule online at <https://www.ithaca.edu/its/workshops>

Online documentation and tutorials on IC-supported computing software and systems are available at <https://www.ithaca.edu/its/traindoc>

Frontline computing support is available through the ITS Helpdesk in 104 Job Hall; send e-mail to [helpdesk@ithaca.edu](mailto:helpdesk@ithaca.edu) or call 607-274-1000.

Backline consulting support is available in the Technology Learning Center, room 101 Friends Hall.

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