

HTML

HTML and the Internet

People use language to communicate; so do computers! There are lots of different languages people speak! There are also lots of different languages computers speak! This packet will help you learn a little HTML (Hyper Text Markup Language) and JavaScript.

HTML and Hello World

In Computer Science, there is a tradition of writing a "Hello World" program when you are first learning a new language. "Hello World" may not be a very interesting program, but if you can write a "Hello World" program then you know you can communicate with the computer in that language. That is the first step to being able to do more interesting things. In HTML, the "Hello World" program looks like this:

```
<HTML>
Hello World
</HTML>
```

Exercise 1: To create your own "Hello World"

1. Type the text above into a text editor
 - a. e.g. Notepad: Windows>All Programs>Accessories>Notepad
2. Save as hello.html
3. Double click the file to open it in a browser and see the results!

HTML and the Sandwich

Writing HTML is kind of like making a sandwich. When you make a sandwich you put a piece of bread on top and a piece of bread on bottom, but it doesn't really matter what you put between them. In HTML, you have to put a <HTML> on top, and a </HTML> on bottom, but it doesn't really matter what you put between them. You can put text (like we did when we wrote "Hello World") or you can put other things like pictures, sounds, or links to other pages.

HTML tags

The text between a '<' and '>' has a special name, a *tag*. Each tag tells the computer to do something special, like display the text as HTML, display a picture, skip a line, make the text bold, embed a sound, etc. The <HTML> on top and the </HTML> on bottom are tags. These tags tell the computer to interpret all the text between them as HTML. The tag without the '/' is the *starting tag* because it comes first; the tag with the '/' is the *ending tag*. Not all starting tags have an ending tag. If there is no ending tag, we will call it a *solo tag*. If there is both a starting tag and an ending tag, we will call it a *pair of tags*. In a pair, the property of the tag applies to everything inside the pair of tags.

Parts of a Tag

Each tag has a name; the *name* is the first word in the tag. Many tags also have attributes; an *attribute* consists of a paired name and value. For example, in the tag

, IMG is the tag name, and SRC= "mypic.gif" is the attribute. SRC is the attribute name and mypic.GIF is the attribute value. The name of the tag is not cAsE SeNsITive; that means it doesn't matter if it is lower case or upper case or both. The name of the attribute is not case sensitive either, but the value of the attribute is case. In HTML, there are many different tags and many of the tags have many attributes.

Adjusting White Space

The P tag is a solo tag; it doesn't have any attributes. The P tag skips a line for a new 'P'aragraph. It looks like this : <P>. The BR tag is a solo tag; it doesn't have any attributes. The BR tag starts a new line without skipping a line. It looks like this :
. To see how these tags work we will create a poem as follows:

The text for "p.html" is as follows:

```
<HTML>
The Road Not Taken
<P>
TWO roads diverged in a yellow wood,<BR>
And sorry I could not travel both<BR>
And be one traveler, long I stood<BR>
And looked down one as far as I could<BR>
To where it bent in the undergrowth;<BR>
<P>
I shall be telling this with a sigh <BR>
Somewhere ages and ages hence: <BR>
Two roads diverged in a wood, and I— <BR>
I took the one less traveled by, <BR>
And that has made all the difference.<BR>
</HTML>
```

Exercise 2: Make poem.html using the same steps you used to make hello.html.

Formatting the Title

The H1 tag is a paired tag; it doesn't have any attributes. The B tag makes all the text between its start tag (<H1>) and end tag(</H1>) in a headline font. The CENTER tag is also a paired tag and it centers all of the text between its start tag(<CENTER>) and end tag(</CENTER>).

Exercise 3: Format the title of your poem using an H1 tag and a CENTER tag.

Hello World as a Picture

To create your own graphic:

1. Open a simple art program
 - a. e.g. Paint: Windows>All Programs>Accessories>Paint
2. Adjust the properties of the image
 - a. Select "Attributes" from the "Image" menu
 - b. Set the Width and Height equal to 100 pixels.
3. Create a small graphic
4. Save and exit

IMG tag

The IMG tag is a solo tag with attributes. The IMG tag displays an image(IMaGe). The SRC attribute is the source(SouRCe) of the filename of the picture you want to display. The image tags looks like this .

Exercise 4: Add a leaf image to the bottom of your web page.

JavaScript

JavaScript allows you to add interactivity to your webpage with buttons and other widgets. Type the following code that uses JavaScript to create a colorful webpage.

```
<HTML>
<HEAD><TITLE>Colorful HTML and JavaScript</TITLE></HEAD>
<BODY>
Click below to change the background color.
<FORM>
<INPUT TYPE=radio NAME="color" ONCLICK="document.bgColor = 'pink';"> Pink<BR>
<INPUT TYPE=radio NAME="color" ONCLICK="document.bgColor = 'white';"> White<BR>
<INPUT TYPE=radio NAME="color" ONCLICK="document.bgColor = 'blue';"> Blue<BR>
<INPUT TYPE=radio NAME="color" ONCLICK="document.bgColor = 'red';"> Red<BR>
<INPUT TYPE=radio NAME="color" ONCLICK="document.bgColor = 'green';"> Green<BR>
<INPUT TYPE=radio NAME="color" ONCLICK="document.bgColor = 'black';"> Black<BR>
<INPUT TYPE=radio NAME="color" ONCLICK="document.bgColor = 'cyan';"> Cyan<BR>
<INPUT TYPE=radio NAME="color" ONCLICK="document.bgColor = 'magenta';">
Magenta<BR>
<INPUT TYPE=radio NAME="color" ONCLICK="document.bgColor = 'yellow';">
yellow<BR>
<INPUT TYPE=radio NAME="color" ONCLICK="document.bgColor = 'orange';">
orange<BR>
<INPUT TYPE=radio NAME="color" ONCLICK="document.bgColor = 'gray';"> gray<BR>
<INPUT TYPE=radio NAME="color" ONCLICK="document.bgColor = 'purple';">
purple<BR>
</FORM>
</BODY>
</HTML>
```

Exercise 5: Type the above text and save it as colors.html.

Want to Learn more?

Google: HTML tutorial or JavaScript tutorial

<http://www.w3schools.com>

<http://www.tizag.com>

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