HTML
Hyper Text Markup Language

Tag Reference

Student Guide

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What is the World Wide Web?

- The World Wide Web (WWW) is most often called the Web.
- The Web is a network of computers all over the world.
- All the computers in the Web can communicate with each other.
- All the computers use a communication standard called HTTP.

How does the WWW work?

- Web information is stored in documents called Web pages.
- Web pages are files stored on computers called Web servers.
- Computers reading the Web pages are called Web clients.
- Web clients view the pages with a program called a Web browser.
- Popular browsers are Mozilla Firefox Google Chrome Internet Explorer and Netscape Navigator.

How does the browser fetch the pages?

- A browser fetches a Web page from a server by a request.
- A request is a standard HTTP request containing a page address.
- A page address looks like this: http://www.someone.com/page.htm.

How does the browser display the pages?

- All Web pages contain *instructions for display*
- The browser displays the page by reading these instructions.
- The most common display instructions are called HTML tags.
- HTML tags look like this This is a Paragraph .

Who is making the Web standards?

- The Web standards are not made up by Netscape or Microsoft.
- The rule-making body of the Web is the W3C.
- W3C stands for the World Wide Web Consortium. (http://www.w3.org)
- W3C puts together specifications for Web standards.
- The most essential Web standards are HTML, CSS and XML.
- The latest HTML standard is XHTML 1.0.

Introduction to HTML

What is an HTML File?

- HTML stands for Hyper Text Markup Language
- An HTML file is a text file containing small markup tags
- The markup tags tell the Web browser how to display the page
- An HTML file must have an htm or html file extension
- An HTML file can be created using a simple text editor (Notepad | Notepad++ etc)

Let's try this out!

- start Notepad
- type in the following text:

```
<html>
<head>
<title>Title of page</title>
</head>
<body>
This is my first homepage. <b>This text is bold</b>
</body>
</html>
```

- Save the file as "mypage.htm".
- Start your Internet browser.
- Select "Open" (or "Open Page") in the File menu of your browser.
- A dialog box will appear.
- Select "Browse" (or "Choose File") and locate the HTML file you just created - "mypage.htm" –
- Select it and click "Open".
- Now you should see an address in the dialog box, for example "C:\MyDocuments\mypage.htm".
- Click OK, and the browser will display the page

Example Explained

The first tag in your HTML document is <html>. This tag tells your browser that this is the start of an HTML document. The last tag in your document is </html>. This tag tells your browser that this is the end of the HTML document.

The text between the <head> tag and the </head> tag is header information. Header information is not displayed in the browser window.

The text between the <title> tags is the title of your document. The title is displayed in your browser's caption.

The text between the <body> tags is the text that will be displayed in your browser.

The text between the and tags will be displayed in a bold font.

HTM or HTML Extension?

When you save an HTML file, you can use either the .htm or the .html extension. We have used .htm in our examples.

Note on HTML Editors:

You can easily edit HTML files using a WYSIWYG (what you see is what you get) editor like Adobe Dreamweaver, FrontPage, Claris Home Page, or Adobe PageMill instead of writing your markup tags in a plain text file.

But if you want to be a skillful Web developer, I strongly recommend that you use a plain text editor to learn your primer HTML.

Frequently Asked Questions

Q: After I have edited an HTML file, I cannot view the result in my browser, why?

A: Make sure that you have saved the file with a proper name and extension like "c:\mypage.htm". Also make sure that you use the same name when you open the file in your browser.

Q: I have tried to edit an HTML file but the changes don't show in the browser. Why?

A: The browser caches your pages so it doesn't have to read the same page twice. When you have changed a page, the browser doesn't know that. Use the browsers refresh/reload button to force the browser to read the edited page.

Q: Does my computer have to run Windows, what about a Mac?

A: You can do all your training on a non Windows computer like a Mac.

HTML Elements

HTML documents are text files made up of HTML elements.

HTML elements are defined using HTML tags.

HTML Tags

- HTML tags are used to mark-up HTML elements
- HTML tags are surrounded by the two characters < and >
- The surrounding characters are called angle brackets
- HTML tags normally come in pairs like and
- The first tag in a pair is the start tag, the second tag is the end tag
- The text between the start and end tags is the element content
- HTML tags are not case sensitive, means the same as <B>*

HTML Elements

Remember the HTML example from the previous page:

```
<html>
<head>
<title>Title of page</title>
</head>
<body>
This is my first homepage. <b>This text is bold</b>
</body>
</html>
```

This is an HTML element:

This text is bold

*The HTML element starts with a start tag: *

The content of the HTML element is: This text is bold

*The HTML element ends with an end tag: *

This is also an HTML element:

<body>

This is my first homepage. This text is bold

</body>

This HTML element starts with the start tag <body>, and ends with the end tag </body>.

The purpose of the <body> tag is to define the HTML element that contains the body of the HTML document.

The purpose of the tag is to define an HTML element that should be displayed as bold.

Why do We Use Lowercase Tags?

I have just said that HTML tags are not case sensitive: <B> means the same as . When you surf the Web, you will notice that most tutorials use uppercase HTML tags in their examples. We always use lowercase tags. Why?

If you want to prepare yourself for the next generations of HTML you should start using lowercase tags. The World Wide Web Consortium (W3C) recommends lowercase tags in their HTML 4 recommendation, and XHTML (the next generation HTML) demands lowercase tags.

Tag Attributes

Tags can have attributes. Attributes can provide additional information about the HTML elements on your page.

This tag defines the body element of your HTML page: <body>. With an added bgcolor attribute, you can tell the browser that the background color of your page should be red, like this: <body bgcolor="red">.

This tag defines an HTML table: <table>. With an added border attribute, you can tell the browser that the table should have no borders: <table border="0">

Attributes always come in name/value pairs like this: name="value".

Attributes are always added to the start tag of an HTML element.

Quote Styles, "red" or 'red'?

Attribute values should always be enclosed in quotes. Double style quotes are the most common, but single style quotes are also allowed.

In some rare situations, like when the attribute value itself contains quotes, it is necessary to use single quotes:

name='John "ShotGun" Nelson'

Basic HTML Tags

The most important tags in HTML are tags that define headings, paragraphs and line breaks.

Headings

Headings are defined with the <h1> to <h6> tags. <h1> defines the largest heading. <h6> defines the smallest heading.

<h1>This is a heading</h1>

<h2>This is a heading</h2>

<h3>This is a heading</h3>

<h4>This is a heading</h4>

<h5>This is a heading</h5>

<h6>This is a heading</h6>

HTML automatically adds an extra blank line before and after a heading.

Paragraphs

Paragraphs are defined with the tag.

** This is a paragraph **

** This is another paragraph **

HTML automatically adds an extra blank line before and after a paragraph.

Line Breaks

The <br> tag is used when you want to end a line, but don't want to start a new paragraph. The <br> tag forces a line break wherever you place it.

** This <br> is a para
graph with line breaks **

The <br> tag is an empty tag. It has no closing tag.(in XHTML -
)

Comments in HTML

The comment tag is used to insert a comment in the HTML source code. A comment will be ignored by the browser. You can use comments to explain your code, which can help you when you edit the source code at a later date.

<!-- This is a comment -->

Note that you need an exclamation point after the opening bracket, but not before the closing bracket.

Basic Notes - Useful Tips

When you write HTML text, you can never be sure how the text is displayed in another browser. Some people have large computer displays, some have small. The text will be reformatted every time the user resizes his window. Never try to format the text in your editor by adding empty lines and spaces to the text.

HTML will truncate the spaces in your text. Any number of spaces count as one. Some extra information: In HTML a new line counts as one space.

Using empty paragraphs to insert blank lines is a bad habit. Use the <br> tag instead. (But don't use the <br> tag to create lists. Wait until you have learned about HTML lists.)

You might have noticed that paragraphs can be written without the closing tag . Don't rely on it. The next version of HTML will not allow you to skip ANY closing tags.

HTML automatically adds an extra blank line before and after some elements, like before and after a paragraph, and before and after a heading.

Basic HTML Tags

Tag	Description
<html>	Defines an HTML document
<body>	Defines the document's body
<h1> to <h6>	Defines header 1 to header 6
<p>	Defines a paragraph
** **	Inserts a single line break
<hr>	Defines a horizontal rule
<!-- -->	Defines a comment

HTML Text Formatting

HTML defines a lot of elements for formatting output, like bold or italic text.

How to View HTML Source

Have you ever seen a Web page and wondered "How do they do that?"

To find out, simply click on the VIEW option in your browsers toolbar and select SOURCE or PAGE SOURCE. This will open a window that shows you the actual HTML of the page.

HTML Character Entities

Some characters like the < character, have a special meaning in HTML, and therefore cannot be used in the text.

To display a less than sign (<) in HTML, we have to use a character entity.

Character Entities

Some characters have a special meaning in HTML, like the less than sign (<) that defines the start of an HTML tag. If we want the browser to actually display these characters we must insert character entities in the HTML source.

A character entity has three parts: an ampersand (&), an entity name or a # and an entity number, and finally a semicolon (;).

To display a less than sign in an HTML document we must write: **<** or **<**

The advantage of using a name instead of a number is that a name is easier to remember. The disadvantage is that not all browsers support the newest entity names, while the support for entity numbers is very good in almost all browsers.

Note that the entities are case sensitive.

Non-breaking Space

The most common character entity in HTML is the non-breaking space.

Normally HTML will truncate spaces in your text. If you write 10 spaces in your text HTML will remove 9 of them. To add spaces to your text, use the ** ** character entity.

The Most Common Character Entities:

Result	Description	Entity Name	Entity Number
	non-breaking space		
<	less than	<	<
>	greater than	>	>
&	ampersand	&	&
"	quotation mark	"	"
'	apostrophe		'

Some Other Commonly Used Character Entities:

Result	Description	Entity Name	Entity Number
¢	cent	¢	¢
£	pound	£	£
¥	yen	¥	¥
§	section	§	§
©	copyright	©	©
®	registered trademark	®	®
×	multiplication	×	×
÷	division	÷	÷

HTML Links

HTML uses a hyperlink to link to another document on the Web.

The Anchor Tag and the Href Attribute

HTML uses the <a> (anchor) tag to create a link to another document.

An anchor can point to any resource on the Web: an HTML page, an image, a sound file, a movie, etc.

The syntax of creating an anchor:

Text to be displayed

The <a> tag is used to create an anchor to link from, the href attribute is used to address the document to link to, and the words between the open and close of the anchor tag will be displayed as a hyperlink.

This anchor defines a link to W3Schools:

Visit W3Schools!

The line above will look like this in a browser:

The Target Attribute

With the target attribute, you can define where the linked document will be opened.

The line below will open the document in a new browser window:

<a href="http://www.w3schools.com/"

target="_blank">Visit W3Schools!

The Anchor Tag and the Name Attribute

The name attribute is used to create a named anchor. When using named anchors we can create links that can jump directly into a specific section on a page, instead of letting the user scroll around to find what he/she is looking for.

Below is the syntax of a named anchor:

```
<a name="label">Text to be displayed</a>
```

The name attribute is used to create a named anchor. The name of the anchor can be any text you care to use.

The line below defines a named anchor:

```
<a name="tips">Useful Tips Section</a>
```

You should notice that a named anchor is not displayed in a special way.

To link directly to the "tips" section, add a # sign and the name of the anchor to the end of a URL, like this:

```
<a href="http://www.w3schools.com/html_links.asp#tips">
Jump to the Useful Tips Section</a>
```

A hyperlink to the Useful Tips Section from WITHIN the file "html_links.asp" will look like this:

```
<a href="#tips">Jump to the Useful Tips Section</a>
```

NOTE: **Named anchors are often used to create "table of contents" at the beginning of a large document. Each chapter within the document is given a named anchor, and links to each of these anchors are put at the top of the document.**

If a browser cannot find a named anchor that has been specified, it goes to the top of the document. No error occurs.

HTML Frames

With frames, you can display more than one Web page in the same browser window

Frames

With frames, you can display more than one HTML document in the same browser window. Each HTML document is called a frame, and each frame is independent of the others.

The disadvantages of using frames are:

- The web developer must keep track of more HTML documents
- It is difficult to print the entire page

The Frameset Tag

- The <frameset> tag defines how to divide the window into frames
- Each frameset defines a set of rows or columns
- The values of the rows/columns indicate the amount of screen area each row/column will occupy

The Frame Tag

- The <frame> tag defines what HTML document to put into each frame

In the example below we have a frameset with two columns. The first column is set to 25% of the width of the browser window. The second column is set to 75% of the width of the browser window. The HTML document "frame_a.htm" is put into the first column, and the HTML document "frame_b.htm" is put into the second column:

```
<frameset cols="25%,75%">
  <frame src="frame_a.htm">
  <frame src="frame_b.htm">
</frameset>
```

Basic Notes - Useful Tips

If a frame has visible borders, the user can resize it by dragging the border. To prevent a user from doing this, you can add **noresize="true"** to the **<frame>** tag.

Add the **<noframes>** tag for browsers that do not support frames.

Mixed Frameset

```
<html>

<frameset rows="50%,50%">

<frame src="tryhtml_frame_a.htm">

<frameset cols="25%,75%">
<frame src="tryhtml_frame_b.htm">
<frame src="tryhtml_frame_c.htm">
</frameset>

</frameset>

</html>
```

Inline Frames / IFrame

```
<html>
<body>

<iframe
src ="default.asp.htm">
</iframe>

<p>Some older browsers don't support iframes.</p>
<p>If they don't, the iframe will not be visible.</p>


</body>
</html>
```

Frame Tags

Tag	Description
<frameset>	Defines a set of frames
<frame>	Defines a sub window (a frame)
<noframes>	Defines a noframe section for browsers that do not handle frames
<iframe>	Defines an inline sub window (frame)

HTML Tables

With HTML you can create tables.

Tables

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.

```
<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>
```

How it looks in a browser:

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

Tables and the Border Attribute

If you do not specify a border attribute the table will be displayed without any borders. Sometimes this can be useful, but most of the time, you want the borders to show.

To display a table with borders, you will have to use the border attribute:

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

```
</table>
```

Headings in a Table

Headings in a table are defined with the <th> tag.

```
<table border="1">
<tr>
<th>Heading</th>
<th>Another Heading</th>
</tr>
<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>
```

How it looks in a browser:

Heading	Another Heading
row 1, cell 1	row 1, cell 2
row 2, cell 1	row 2, cell 2

Empty Cells in a Table

Table cells with no content are not displayed very well in most browsers.

```
<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></td>
</tr>
</table>
```

How it looks in a browser:

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

Note that the borders around the empty table cell are missing.

To avoid this, add a non-breaking space ( ) to empty data cells, to make the borders visible:

```
<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> </td>
</tr>
</table>
```

How it looks in a browser:

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

Table Tags

Tag	Description
<table>	Defines a table
<th>	Defines a table header
<tr>	Defines a table row
<td>	Defines a table cell
<caption>	Defines a table caption
<colgroup>	Defines groups of table columns
<col>	Defines the attribute values for one or more columns in a table
<thead>	Defines a table head
<tbody>	Defines a table body
<tfoot>	Defines a table footer

HTML Lists

HTML supports ordered, unordered and definition lists.

Unordered Lists

An unordered list is a list of items. The list items are marked with bullets (typically small black circles).

An unordered list starts with the <ul> tag. Each list item starts with the <li> tag.

```
<ul>
<li>Coffee</li>
<li>Milk</li>
</ul>
```

Here is how it looks in a browser:

- Coffee
- Milk

Inside a list item you can put paragraphs, line breaks, images, links, other lists, etc.

Ordered Lists

An ordered list is also a list of items. The list items are marked with numbers.

An ordered list starts with the <ol> tag. Each list item starts with the <li> tag.

```
<ol>
<li>Coffee</li>
<li>Milk</li>
</ol>
```

Here is how it looks in a browser:

1. Coffee
2. Milk

Inside a list item you can put paragraphs, line breaks, images, links, other lists, etc.

Definition Lists

A definition list is not a list of items. This is a list of terms and explanation of the terms.

A definition list starts with the <dl> tag. Each definition-list term starts with the <dt> tag. Each definition-list definition starts with the <dd> tag.

```
<dl>
<dt>Coffee</dt>
<dd>Black hot drink</dd>
<dt>Milk</dt>
<dd>White cold drink</dd>
</dl>
```

Here is how it looks in a browser:

Coffee
    Black hot drink
Milk
    White cold drink

Inside a definition-list definition (the <dd> tag) you can put paragraphs, line breaks, images, links, other lists, etc.

List Tags

Tag	Description
** **	Defines an ordered list
** **	Defines an unordered list
** **	Defines a list item
<dl>	Defines a definition list
<dt>	Defines a definition term
<dd>	Defines a definition description
<dir>	Deprecated. Use instead
<menu>	Deprecated. Use instead

HTML Forms and Input

HTML Forms are used to select different kinds of user input.

HTML Forms are used to select different kinds of user input.

Forms

A form is an area that can contain form elements.

Form elements are elements that allow the user to enter information (like text fields, textarea fields, drop-down menus, radio buttons, checkboxes, etc.) in a form.

A form is defined with the <form> tag.

```
<form>
 <input>
 <input>
</form>
```

Input

The most used form tag is the <input> tag. The type of input is specified with the type attribute. The most commonly used input types are explained below.

Text Fields

Text fields are used when you want the user to type letters, numbers, etc. in a form.

```
<form>
First name:
<input type="text" name="firstname">
<br>
Last name:
<input type="text" name="lastname">
</form>
```

How it looks in a browser:

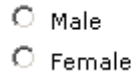
Note that the form itself is not visible. Also note that in most browsers, the width of the text field is 20 characters by default.

Radio Buttons

Radio Buttons are used when you want the user to select one of a limited number of choices.

```
<form>
<input type="radio" name="gender" value="male"> Male
<br>
<input type="radio" name="gender" value="female"> Female
</form>
```

How it looks in a browser:



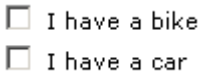
Note that only one option can be chosen.

Checkboxes

Checkboxes are used when you want the user to select one or more options of a limited number of choices.

```
<form>
<input type="checkbox" name="bike">
I have a bike
<br>
<input type="checkbox" name="car">
I have a car
</form>
```

How it looks in a browser:



The Form's Action Attribute and the Submit Button

When the user clicks on the "Submit" button, the content of the form is sent to another file. The form's action attribute defines the name of the file to send the content to. The file defined in the action attribute usually does something with the received input.

```
<form name="input" action="html_form_action.asp"
method="get">
Username:
<input type="text" name="user">
<input type="submit" value="Submit">
</form>
```

How it looks in a browser:

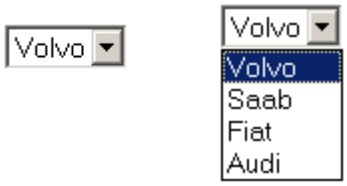
If you type some characters in the text field above, and click the "Submit" button, you will send your input to a page called "html_form_action.asp". That page will show you the received input.

Drop down List box

This control allows you to create a dropdown list box from which you can choose an item at a time. Save space on the screen.

```
<form>
<select name="cars">
<option value="volvo">Volvo
<option value="saab">Saab
<option value="fiat">Fiat
<option value="audi">Audi
</select>
</form>
```

How it looks in the browser:

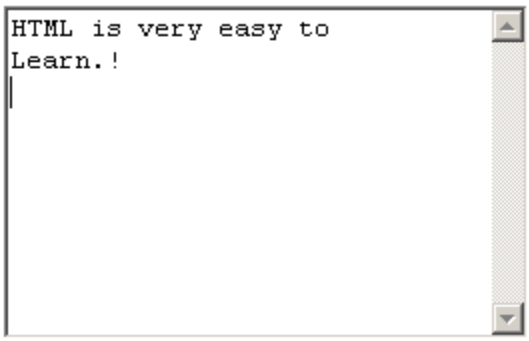


Text Area

A user can write text in the text-area. In a text-area you can write an unlimited number of characters.

```
<textarea cols=”50” rows=”5”>
HTML is very easy to
Learn.!
</textarea>
```

How it looks in the browser:



Fieldset around data

Draws a border with a caption around your data.

```
<fieldset>
<legend>
Health information:
</legend>
<form>
Height <input type="text" size="3">
Weight <input type="text" size="3">
</form>
</fieldset>
```

How it looks in the browser:

If there is no border around the input form, your browser is too old.

Form Tags

Tag	Description
<form>	Defines a form for user input
<input>	Defines an input field
<textarea>	Defines a text-area (a multi-line text input control)
<label>	Defines a label to a control
<fieldset>	Defines a fieldset
<legend>	Defines a caption for a fieldset
<select>	Defines a selectable list (a drop-down box)
<optgroup>	Defines an option group
<option>	Defines an option in the drop-down box
<button>	Defines a push button

HTML Images

With HTML you can display images in a document.

The Image Tag and the Src Attribute

In HTML, images are defined with the <img> tag.

The <img> tag is empty, which means that it contains attributes only and it has no closing tag.

To display an image on a page, you need to use the src attribute. Src stands for "source". The value of the src attribute is the URL of the image you want to display on your page.

The syntax of defining an image:

```
<img src="url">
```

The URL points to the location where the image is stored. An image named "boat.gif" located in the directory "images" on "www.w3schools.com" has the URL: http://www.w3schools.com/images/boat.gif.

The browser puts the image where the image tag occurs in the document. If you put an image tag between two paragraphs, the browser shows the first paragraph, then the image, and then the second paragraph.

The Alt Attribute

The alt attribute is used to define an "alternate text" for an image. The value of the alt attribute is an author-defined text:

```
<img src="boat.gif" alt="Big Boat">
```

The "alt" attribute tells the reader what he or she is missing on a page if the browser can't load images. The browser will then display the alternate text instead of the image. It is a good practice to include the "alt" attribute for each image on a page, to improve the display and usefulness of your document for people who have text-only browsers.

```
<img src="boat.gif"
alt="Big Boat"
 height=”150”
width=”350”
border=”0”
align=”left”
 hspace=”10”
 vspace=”20”>
```

HTML Backgrounds

A good background can make a Web site look really great.

Backgrounds

The <body> tag has two attributes where you can specify backgrounds. The background can be a color or an image.

Bgcolor

The bgcolor attribute sets the background to a color. The value of this attribute can be a hexadecimal number, an RGB value, or a color name.

```
<body bgcolor="#000000">
<body bgcolor="rgb(0,0,0)">
<body bgcolor="black">
```

The lines above all set the background color to black.

Background

The background attribute sets the background to an image. The value of this attribute is the URL of the image you want to use. If the image is smaller than the browser window, the image will repeat itself until it fills the entire browser window.

```
<body background="clouds.gif">
<body background="http://www.w3schools.com/clouds.gif">
```

The URL can be relative (as in the first line above) or absolute (as in the second line above).

Note: If you want to use a background image, you should keep in mind:

- Will the background image increase the loading time too much? Tip: Image files should be maximum 10k
- Will the background image look good with other images on the page?
- Will the background image look good with the text colors on the page?
- Will the background image look good when it is repeated on the page?
- Will the background image take away the focus from the text?

Basic Notes - Useful Tips

The bgcolor, background, and the text attributes in the <body> tag are deprecated in the latest versions of HTML (HTML 4 and XHTML). The World Wide Web Consortium (W3C) has removed these attributes from its recommendations. In future versions of HTML, style sheets (CSS) will be used to define the layout and display properties of HTML elements.

Few of the most visited web sites use background images.

The most used background colors are: white, black and gray.

HTML Fonts

The <font> tag in HTML is deprecated. It is supposed to be removed in a future version of HTML.

Even if a lot of people are using it, you should try to avoid it, and use styles instead.

The HTML <font> Tag

With HTML code like this, you can specify both the size and the type of the browser output:

```
<p>
<font size="2" face="Verdana">
This is a paragraph.
</font>
</p>
<p>
<font size="3" face="Times">
This is another paragraph.
</font>
</p>
```

Font Attributes

Attribute	Example	Purpose
size="number"	size="2"	Defines the font size
size="+number"	size="+1"	Increases the font size
size="-number"	size="-1"	Decreases the font size
face="face-name"	face="Times"	Defines the font-name
color="color-value"	color="#eeff00"	Defines the font color
color="color-name"	color="red"	Defines the font color

The <font> Tag Should NOT be Used

The <font> tag is deprecated in the latest versions of HTML (HTML 4 and XHTML).

The World Wide Web Consortium (W3C) has removed the <font> tag from its recommendations. In future versions of HTML, style sheets (CSS) will be used to define the layout and display properties of HTML elements.

The Meta Element

HTML also includes a meta element that goes inside the head element. The purpose of the meta element is to provide meta-information about the document.

Most often the meta element is used to provide information that is relevant to browsers or search engines like describing the content of your document.

Keywords for Search Engines

Some search engines on the WWW will use the name and content attributes of the meta tag to index your pages.

This meta element defines a description of your page:
<meta name="description" content="Free Web tutorials on HTML, CSS, XML, and XHTML">

This meta element defines keywords for your page:
<meta name="keywords" content="HTML, DHTML, CSS, XML, XHTML, JavaScript, VBScript">

The intention of the name and content attributes is to describe the content of a page.

However, since too many webmasters have used meta tags for spamming, like repeating keywords to give pages a higher ranking, some search engines have stopped using them entirely.

Uniform Resource Locators

Something called a Uniform Resource Locator (URL) is used to address a document (or other data) on the World Wide Web. A full Web address like this: http://www.w3schools.com/html/lastpage.htm follows these syntax rules:

scheme://host.domain:port/path/filename

The **scheme** is defining the **type** of Internet service. The most common type is **http**.

The **domain** is defining the Internet **domain name** like w3schools.com.

The **host** is defining the domain host. If omitted, the default host for http is **www**.

The **:port** is defining the **port number** at the host. The port number is normally omitted. The default port number for http is **80**.

The **path** is defining a **path** (a sub directory) at the server. If the path is omitted, the resource (the document) must be located at the root directory of the Web site.

The **filename** is defining the name of a document. The default filename might be default.asp, or index.html or something else depending on the settings of the Web server.

HTML 4.01 Quick List

HTML Basic Document

```
<html>
<head>
<title>Document name goes here</title>
</head>

<body>
Visible text goes here
</body>

</html>
```

Heading Elements

```
<h1>Largest Heading</h1>

<h2> . . . </h2>
<h3> . . . </h3>
<h4> . . . </h4>
<h5> . . . </h5>

<h6>Smallest Heading</h6>
```

Text Elements

```
<p>This is a paragraph</p>
<br> (line break)
<hr> (horizontal rule)
<pre>This text is preformatted</pre>
```

Logical Styles

```
<em>This text is emphasized</em>
<strong>This text is strong</strong>
<code>This is some computer code</code>
```

Physical Styles

```
<b>This text is bold</b>
<i>This text is italic</i>
```

Links, Anchors, and Image Elements

```
<a href="http://www.w3schools.com/">This is a Link</a>
<a href="http://www.w3schools.com/"><img src="URL" alt="Alternate Text"></a>
<a href="#anchor_name">This is an anchor</a>
<a href="mailto:someone@microsoft.com">Send Mail</a>
```

Unordered list

```
<ul>
<li>First item</li>
<li>Next item</li>
</ul>
```

Ordered list

```
<ol>
<li>First item</li>
<li>Next item</li>
</ol>
```

Definition list

```
<dl>
<dt>First term</dt>
<dd>Definition</dd>
<dt>Next term</dt>
<dd>Definition</dd>
</dl>
```

Tables

```
<table border="1">
<tr>
<th>someheader</th>
<th>someheader</th>
</tr>
<tr>
<td>sometext</td>
<td>sometext</td>
</tr>
</table>
```

Frames

```
<frameset cols="25%,75%">
  <frame src="page1.htm">
  <frame src="page2.htm">
</frameset>
```

Forms

```
<form action="http://www.somewhere.com/somepage.asp" method="post/get">

<input type="text" name="lastname" value="Nixon" size="30" maxlength="50">
<input type="password">
<input type="checkbox" checked="checked">
<input type="radio" checked="checked">
<input type="submit">
<input type="reset">
<input type="hidden">

<select>
<option>Apples
<option selected>Bananas
<option>Cherries
</select>

<textarea name="Comment" rows="60" cols="20"></textarea>

</form>
```

Entities

```
&lt; is the same as <
&gt; is the same as >
&#169; is the same as ©
```

Other Elements

```
<!-- This is a comment -->

<blockquote>
Text quoted from some source.
</blockquote>

<address>
Address 1<br>
Address 2<br>
City<br>
</address>
```

HTML 4.01 Reference

Tag	Description	NN	IE
<!--...-->	Defines a comment	3.0	3.0
<!DOCTYPE>	Defines the document type		
<a>	Defines an anchor	3.0	3.0
<abbr>	Defines an abbreviation	6.2	
<acronym>	Defines an acronym	6.2	4.0
<address>	Defines an address element	4.0	4.0
<applet>	Defines an applet	3.0	3.0
<area>	Defines an area inside an image map	3.0	3.0
<b>	Defines bold text	3.0	3.0
<base>	Defines a base URL for all the links in a page	3.0	3.0
<basefont>	Defines a base font	3.0	3.0
<bdo>	Defines the direction of text display	6.2	5.0
<big>	Defines big text	3.0	3.0
<blockquote>	Defines a long quotation	3.0	3.0
<body>	Defines the body element	3.0	3.0
** **	Inserts a single line break	3.0	3.0
<button>	Defines a push button	6.2	4.0
<caption>	Defines a table caption	3.0	3.0
** **	Defines centered text	3.0	3.0
<cite>	Defines a citation	3.0	3.0
<code>	Defines computer code text	3.0	3.0
<col>	Defines attributes for table columns		3.0
<colgroup>	Defines groups of table columns		3.0
<dd>	Defines a definition description	3.0	3.0
<del>	Defines deleted text	6.2	4.0
<dir>	Defines a directory list	3.0	3.0

<dfn>	Defines a definition term		3.0
** **	Defines a section in a document	3.0	3.0
<dl>	Defines a definition list	3.0	3.0
<dt>	Defines a definition term	3.0	3.0
****	Defines emphasized text	3.0	3.0
<fieldset>	Defines a fieldset	6.2	4.0
<font>	Defines the font face, size, and color of text	3.0	3.0
<form>	Defines a form	3.0	3.0
<frame>	Defines a sub window (a frame)	3.0	3.0
<frameset>	Defines a set of frames	3.0	3.0
<h1> to <h6>	Defines header 1 to header 6	3.0	3.0
<head>	Defines information about the document	3.0	3.0
<hr>	Defines a horizontal rule	3.0	3.0
<html>	Defines an html document	3.0	3.0
<i>	Defines italic text	3.0	3.0
<iframe>	Defines an inline sub window (frame)	6.0	4.0
<img>	Defines an image	3.0	3.0
<input>	Defines an input field	3.0	3.0
<ins>	Defines inserted text	6.2	4.0
<isindex>		3.0	3.0
<kbd>	Defines keyboard text	3.0	3.0
<label>	Defines a label	6.2	4.0
<legend>	Defines a title in a fieldset	6.2	4.0
** **	Defines a list item	3.0	3.0
<link>	Defines a resource reference	4.0	3.0
<map>	Defines an image map	3.0	3.0
<menu>	Defines a menu list	3.0	3.0
<meta>	Defines meta information	3.0	3.0
<noframes>	Defines a noframe section	3.0	3.0
<noscript>	Defines a noscript section	3.0	3.0
<object>	Defines an embedded object		3.0
** **	Defines an ordered list	3.0	3.0
<optgroup>	Defines an option group	6.0	
<option>	Defines an option in a drop-down list	3.0	3.0
<p>	Defines a paragraph	3.0	3.0
<param>	Defines a parameter for an object	3.0	3.0
<pre>	Defines preformatted text	3.0	3.0
<q>	Defines a short quotation	6.2	
<s>	Defines strikethrough text	3.0	3.0
<samp>	Defines sample computer code	3.0	3.0
<script>	Defines a script	3.0	3.0
<select>	Defines a selectable list	3.0	3.0
<small>	Defines small text	3.0	3.0
****	Defines a section in a document	4.0	3.0

<strike>	Defines strikethrough text	3.0	3.0
****	Defines strong text	3.0	3.0
<style>	Defines a style definition	4.0	3.0
<sub>	Defines subscripted text	3.0	3.0
<sup>	Defines superscripted text	3.0	3.0
<table>	Defines a table	3.0	3.0
<tbody>	Defines a table body		4.0
<td>	Defines a table cell	3.0	3.0
<textarea>	Defines a text area	3.0	3.0
<tfoot>	Defines a table footer		4.0
<th>	Defines a table header	3.0	3.0
<thead>	Defines a table header		4.0
<title>	Defines the document title	3.0	3.0
<tr>	Defines a table row	3.0	3.0
<tt>	Defines teletype text	3.0	3.0
<u>	Defines underlined text	3.0	3.0
** **	Defines an unordered list	3.0	3.0
<var>	Defines a variable	3.0	3.0

ASCII Entities with new Entity Names

Result	Description	Entity Name	Entity Number
"	quotation mark	&quot;	&#34;
&	ampersand	&amp;	&#38;
<	less-than	&lt;	&#60;
>	greater-than	&gt;	&#62;

ISO 8859-1 Symbol Entities

Result	Description	Entity Name	Entity Number
	non-breaking space		
¡	inverted exclamation mark	&iexcl;	&#161;
¤	currency	&curren;	&#164;
¢	cent	&cent;	&#162;
£	pound	&pound;	&#163;
¥	yen	&yen;	&#165;
¦	broken vertical bar	&brvbar;	&#166;
§	section	&sect;	&#167;
¨	spacing diaeresis	&uml;	&#168;
©	copyright	&copy;	&#169;
ª	feminine ordinal indicator	&ordf;	&#170;
«	angle quotation mark (left)	&laquo;	&#171;
¬	negation	&not;	&#172;
	soft hyphen	&shy;	&#173;

®	registered trademark	®	®
¯	spacing macron	¯	¯
°	degree	°	°
±	plus-or-minus	±	±
²	superscript 2	²	²
³	superscript 3	³	³
´	spacing acute	´	´
µ	micro	µ	µ
¶	paragraph	¶	¶
·	middle dot	·	·
¸	spacing cedilla	¸	¸
¹	superscript 1	¹	¹
º	masculine ordinal indicator	º	º
»	angle quotation mark (right)	»	»
¼	fraction 1/4	¼	¼
½	fraction 1/2	½	½
¾	fraction 3/4	¾	¾
¿	inverted question mark	¿	¿
×	multiplication	×	×
÷	division	÷	÷

ISO 8859-1 Character Entities

Result	Description	Entity Name	Entity Number
À	capital a, grave accent	À	À
Á	capital a, acute accent	Á	Á
Â	capital a, circumflex accent	Â	Â
Ã	capital a, tilde	Ã	Ã
Ä	capital a, umlaut mark	Ä	Ä
Å	capital a, ring	Å	Å
Æ	capital ae	Æ	Æ
Ç	capital c, cedilla	Ç	Ç
È	capital e, grave accent	È	È
É	capital e, acute accent	É	É
Ê	capital e, circumflex accent	Ê	Ê
Ë	capital e, umlaut mark	Ë	Ë
Ì	capital i, grave accent	Ì	Ì
Í	capital i, acute accent	Í	Í
Î	capital i, circumflex accent	Î	Î
Ï	capital i, umlaut mark	Ï	Ï
Ð	capital eth, Icelandic	Ð	Ð
Ñ	capital n, tilde	Ñ	Ñ
Ò	capital o, grave accent	Ò	Ò
Ó	capital o, acute accent	Ó	Ó

Ô	capital o, circumflex accent	Ô	Ô
Õ	capital o, tilde	Õ	Õ
Ö	capital o, umlaut mark	Ö	Ö
Ø	capital o, slash	Ø	Ø
Ù	capital u, grave accent	Ù	Ù
Ú	capital u, acute accent	Ú	Ú
Û	capital u, circumflex accent	Û	Û
Ü	capital u, umlaut mark	Ü	Ü
Ý	capital y, acute accent	Ý	Ý
Þ	capital THORN, Icelandic	Þ	Þ
ß	small sharp s, German	ß	ß
à	small a, grave accent	à	à
á	small a, acute accent	á	á
â	small a, circumflex accent	â	â
ã	small a, tilde	ã	ã
ä	small a, umlaut mark	ä	ä
å	small a, ring	å	å
æ	small ae	æ	æ
ç	small c, cedilla	ç	ç
è	small e, grave accent	è	è
é	small e, acute accent	é	é
ê	small e, circumflex accent	ê	ê
ë	small e, umlaut mark	ë	ë
ì	small i, grave accent	ì	ì
í	small i, acute accent	í	í
î	small i, circumflex accent	î	î
ï	small i, umlaut mark	ï	ï
ð	small eth, Icelandic	ð	ð
ñ	small n, tilde	ñ	ñ
ò	small o, grave accent	ò	ò
ó	small o, acute accent	ó	ó
ô	small o, circumflex accent	ô	ô
õ	small o, tilde	õ	õ
ö	small o, umlaut mark	ö	ö
ø	small o, slash	ø	ø
ù	small u, grave accent	ù	ù
ú	small u, acute accent	ú	ú
û	small u, circumflex accent	û	û
ü	small u, umlaut mark	ü	ü
ý	small y, acute accent	ý	ý
þ	small thorn, Icelandic	þ	þ
ÿ	small y, umlaut mark	ÿ	ÿ

Some Other Entities supported by HTML

Result	Description	Entity Name	Entity Number
Œ	capital ligature OE	Œ	Œ
œ	small ligature oe	œ	œ
Š	capital S with caron	Š	Š
š	small S with caron	š	š
Ÿ	capital Y with diaeres	Ÿ	Ÿ
ˆ	modifier letter circumflex accent	ˆ	ˆ
˜	small tilde	˜	˜
	en space		
	em space		
	thin space		
	zero width non-joiner	‌	‌
	zero width joiner	‍	‍
	left-to-right mark	‎	‎
	right-to-left mark	‏	‏
–	en dash	–	–
—	em dash	—	—
‘	left single quotation mark	‘	‘
’	right single quotation mark	’	’
‚	single low-9 quotation mark	‚	‚
“	left double quotation mark	“	“
”	right double quotation mark	”	”
„	double low-9 quotation mark	„	„
†	dagger	†	†
‡	double dagger	‡	‡
‰	per mille	‰	‰
‹	single left-pointing angle quotation	‹	‹
›	single right-pointing angle quotation	›	›
€	euro	€	€
™	trademark		™

Cross Platform Colors

000000	000033	000066	000099	0000CC	0000FF
003300	003333	003366	003399	0033CC	0033FF
006600	006633	006666	006699	0066CC	0066FF
009900	009933	009966	009999	0099CC	0099FF
00CC00	00CC33	00CC66	00CC99	00CCCC	00CCFF
00FF00	00FF33	00FF66	00FF99	00FFCC	00FFFF
330000	330033	330066	330099	3300CC	3300FF
333300	333333	333366	333399	3333CC	3333FF

336600	336633	336666	336699	3366CC	3366FF
339900	339933	339966	339999	3399CC	3399FF
33CC00	33CC33	33CC66	33CC99	33CCCC	33CCFF
33FF00	33FF33	33FF66	33FF99	33FFCC	33FFFF
660000	660033	660066	660099	6600CC	6600FF
663300	663333	663366	663399	6633CC	6633FF
666600	666633	666666	666699	6666CC	6666FF
669900	669933	669966	669999	6699CC	6699FF
66CC00	66CC33	66CC66	66CC99	66CCCC	66CCFF
66FF00	66FF33	66FF66	66FF99	66FFCC	66FFFF
990000	990033	990066	990099	9900CC	9900FF
993300	993333	993366	993399	9933CC	9933FF
996600	996633	996666	996699	9966CC	9966FF
999900	999933	999966	999999	9999CC	9999FF
99CC00	99CC33	99CC66	99CC99	99CCCC	99CCFF
99FF00	99FF33	99FF66	99FF99	99FFCC	99FFFF
CC0000	CC0033	CC0066	CC0099	CC00CC	CC00FF
CC3300	CC3333	CC3366	CC3399	CC33CC	CC33FF
CC6600	CC6633	CC6666	CC6699	CC66CC	CC66FF
CC9900	CC9933	CC9966	CC9999	CC99CC	CC99FF
CCCC00	CCCC33	CCCC66	CCCC99	CCCCCC	CCCCFF
CCFF00	CCFF33	CCFF66	CCFF99	CCFFCC	CCFFFF
FF0000	FF0033	FF0066	FF0099	FF00CC	FF00FF
FF3300	FF3333	FF3366	FF3399	FF33CC	FF33FF
FF6600	FF6633	FF6666	FF6699	FF66CC	FF66FF
FF9900	FF9933	FF9966	FF9999	FF99CC	FF99FF
FFCC00	FFCC33	FFCC66	FFCC99	FFCCCC	FFCCFF
FFFF00	FFFF33	FFFF66	FFFF99	FFFFCC	FFFFFF

End of Book – Good Luck!