Essential HTML Tags

There are four sets of HTML tags that are needed to form the basic structure for every HTML file:

- <html></html>
- <head></head>
- <title></title>
- <body></body>

Definition - `<html> </html>`
> This basically defines the document as web page. It also identifies the beginning and end of the HTML document. All other tags must fall between the `html` tags.

Header - `<head> </head>`

> The header contains information about the document that will not appear on the actual page, such as the title of the document, the author, which stylesheet to use and also meta tags.

Title - `<title> </title>`

> The `title` tag defines the title that will appear in the title bar of your web browser. The `title` must appear between the `head` tags.

Body - `<body> </body>`

> The `body` tags contain all the information and other visible content on the page. All your images, links and plain text must go between the `<body>` and `</body>` tags.

These four tags are special. There must only be one set of each and they must be in the correct order like in the example below. The fun and creative part comes when using the basic tags for adding content and headings.

Sections, Divisions & Lines

These are the tags used to divide your page up into sections. Effective use of these tags will mean that the page has a good structure and layout, making it more user friendly and easier to read.

Division - `<div> </div>`
> The `div` tag defines a section or division within a HTML file. It typically contains headings, paragraphs, tables or other elements that need to be grouped together. Commonly used with css by setting the `<div class="?">` attribute to set the look and feel of a section of your web page.

Paragraph - `<p> </p>`
> Used to define paragraphs of text, much like you would see in a book. A lot of text can appear within the `<p>` and `</p>` tags, and browsers will automatically wrap the text onto the next line once it reaches the edge of the screen. When another `<p>` tag is used to start the next paragraph, the browser will add some blank space between the paragraphs. It has the following attributes:
> `align="?"` - Alignment of text in the paragraph: `left`, `center` or `right` (*)
> `width="?"` - Paragraph will occupy a fixed width or percentage of the page, default 100%

Span - `<span> </span>`

> Used to group inline elements together, such as a few words within a sentence, in order to apply a css style to those words only. The `span` tag can be used within `div` and `p` tags as it does not create a new horizontal block boundary.

Line Break - `<br>`

> Equivalent to one carriage return, it is used to start text on a new line. Multiple `<br>` tags in a row will create a large vertical space on a web page.

Horizontal Line - `<hr>`

> The horizontal rule, often referred to as the HTML line separator tag, creates a horizontal line commonly used to visually separate sections on a page. It has the following attributes:
> `width="??%"` - The line will occupy a fixed width or percentage of the default 100% width.
> `color="#??????"` - Colour of the line (*)
> `noshade` - Prevent the 3D 'etched' look and create a flat, solid line separator.

No Breaks - `<nobr> </nobr>`

> If for some reason you want text to continue in one straight line, and not to wrap at the edge of the screen screen, you can use the `nobr`. Note: this will force a user to scroll to the right to see the rest of the line, which is considered bad design.

Text Formatting Tags

The following HTML tags are used to format the appearance of the text on your web page. This can jazz up the look of the web page, *however,* too much variety in the text formatting can also look displeasing.

Header - `<h?> </h?>`

> There are 6 levels of headings available, from `h1` for the largest and most important heading, down to `h6` for the smallest heading.

Bold - `<b> </b>`

> The text in between the tags will be bold, and stand out against text around it, the same as in a word processor.

Italic - `<i> </i>`

> Also working the same way as a word processor, italics displays the text at a slight angle.

Underline - `<u> </u>`

> Again, the same as underline in a word processor. Note that html links are already underlined and don't need the extra tag.

Strike-out - `<strike> </strike>`

> Puts a line right through the centre of the text, crossing it out. Often used to show that text is old and no longer relevant. Also works by using `<s> </s>` instead.

Preformatted Text - `<pre> </pre>`

> Any text between the `pre` tags, including spaces, carriage returns and punctuation, will appear in the browser as it would in a text editor (normally browsers ignore multiple spaces)

Source Code - `<code> </code>`

> Text is displayed in a fixed-width font, commonly used when showing source code. I have used it on this site, along with stylesheets, to show all tags.

Typewriter Text - `<tt> </tt>`

> The text appears to have been typed by a typewriter, in a fixed-width font. (*)

Block Quote - `<blockquote> </blockquote>`

Defines a long quotation, and the quote is displayed with an extra wide margin on the left hand side of the block quote.

Small - `<small> </small>`

Instead of having to set a font size, you can use the `small` tag to render text slightly smaller than the text around it. Useful for displaying the 'fine-print'.

Font Colour - `<font color="#??????"> </font>` (*)

Change the colour of a few words or a section of text. The 6 question marks represent the hex color code, see this list of colours and codes for some samples. (*)

Font Size - `<font size="?"> </font>`

Replace the ? with a number from 1 to 7 to change the size of the font. One being the smallest and seven the largest. (*)

Font Size Change - `<font size="+/-?"> </font>`

For an immediate change of font size with respect to the font size preceding it, this tag increase or decreases the size of the font by the number you specify. Eg: `<font size="-1">`Some Text`</font>` (*)

Change Font Face - `<font face="?"> </font>`

To show text in a particular font, use the font name such "Helvetica" or "Arial" or "Courier". Be aware that using some fancy font from your computer means that the person viewing that page must also have that font installed on their computer too, otherwise it will look totally different to them. (*)

Centre - `<center> </center>`

A useful tag, as it says, it makes everything in between the tags centred (in the middle of the page). (*)

Emphasis - `<em> </em>`

Used to emphasize text, which usually appears in italics, but can vary according to your browser.

Strong Emphasis - `<strong> </strong>`

Used to emphasize text more, which usually appears in bold, but can vary according to your browser.

Images

Images are used in HTML documents to one: make the page visually effective and two: display information. Images can also be used as links, but this is discussed in the topic on linking.

Although images are good for a number of things, a page with too many images often looks too cluttered and can take too long to load, which can be frustrating, and as a business aspect it could lose clients.

An image - `<img src="url">`

To display an image you need to specify the URL of the image using the `src` attribute, replacing `url` with the filename of your image. There are several ways this can be done:

`src="picture.jpg"` - the filename if the image is in the same directory as the html file.

`src="images/picture.jpg"` - a relative path when the image is in another directory.

`src="http://www.simplehtmlguide.com/images/photo.jpg"` - a full URL can also be used.

Alternate Text - `<img ... alt="?">`

The `alt` <u>attribute</u> defines the text shown in place of an image when the image cannot load. This is actually a required attribute for valid html, and should briefly describe what the image normally would.

Image Size - `<img ... width="?" height="?">`

An image will normally be shown actual size, but by using the `width` and `height` attributes you can change the displayed size. You can specify the size in pixels or as a percentage. Tip: specify the size using the actual size of the image in pixels to force browsers to allocate space for the image before it is even loaded, ensuring you page layout remains the same with or without images displayed.

Border - `<img ... border="?">`

Add a border by specifying the thickness in pixels. You can also set `border="0"` to remove the border added when images are used as links. <u>(*)</u>

Image Alignment - `<img ... align="?">`

By default an image appears at the place specified in the html code(as with any other tag). However, you can align an image with the surrounding text or paragraph by setting any of `align="left | right | top | bottom | middle"`. <u>(*)</u>

Spacing - `<img ... vspace="?" hspace="?">`

Adjust the whitespace (or runaround space) around an image, in pixels. Use `vspace` to adjust the vertical spacing above and below, or `hspace` for the left and right sides. <u>(*)</u>

HTML Linking Tags

Learn how to create links on your web page. Links allow you to jump from one page to another by clicking on the link text. You can also jump to places on the same page (called <u>fragments</u>), to different sections of your site, or to another web site alltogether.

Basic Link - `<a href="`*url*`">link text</a>`

There are two main parts to a link tag: the text a user can click, and the web address they go to if they click it. The bit between the `<a>` and `</a>` tags is the link text, and is generally displayed in blue and underlined by web browsers. The `href="url"` part is the web address, where `url` can be set in several ways:

`href="example.html"` - another page in the current directory

`href="example/page.html"` - a relative location

`href="http://www.example.com/page.html"` - a full address (<u>URL</u>).

Link to a Fragment - `<a href="#`*fragment*`">link</a>`

It is often usefull to link to other places on the same webpage, such as other sections or chapters further down the page. The technical term for this is linking to a <u>Fragment</u>, where browsers will automatically try and scroll to that part of the page.

Fragments first need to be defined somewhere in a webpage by giving them a name, for example `<a name="fragment_name">`, then links to this fragment are created by using the hash (#) character: `<a href="#fragment_name">Link</a>`. To link to a fragment on another page you would simply append the fragment name to the address, for example: `href="example.html#fragment_name"`.

Target Window - `<a href="url" target="???">link</a>`

You may not always want to link to a page and have it load up over the one you are currently viewing. Thats where the `target` attribute comes in handy. By setting the `target="_BLANK"` the page you link to will load up in a new window (or new tab in some newer browsers). Similary, `"_self"`, `"_parent"`, or `"_top"` will open the link in the current window, the parent window (used with <u>frames</u>) or the top level window, respectively.

Image as a Link - `<a href="url"><img ...></a>`

By placing an <u>image tag</u> between the `<a>` and `</a>` tags, you can turn an image into a link, and clicking on that image will then load the referenced page. You may notice that the image gets a blue border just as link text became underlined. This can be resolved by setting the `border="0"` attribute of the image, or using <u>CSS</u>.

Email Link - `<a href="mailto:email"></a>`

A special kind of link, the `mailto` notation link instructs the browser to compose and email to the specified address using the default email program. It but does not actually send any emails automatically. You can also set a subject for the email by using `<a href="mailto:lhenry23@gsu.edu?Subject=Linking">email me</a>`. You may notice that I have used this type of link over on the <u>contact me</u> page.

HTML Lists

Learn how to create lists on a web page. Lists are the preferred way to display items one after the other, instead of using `<br>` tags. Lists have a tag to start and end the list itself, as well as a tag for each item in the list.

There are three types of lists, _<u>ordered</u>_, _<u>unordered</u>_ and _<u>definition</u>_ lists.

Unordered Lists

An unordered list is a bulleted list, similar to the menu on the right (although the menu has been altered using <u>stylesheets</u> to use images instead of the standard bullets.)

Define Unordered List - `<ul> ... </ul>`

Use the `<ul>` tags to define the start and end of an unordered list. A number of list items (`li` elements) will go within the `ul` tags.

Unordered List Item - `<li> some item </li>`

Add the text for each item in between some `<li>` and `</li>` tags. Each list item must have its own `li` tags.

Bullet Type `<ul type="disc | circle | square">`

By default a browser will show a round bullet. This can be changed by using the `type` <u>attribute</u> of the `ul` tag, which will change the bullet type for the entire list.

Item Type `<li type="?">`

You can set the type of bullet for an item in the middle of the list by setting the `type` attribute of an `li` tag.

HTML Tables

Table tags are used for displaying spreadhseet-like data neatly formatted in rows and columns. They can also be used to design page layouts by placing content into invisible rows and columns of a 'table'.

Table - `<table> ... </table>`
Used to define a table, it contains all row and column tags along with their content. Think of it like the `body`tag, although there must always be at least one row in a table. It has some <u>attributes</u> to define the table layout.
`border="?"` - The size of the border (in pixels) surrounding the table
`cellspacing="?"` - The space (in pixels) between each cell, eg. between rows or columns
`cellpadding="?"` - The space, or margin, between the content of a cell and its border
Table Row - `<tr> </tr>`
To start a table row, the `tr` tags must appear within the `table` tags.
Table Cell - `<td> </td>`
A table cell is where the content goes. Cells must exist within rows, where the number of cells in a row determines the number of columns in the table. Cell properties can be set using the <u>attributes</u>:
`align="?"` - Alignment of text in the cell: `left`, `center` or `right` <u>(*)</u>

`valign="?"` - Vertical alignment of the cell: `top`, `middle` or `bottom`.

`width="?"` - Specify a fixed with of a cell, by default they will only take up as much space as they need.

`colspan="?"` - Column spanning allows a cell to take up more than one column, in order to match layouts of other rows. Replace `?` with the number of columns to span.

`rowspan="?"` - Row spanning, similar to column spanning, forces a cell to occupy more than one row.

`nowrap` - No text in the cell will be wrapped onto the next line. Similar to the `nobr` tag for paragraphs

Header Cell - `<th> </th>`

Similar to a table cell, a header cell must appear within a table row. Normally found in the first row, header cells are usually shown in bold and centered by the browser.

Miscellaneous HTML Tags

Tags that don't seem to fit in any other section ...

Comment - `<!-- hello world -->`

Anything between the comment tags is not displayed by the browser, so they are used to document your html code, or sometimes for hiding sections of html that you don't want to delete just yet.

Document Type - `<!DOCTYPE ... >`

The purpose of the `DOCTYPE` declaration is to define the type of HTML document to web browsers, more specifically, which versions of HTML to use. The `DOCTYPE` should appear on the first line of a file, even before the `html` tag, and will typically be similar to one of the following:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
"http://www.w3.org/TR/html4/strict.dtd">
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

META Tags - `<meta>`

Meta tags contain information about the page that does not need to be displayed, but it still used by search engines and other web crawlers. They are typically used to give search engines a brief description of the page, as well as the important keywords on it. Meta tags must appear within the `head` section of the html, and have usually have two of the following attributes:

`name="?"` - The name of the meta tag, such as `description`, `keywords` or `author`.

`content="?"` - The actual content or value of what was specified in the `name` attribute. Can also be used along with `http-eqeiv`.

`http-equiv="?"` - An alternate way of defining names for some special meta tags such as content-type and language.

Also see the table of <u>Page Transition Meta Tags</u>.

Special HTML Characters

There are a number of special characters that are reserved by the HTML language, which will not appear correctly unless you use the tags below, or the <u>ISO codes</u>.

Tag Start - `<` - **<**

Less-Than symbol, usually used to define the start of an actual HTML tag.

Tag End - `>` - **>**

Greater-Than symbol, used to declare the end of each tag.

Quotation Marks - `"` - **"**

As the name says: to mark a quote, or in html terms: to declare the value of a tag attribute.

Ampersand - `&` - **&**

It is used to define the start of all special character tags, so it needs a special charachter tag itself.

Non Breaking Space - ` `

A space, a plain ordinary space (like when you press the spacebar). The *non-breaking* part is relevant because multiple spaces in HTML will only show up as one space on your web page. This tag can be used many times in a row to force the web browser to display many spaces on the web page.

Copyright - `©` - **©**

Copyright indicates ownership of intellectual property. See copyright defined on Wikipedia.

Trademark - `™` - **™**

Declares a product name or images as business trademark that is not yet registered.

Registered - `®` - **®**

Used to indicate that a product or business trademark that is officially registered.

One Half - `½` - **½**

Fraction symbol for One Half (0.5) of some other value.

Degree - `°` - **˚**

The degree symbol is used to represent temperature or angular measurements.