Tags and attributes
Most of HTML is plain text. You can edit HTML with any text editor which can save plain text.

Special HTML codes, called “tags” and “attributes,” provide instructions to the browser, introducing formatting and objects such as images or links. Some tags include information you can’t see, or scripts your computer runs. You can add these codes by hand, or an editor can add them for you.

Tags are short codes surrounded by less than and greater-than signs, also called “angle brackets.”

Examples: `<P>` `<HR>` `<IMG SRC="foo.jpg">`

Most tags are container tags: they have start and stop elements. The stop element begins with a slash. The style or property of the tag will apply to its contents. Example: `<P> </P>`

Tags can be extended with attributes, which are separated by spaces inside a tag. Some attributes are required (e. g. IMG tags have SRC attributes). Example: `<IMG SRC="foo.jpg">`

Stop tags contain no attributes. Example: `</BODY>`

Skeleton
Every HTML document should have the following skeleton. The TITLE is displayed in the menu bar of the web browser as well as in bookmarks. The BODY is where document content is added.

```
<HTML>
<HEAD>
    <TITLE> Document title </TITLE>
</HEAD>
<BODY>
    Document content
</BODY>
</HTML>
```

The BODY tag can be extended with attributes which define information about the color of a document, and usually override default colors set by the users’ browser. You can use any or all of these attributes:

- **BGCOLOR** background color
- **TEXT** body text color
- **LINK** link text color
- **VLINK** visited link text color
- **ALINK** link text color, while mouse is pressed

Colors apply to the borders of images which are links as well as link text. Standard six-letter hexadecimal codes, are used for all color attributes.

```
<BODY BGCOLOR="#FFFF99" TEXT="#003300">
```

The codes provide RGB values—the first pair of letters control red, the second green, and the third blue. Programs like The Gimp or Photoshop can help you select values for these colors. There are also many lists on the Web (see “Links” below).

The BODY tag can also take a BACKGROUND attribute:
```
<BODY BACKGROUND="file.jpg">`
```

The background should be a gif or jpeg. It will be tiled over the entire page, on top of the background color (if one is defined).

Styling text
The following container tags can be used to add style to any text. Text inside the tags will have the style applied.

- `<I> </I>` Italic
- `<EM> </EM>` Emphasis (same as italic)
- `<B> </B>` Bold
- `<STRONG> </STRONG>` Strong (same as bold)
- `<BIG> </BIG>` Make text one size bigger
- `<SMALL> </SMALL>` Make text one size smaller
- `<U> </U>` Underline
- `<S> </S>` Strikethrough
- `<TT> </TT>` Teletype (in monospace font)

To apply more than one style, “stack” tags:
```
<B><I>Bold and italic text</I></B>
```

The FONT tag, which takes the attributes **FACE**, **SIZE**, or **COLOR**, can be used to control typeface, size, and/or color of text. Cascading Style Sheets (CSS) will eventually replace use of FONT tags.

```
<FONT FACE="helvetica" size="+2"> </FONT>
```

FACE is the name of the font to use for display. If a comma-separated list is provided the first available font will be used. The default follows the user’s browser settings.

**SIZE** can be an absolute value from 1-7, with 7 biggest, or a relative value between -3 and +3 (+1, -2, etc). The default (with no **SIZE** attribute or if relative sizes are used) is size 3.

**COLOR** follows the six-character hexadecimal spec. The default is the **TEXT** attribute in the **BODY** or the users’ browser settings.
Dividing and spacing text

Divide your document up into sections and add formatting by using the following tags:

- `<h2>` Headline
- `<p>` Paragraph
- `<blockquote>` Blockquote
- `<pre>` Preformatted text
- `<hr>` Horizontal rule
- `<br>` Line break
- `<div>` Division

Though H2 is used above, any numeral from 1 to 6 can be used for headlines. The text will be displayed with bold formatting, and one line space will be inserted before and below the headline. H1 is the biggest headline; H6 is the smallest.

An ALIGN attribute can be added to any headline, with a value of LEFT, CENTER, or RIGHT. The headline will be aligned as indicated. The default is left-aligned.

```html
<H4 ALIGN="RIGHT"> </H4>
```

Perhaps the most used HTML tag is the paragraph, which like the headline adds one line of space above and below. Like headlines, ALIGN attributes can be added to paragraphs tags.

```html
<P ALIGN="RIGHT"> </P>
```

A `blockquote` tag works like a paragraph tag, but is indented on the left and right sides.

Text in `<pre>` tags appears *preformatted*—exactly as typed, preserving all spaces, returns, tabs, and other whitespace characters usually ignored in markup.

To start a new line without extra space, use the `break` tag `<br>`.

**Horizontal rules** can be added with `<hr>`.

The `division` tag `<div>` can define areas for alignment or naming. It is used with style sheets.

**Lists**

Lists are automatically indented. There are three kinds.

- `<ul>` `<ul>` Unordered list
- `<ol>` `<ol>` Ordered list
- `<dl>` `<dl>` Definition list

For ordered or unordered lists, list items are indicated with `<li>`:

```html
<LI> </LI>
```

The bullet type of the `ul` list is defined with a TYPE attribute of SQUARE, CIRCLE, or DISC. A typical list looks like:

```html
<UL>
  <LI> Mugs </LI>
  <LI> Cups </LI>
  <LI> Dishes </LI>
  <LI> Silverware </LI>
</UL>
```

Ordered lists are automatically incremented for each item. Numerals are the default, but TYPE attributes of A, a, I, or i can be used to specify letters or Roman numerals. To start a list from a certain number, add a START attribute.

```html
<OL START="5" TYPE="i"> </OL>
```

Ordered and unordered lists may be nested (which is very handy for making outlines).

Definition lists are delimited by `<dt>` and `<dd>` tags. A reverse (hanging) indent applies to the definition data.

```html
<DT> </DT>
<DD> Definition term </DD>
<DT> </DT>
<DD> Definition data </DD>
```

A typical definition list looks like:

```html
<DL>
  <DT> One </DT>
  <DD> Definition for one </DD>
  <DT> Two </DT>
  <DD> Definition for two </DD>
</DL>
```

**Images**

Most HTML documents contain images. You can add images with the `<img>` tag.

```html
<IMG SRC="filename.jpeg">
```

The following attributes can be added to `img` tags:

- **WIDTH** image width, in pixels or percentage
- **HEIGHT** image height, in pixels or percentage
- **ALT** alternate text
- **VSPACE** vertical space, in pixels
- **HSPACE** horizontal space, in pixels
- **ALIGN** alignment
- **BORDER** border surrounding the image, in pixels

`WIDTH` and `HEIGHT` attributes are optional, but allow browsers to render a document before the image loads, so including them is wise. Pixel values work much better than percentages.

Alternate text (ALT) is not required, but makes browsing much richer for the visually impaired.

`VSPACE` and `HSPACE` can create a margin around an image.

Image alignment is a black art—in most cases tables do a better job than the alignment capable with the `img` tag.
Links

The link tag `<A>` is also known as the “anchor” tag.

- `<A NAME= ” ”>` Create an named reference
- `<A HREF= ” ”>` Hypertext link

`NAME` is used to make links to a part of a page. Named areas are referenced with `#`:

- `<A HREF= ” #mark ”>`

`HREF` defines the destination (hyperlink reference) of the link, which can be another Web page, an image, or even a different kind of URL like a sound file or email.

A `TARGET` attribute can be added to a link to select the window or frame where the `HREF` defined in the link will be displayed. The default is the current window or frame.

Tables

Tables can be extremely useful for organizing data or controlling layout. A table is made up of rows and cells. Each row needs to have at least one cell.

- `<TABLE>` Table
- `<TR>` Table row
- `<TD>` Table data (cell)
- `<TH>` Table header (cell)

Many attributes can be applied to the `TABLE` tag:

- `BORDER` border around table, in pixels
- `CELLPADDING` margin inside cells, in pixels
- `CELLSPACING` space between cells, in pixels
- `BGCOLOR` color of table background
- `WIDTH` table width, in pixels or percentage
- `ALIGN` alignment of table relative to page

`BORDER` makes a border of a certain width (in pixels) around the table. Large borders are often very unattractive.

`CELLPADDING` controls the amount of margin (in pixels) which “pads” the interior of every cell.

`CELLSPACING` controls the distance (in pixels) between cells.

`BGCOLOR` sets the table color using the standard six-character hexadecimal spec. The default is the background color of the document as defined by the `BGCOLOR` attribute of the `BODY`.

`WIDTH` defines the minumum width of the table, in pixels (“200”) or percentage of available area (“54%”). Using this attribute can help a lot with layout control—you can set the width of a table, then set the width of cells inside it, and position elements on the page accordingly.

`ALIGN` defines the way the table is aligned on the page (LEFT, CENTER, or RIGHT). Left is the default.

A basic two column, two row table looks like this:

```
<TABLE BORDER= ”1”>
  <TR>
    <TD> One </TD>
    <TD> Two </TD>
  </TR>
  <TR>
    <TD> Three </TD>
    <TD> Four </TD>
  </TR>
</TABLE>
```

For `TR`, `TH`, and `TD` tags, the attributes `BGCOLOR`, `WIDTH`, `ALIGN`, and `VALIGN` may be used:

- `BGCOLOR` color of row or cell background
- `WIDTH` width, in pixels or percentage
- `ALIGN` horizontal alignment of table contents
- `VALIGN` vertical alignment of table contents

For `TH` and `TD` tags, two additional attributes `ROWSPAN` and `COLSPAN` can be used to “stretch” cells across rows or columns.

- `ROWSPAN` number of rows cell should span
- `COLSPAN` number of rows cell should span

If rows do not have the same number of cells, these attributes should be added to stretch cells, or there will be blank space in the table.

Here is a small table with cell three stretched across two columns, and cell four stretched across two rows:

```
<TABLE BORDER= ”1”>
  <TR>
    <TD> One </TD>
    <TD> Two </TD>
  </TR>
  <TR>
    <TD colspan= ”2”> Three </TD>
  </TR>
  <TR>
    <TD rowspan= ”2”> Four </TD>
  </TR>
  <TR>
    <TD> Five </TD>
    <TD> Six </TD>
  </TR>
</TABLE>
```