Hypertext Markup Language and Cascading Style Sheets

"*the language of the web is the language of the world*" QUOTE: "THE LANGUAGE OF THE WEB IS THE LANGUAGE OF THE WORLD"

Contents

Html and Css are inextricably linked. This document advocates using, as far as possible, semantic html along with simple standards compliant Css to alter the appearance of the Html documents

It is one of the strange ironies of the internet that websites dedicated to css are generally ugly and unreadable. The idea behind modern html (or xhtml) is to make it "semantic" (which is probably a vain hope), and use CSS to change the appearance of this supposedly "clean", "semantic" html markup....

The reality is that the majority of modern website clog their pages with <div> and <span> tags, hair-raising javascript scripts, and abstruse indecifrable cross-browser hacks, pandering to weird standards-mangling quirks in Internet Explorer 5.301806 etc.

```
www.htmlcodetutorial.com
     an old but good site
http://www.cookwood.com/html/extras/xhtml_ref.html
http://krijnhoetmer.nl/stuff/
     some simple css ideas
```

Section 1

Quotes

Both double quotes " and single quotes ' are valid for quoting html attribute values.

```
<p cite="shakespeare">to be...</p>
<p cite='shakespeare'>to be...</p>
##(these are both correct)
```

Html

2.1 Meta Information

Meta tags should go in the <head>...</head> section of the page

```
http://www.i18nguy.com/markup/metatags.html
```
   Information about the use of "meta" tags in the html <head> section

Indicate that the character set for the document is utf-8

```
<meta http-equiv="content-type" content="text/html; charset=UTF-8" />
```
(possibly the most important metatag! All pages should have this tag)

Indicate that the author of the page is 'J Biggle'

```
<meta name="author" content="J Biggle">
```

State that the last revision of the page occurred on the 3 june 2008

```
<meta name="revision" content="Biggle, 3 June 2008">
```

Indicate that the page is about plants

```
<meta name="description" content="information about plants">
```

Indicate some keywords for the document

```
<meta name="keywords" content="plants, flowers">
```

State which program generated the html page

```
<meta name="generator" content="someprogram">
```

2.2 Foreign Languages And Alphabets

Place some chinese characters using entities notation

```
~(this is useful if the page is not utf8)
```

Indicate that the character set for the document is utf-8

```
<meta http-equiv="content-type" content="text/html; charset=UTF-8" />
```
(put this with the <head>...</head> of the document)

Indicate that the language of a document is British English

```
<html lang="en-GB">
```

Indicate that the language of a paragraph is welsh

```
<p lang="cy">
```

Find valid language codes for the 'lang' attribute

```
look at iso-639
```

Find valid language codes for indigenous languages

```
see www.sil.org (iso-639-3)
```

2.3 Entities

```
xmlstarlet esc "&"
```

2.4 Semantic Tags

Semantic html tags refer to the 'meaning' of the content of the document, rather than to its appearance.

```
http://www.w3.org/TR/WCAG10-HTML-TECHS/
```
   a guide for writing accessible html

<table>
<tr><td colspan="2" align="center">**semantic html tags**</td></tr>
<tr><td colspan="2">`<q>` an inline quotation</td></tr>
<tr><td align="right">`<cite>`</td><td>Citation</td></tr>
<tr><td align="right">`<var>`</td><td>Variable</td></tr>
<tr><td align="right">`<code>`</td><td>Computer code</td></tr>
<tr><td align="right">`<acronym>`</td><td>An acronym</td></tr>
<tr><td align="right">`<abbr>`</td><td>An abbreviated word</td></tr>
</table>

Include the title of the document, which appears in the browser title bar

```
<title>...</title>  ~(this goes in the <head> section of the page)
```

Mark up the text of a quotation (may be several lines)

```
<blockquote cite="http://reference">...</blockquote>
```

Mark up an inline quotation

```
<q cite="...">...</q>
```

Include computers source code in a document

```
<code> ... </code>
```

Include an acronym in a document

```
<acronym title="World Wide Web">WWW</acronym>
```

(it is only necessary to include the 'title' the first occurrence in the page)

Abbreviated words should be marked up with <abbr>

```
<abbr>
```

Indicate an address in the page

```
<address>3 smith st, bigtown</address>
```

Cite a literary work

```
<cite>... </cite>
```

Put a caption or heading on a table. usually displayed above the table

```
<table><caption>a table</caption>...</table>
```

Variables

```
<var>
```

<div style="text-align: right">Section 3</div>

Revisions

Strike out text with a line

```
text-decoration: line-through;
```

```
<strike>...</strike>   ~(the same but older)
```

<div style="text-align: right">Section 4</div>

Css Stylesheets

Insert an external stylesheet in a document

```
<link href="/path/to/sheet.css" type="text/css" rel="stylesheet">
```

Put an embedded style sheet in a web page,

```
<html>
<head>
<style type="text/css">
  h1 {color:red}
  p {color:blue}
</style>
</head>
...
```

<div style="text-align: center">3</div>

Embed style in the element in the html page

```
<p style="font-size: xx-large">big</p>
```

Css Syntax

A semicolon before a close brace is not necessary

```
p { font-weight: bold }          ~(this is correct)

p { font-weight: bold; }         ~(this is also correct)
```

Using Divs With Id Names

Using a named div html: <div id="example" name="example"> css: div#example { ... }
Elements within the named div

```
#example ul { ... }
```

Tables

Use <th> to create header cells

```
<table><tr><th>year</th></tr><tr></tr></table>
```

create table with a thin silver border around all cells

```
html:
  <table class="b">...</table>
css:
 TABLE.b { border: 1px solid
   ⇒ silver; border-collapse:
   ⇒ collapse; }
 .b TD { border: 1px solid
   ⇒ silver; }
 .b TH { border: 1px solid
   ⇒ silver; }

\end{multicols}

\section{Fonts}

\emph{ Create small capital text
 ⇒ for H3 headings }
\begin{lstlisting}
  H3 { font-variant: small-caps }
   ⇒      ~(the 'correct' way)

  H3 { font-size: smaller; text-
   ⇒ transform: uppercase; }    ~(
   ⇒ another way)
```

Set all the font properties in one go. This is known as a 'short-hand'

```
H4 { font: italic bold x-large
   ⇒ arial,sans-serif; }
```

7.1 Font Family

Set the font family for a heading

```
H1 { font-family: "Times New
   ⇒ Roman", Georgia, Serif; }
```

Generic families

```
serif, sans-serif, monospace
```

7.2 Text Transformations

text-transform: none, uppercase lowercase, capitalize
text-decoration: none underline overline line-through blink

Put an overline and an underline when the mouse is over a link

```
A:hover { text-decoration:
   ⇒ underline overline }
```

7.3 Text Spacing

Line-height: the space between lines on the page

```
line-height: 1.5               ~(no
   ⇒   units are required)
```

Letter-spacing: -2px   Word-spacing:

7.4 Font Sizes

'1em' is the current font size.
The font size can be set using a 'named' value. This has the advantage of being more readable and also does not fix the pixel size absolutely

```
html:
   <h3>title</h3
css:
   H3 { font-size: small}
```

Font-size values

```
xx-small x-small small medium
  ⇒ large x-large xx-large
  ⇒ smaller larger
```

font-size units

px	Pixels
cm	Centimeters
mm	Milimeters
em	Relative to current fontsize
%	Percentage
in	Inches
pc	Picas

Set the font size with a percentage

```
css: P { font-size: 120%; }

* set the font size to be 2.5
  ⇒ times the normal size
>> H1 {font-size: 2.5em; }    ##(
  ⇒ the default size is often 16
  ⇒ px)
```

```
FONT STYLES ....

* possible "font-style" values
>> normal, italic, oblique

== font-weight values
..
.. normal,
.. bold,
.. bolder,
.. lighter,
.. 100,
.. 200,
.. 300,
.. 400,
.. 500,
.. 600,
.. 700,
.. 800,
.. 900
..
```

```
PAGE LAYOUTS

* a layout with a bordered side
  ⇒ bar and an outset image,
\begin{lstlisting}
html:
  <div><image src="" title=""
    ⇒ alt="">
  <p id="sidebar"> text...  </p>
  </div>
css:
  p#sidebar
```

```
    { border: 2px dashed; font-
      ⇒ size: smaller; text-
      ⇒ indent: 0 }
  img
    { float: left; margin-right:
      ⇒ 0.5em; border: none }
  div
    { float: left; width: 30%;
      ⇒ margin-right: 0.8em }
```

Lists

```
http://css.maxdesign.com.au/listamatic/
```
lots of different ways to style lists, including horizontally

8.1 Definition Lists

```
http://www.maxdesign.com.au/presentation/
definition/
```
a discussion about definition lists

Display a definition list with the definition on the same line as the term

```
css:
  dt { float: left; margin-right
    ⇒ : 0.3em; width: 10%; text-
    ⇒ align: right; }
```

A reasonably nice list with side bar

```
dl.bar
  { margin-left: 5%; border-
    ⇒ left: 6px solid lightgrey
    ⇒ ; padding-top: 1em }
dl.bar dt
  { font-style: italic; font-
    ⇒ variant: small-caps;
    border-bottom: 1px dotted
      ⇒ gray;
    padding-left: 0.5em;
      ⇒ padding-bottom: 0.1em;
      ⇒ font-weight: bold; }
dl.bar dd
  { font-style: normal; margin-
    ⇒ left: 2em; padding-top:
    ⇒ 0.5em }
```

8.2 Horizontal Lists

A simple "tab" style horizontal menu with hyperlinks

```
html:
  <ul>
    <li><a href="#">Books</a></li>
    <li><a href="#">Kanji</a></li>
```

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```
   <li><a href="#">Examples </a
    ⇒ ></li>
  </ul>
 css:
  ul
   { list-style-type: none;
     ⇒ border-bottom: 3px solid
     ⇒ black }
  ul li
   { display: inline; border: 1px
     ⇒  solid gray;
    padding: 0 .2em 0 .2em;
      ⇒ margin-left: 0.4em; }
  ul. li a
   { text-decoration: none; }
```

Do something

```
html:
  <ul id="navlist">
  <li id="active"><a href="#" id
    ⇒ ="current">Item one</a></li
    ⇒ >
  <li><a href="#">Item two</a></
    ⇒ li>
  <li><a href="#">Item three</a
    ⇒ ></li>
  <li><a href="#">Item four</a></
    ⇒ li>
  <li><a href="#">Item five</a></
    ⇒ li>
  </ul>
css:
 #navlist
 {
   padding: 3px 1em; margin-left:
    ⇒  0; border-bottom: 1px
    ⇒ solid #778;
   font: bold 12px Verdana, sans-
    ⇒ serif;
 }
 #navlist li
   { list-style: none; margin: 0;
    ⇒  display: inline; }
 #navlist li a
 {
padding: 3px 0.5em; margin-left:
  ⇒  0.5em; border: 1px solid
  ⇒ #778;
border-bottom: none; background:
  ⇒  whitesmoke; text-decoration
  ⇒ : none;
}

 #navlist li a:link { color:
   ⇒ #448; }
```

```
#navlist li a:visited { color:
  ⇒ #667; }
```

8.3   Unordered Lists

Display a <ul> list horizontally ("inline")

```
css:
  ul { list-style-type: none; }
  li { display: inline; border:
    ⇒  1px solid grey; }
html:
  <ul>
   <li>Item 1</li>
   <li>Item 2</li>
  </ul>
```

Set an image to use for a list marker

```
ul { list-style: url(star.gif)
  ⇒  disc }
```

Set an image for a particular <li> element

```
ul li.x { list-style-image:
  ⇒ url(star.png) }
```

Remove the indentation on a list

```
css:
 ul { margin-left: 0; padding-
   ⇒ left: 0; }
```

display a list with no marker

```
html:
  <ul>...</ul>
css:
  UL { list-style-type: none; }
```

side by side lists with a dark heading

```
html:
  <div><p>year</p><ul><li>1990<
    ⇒ li>1992</ul></div>
  <div><p>month</p><ul><li>Jan<
    ⇒ li>Feb</ul></div>
css:
  div
    { float: left; border-left: 1
      ⇒ px dashed; padding-right:
      ⇒ 1em }
  div p:first-child
    { background: blue; color:
      ⇒ white }
```

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possible values for the 'list-style-type'

none	No marker
circle	A circle
disc	Filled circle. This is default
square	A square
armenian	The marker is traditional Armenian numbering
decimal	The marker is a number
decimal-leading-zero	A number padded by initial zeros (01, 02, 03, etc.)
georgian	Traditional Georgian numbering (an, ban, gan, etc.)
lower-alpha	Lower-alphabetic (a, b, c, d, e, etc.)
lower-greek	Lower-greek (alpha, beta, gamma, etc.)
lower-latin	Lower-latin (a, b, c, d, e, etc.)
lower-roman	Lower-roman (i, ii, iii, iv, v, etc.)
upper-alpha	Upper-alpha (A, B, C, D, E, etc.)
upper-latin	Upper-latin (A, B, C, D, E, etc.)
upper-roman	Upper-roman (I, II, III, IV, V, etc.)
inherit	The value of the list-style-type property inherits

Images

Make an image float right

```
html:
    <img class="float-right" src="
    ⇒ imagefile" border="0" />
css:
    img.float-right { border:0;
    ⇒ float: right; clear: right
    ⇒ ; margin: 1.2em; }
```

Make a blockquote with big quote marks

```
html:
    <blockquote cite="someone">
    <div>annoying but excellent</
    ⇒ div></blockquote>
css:
    blockquote
    { background: transparent
    ⇒ url(quoleft.png) left
    ⇒ top no-repeat; }
    blockquote div
    {
        padding: 0 48px;
        background: transparent url(
        ⇒ quoright.png) right
        ⇒ bottom no-repeat;
    }
```

Make a background image for an element, on the left

```
    a { background:#ffffff url('
    ⇒ img_tree.png') no-repeat
    ⇒ top left}
```

Make a background image for an element, on the left (ommitting values)

```
    a { background: url('img_tree.
    ⇒ png') no-repeat left}
```

Make a no-repeating background image, long-hand

```
    background-image:url('img_tree
    ⇒ .png');
    background-repeat:no-repeat;
    background-position:top right;
```

10.1 Icons

http://www.favicon.cc/
    A site which allows the user to create a 16x16 icon image or modifiy an existing image. The site also has a large collection of icons under the "creative commons" licence.

Image Galleries

Debian: igal, galrey, webmagick, Llgal - Command-line online gallery generator based on "igal" Image magick

Menus

9.1 Tag Clouds

A tag cloud allows data items to be visualised by the size of the text. see http://www.astray.com/recipes for an example.

A fragment of the css for an html tag cloud

```
#tagCloud a.cloud4
{
  font-size:8pt;
}
#tagCloud a.cloud3
{
  font-size:10pt;
}
#tagCloud a.cloud2
{
  font-size:12pt;
}
```

A perl library for making tag clouds

```
libhtml-tagcloud-perl
```

9.2 Horizontal Tab Menus

http://www.dynamicdrive.com/style/csslibrary/item/shade-image-tabs-menu/
    shows how to do horizontal tab menus with shaded background

http://articles.sitepoint.com/article/accessible-menu-tabs
    a good article about horizontal menu tabs with rounded tabs and resizable

http://ashoksuthar.wordpress.com/2007/02/14/rounded-tab-menu-through-css/

image gallery tools

imageindex   Generate static HTML galleries from images

Margins

Section 12

Set the page margins to 5% of the page width

```
body { margin-left: 5%; margin-
  ⇒ right: 5%; }
```

Floating Elements

Section 13

> http://css.maxdesign.com.au/floatutorial/

Make a box which stays put even when the page is scrolled

```
html:
  <div class="banner'>...</div>
css:
  DIV.banner
   { position: fixed; left:
     ⇒ auto; width: 8.5em;
     ⇒ right: 2em; }
  ##(not internet explorer 5,6)
```

A box with a border, white background, which floats right takes up 25% of the page width, and uses margins to distance itself from other page elements.

```
html:
  <div class="float-right
    ⇒ ">...</div>
css:
  div.float-right
  {
    float: right; width: 25%;
    margin: 0 0 10px 10px;
    padding: 10px;
    background-color: white;
      ⇒ border: 1px solid
      ⇒ silver;
  }
```

Create a 'drop capital' at the beginning of a paragraph.

```
html:
  <span>T</span>...
css:
  span
  {
    float:left; width:0.7em;
    font-size:400%; font-
      ⇒ family:algerian,
      ⇒ courier;
    line-height:80%;
  }
```

Alignment

Section 14

Aligning the text of an element

```
html:
  <h2>title</h2>
css:
  H2 { text-align: center; }
```

Images

Section 15

create an image with a border and caption at the bottom...

```
html:
  <div class="figure">
  <p><img class="scaled" src="
    ⇒ st-tropez.jpg" alt="St.
    ⇒ Tropez">
  <p>Saint Tropez and its fort
    ⇒  in the evening sun
  </div>
css:
  DIV.figure
  {
    float: right; width: 25%;
    border: thin silver solid
      ⇒ ;
    margin: 0.5em; padding:
      ⇒ 0.5em;
  }
  DIV.figure p
  {
    text-align: center;
    font-style: italic;
    font-size: smaller;
    text-indent: 0;
  }
  img.scaled { width: 100%; }
```

Boxes And Borders

Section 16

The 'margin' is outside the border. the margin has no background colour; the 'padding' is inside the border and can have a background colour. the border is a (visible) box which goes around an element.

Set all the border properties in one go

```
border: 5px solid red;
```

put a thin black solid border around a table

```
html:
  <table>...</table>
css:
  TABLE { border: 1px solid
    ⇒ black; }
```

8

make a 'pre' element have a beige background and a width of 80%

```
html:
  <pre class="code"> ... </pre
    ⇒ >
css:
  pre.code-line { background-
    ⇒ color: beige; width: 80%
    ⇒  }
```

make rounded corners on pre tags. This is not a standards compliant way to make borders, but the other methods are complicated.

```
pre
{
  -moz-border-radius: 5px;
  -webkit-border-radius: 5px;
  border: 1px solid #000;
}
```

make a dotted border

```
html:
  <p class="dashed">...</p>
css:
  p.dashed {border-style: dashed
    ⇒ ; }
```

Make a heading with a box around it which stretches 70% of the page..

```
css:
  h3 { padding-left:1em; margin-
    ⇒ left:0;
        border:1 px solid black;
          ⇒  width:70 %; }
```

Selecting Elements With Css

Make the font bold for a link within a paragraph element

```
html:
  <p class="code"><a href
    ⇒ ="...">...</a></p>
css:
  P.code a { font-weight: bold }
```

Dont display horizontal rules which come after h1 headings

```
h1 + hr { display: none }   ˜(
  ⇒ select 'brother' elements)
```

Select list items which are inside unordered lists

```
ul li {}
```

Select elements inside other elements

```
html:
```

```
<dl class="book-list">
  <dt><em class="book-
    ⇒ description">text</em>
  <dd>
</dl>
css:
  dl.book-list dt em.book-
    ⇒ description
  { padding-bottom: .5em; }
```

Make red all elements which have an href of 'google.com'

```
css:
  [href="google.com"] { color:
    ⇒ red }
  [href] { color: red }
```

Change the colour for english css: [lang=en] { color: red} :lang(en) {} the same ,,,

Make attributes for a particular media

```
@media screen {}
```

```
@media print {}
```

17.1   Web Resources

```
http://www.w3.org/Style/Examples/007/
figures
http://www.w3.org/Style/CSS/
```
the official site for css

Checking Hyperlinks

```
http://www.linklint.org
```
site for linklint, a hyperlink checker
```
http://validator.w3.org/checklink
```
the site for the w3c hyperlink checker

hyperlink checking utilitie

htcheck	Derived from htdig, uses MySql backe
linkchecker	A Python program to check websites f
linklint	A Perl link checker, development seem
checklink	W3C Link Checker Perl script (packag

Check the validity of links in the file bookmarks.html

```
wget --spider --force-html -i
  ⇒ bookmarks.html
```

Check the links on "site.net" and put output files in the "dir" folder

```
linklint -http -host site.net -
  ⇒ limit 1000 -doc dir /@
options:
  -http , check via http
  -host site.net , the site to
    ⇒ check
```

```
-limit 1000 , check at most
   ⇒ 1000 pages
-doc dir , put output
   ⇒ documents in the "dir"
   ⇒ folder
/@ , check the entire site
```

Check only the top and the "/doc/" webfolder for bad hyperlinks

```
linklint -http -host site.net -
   ⇒ doc dir /# /doc/#
```

Hyperlinks

Remove the underline for hyperlinks (visited and unvisited)

```
a { text-decoration: none; }
```

Make links which have NOT been visited (clicked) have no underline

```
A:link { text-decoration: none;
   ⇒ }
```

Set the colour to purple for a hyperlink which has been clicked

```
A:visited {color: purple;}
```

Make the link turn blue when the mouse pointer hovers over it

```
A:hover { color: navy; }
```

A link which changes colour when the mouse pointer hovers

```
a { color: #000099; text-
   ⇒ decoration: none; }
```

```
a:hover { color: #0000FF;
   ⇒ background: #FFFF00; }
```

Apply a style to hyperlinks with point to 'pdf' files

```
a[href $='.pdf'] { }
```

Put a dotted line underneath a hyperlink

```
a { text-decoration: none;
   ⇒ border-bottom: 1px dotted; }
```

Backgrounds

Set all the background properties

```
background: #00ff00 url('image.
   ⇒ gif') no-repeat fixed center
   ⇒ ;
```

Colours

```
http://www.dhtmlgoodies.com/scripts/
color-schemer/color-schemer.html
```
   choose colour schemes
```
http://palettebuilder.com/rgb.aspx
```
   another colour chooser site
```
http://www.w3schools.com/css/css_colornames
asp
```
   a list of colour names

Html Editors

Bluefish

Html Validators

Weblint, xmllint

Site Design Examples

These sites contain some colour or design element which may be useful in the development of website.

```
http://stapps.cdu.edu.au/pls/apex/f?p=
100:30:1510741901221133
```
   interesting use of icons in the menu bar
```
http://www.sampletheweb.com/
```
   what I consider to be a nice horizontal menu bar
```
http://jmcpherson.org/editing.html
```
   soft grey colours
```
http://mail-archives.apache.org/mod_mbox/
www-mirrors/200004.mbox/%3CPine.LNX.4.10.
10004041616100.4099-100000@squishy.ameth.
org%3E
```
   bold but pleasant colours. table layout, wine red (white on #900) with bluey greys (bold black on #ddd, normal black on #eee)
```
rsync.net
```
   a simple style
```
http://www.cyberciti.biz/
http://www.nixtutor.com/freebsd/understandi
```
   Nice colours, rounded page tabs.
```
http://leepoint.net/notes-java/GUI/containe
10windows/15framesize.html
```
   a simple underline style
```
http://www.panamet.com.ar/servicios.htm
```
   yellowy red colours
```
http://cslife.wordpress.com/2008/12/01/
save-vim-syntax-highlighting-to-html/
```
   simple wordpress
```
http://www.online-kredit-index.de/
```
   A simple green style with subtle shaded image backgrounds on banners and navigation bars

```
http://perunews.wordpress.com/threatdown/
the-north-coast/ecuadorian-border-crossing/
```
a reasonably nice banner with browny
colours
```
http://www.wollemipine.com/index.php
```
simple, nice colours and a kind of watermark
image

24.1 Source Code Formatting Examples

```
http://stackoverflow.com/questions/1037927/
run-pdflatex-quietly
```
Syntax highlighted code and a blueish back-
ground for code snippets.
```
http://en.wikipedia.org/wiki/Named_pipe#
Named_pipes_in_Unix
```
The wikipedia code boxes is an example of
another code formatting style

Publishing Source Code   Section 25

Convert source code to syntax highlighted html

```
webcpp inputfile outputfile.ext
   ⇒  ~(the file type is guessed
   ⇒  from the ext)

webcpp inputfile outputfile -s
   ⇒  ~(dont write <html> and <
   ⇒  body> tags)
```

Syntax Highlighting Programs   Section 26

*Highlight http://www.andre-simon.de/ supports 140
languages and* can also output to LaTeX, rtf, HTML,
svg, xhtml uses '<span>' tags *Gnu source-highlight
Code2html a perl script*
:: webcpp http://webcpp.sourceforge.net uses <font>
tags with classes. Html is 'all on one line' style. Sup-
ports the languages: iAda95, ASP, Assembler, Basic, C,
C#, C++, Cg, CLIPS, Fortran, Haskell, Java, Markup,
Modula2, Objective C, Pascal, Perl, PHP, Python, Ren-
derman, Ruby, SQL, Tcl, Unix shell, UnrealScript &
VHDL