Basic HTML for Online Instructors

**Basic HTML structure**

```html
<html>
  <head>
    <title></title>
  </head>
  <body>
  </body>
</html>
```

**Key Terms**

- **HTML**: HyperText Markup Language
- **Tags**: the basis of HTML
- **Meta Data**: info. not displayed but attached to web sites; for example, keywords

**the title tags contain the title of the web page; this will appear in the top of the browser.**

**the body tags contain all of the onscreen content you want visitors to your web page to see; think of this area as the actual web page.**

**the head tags contain meta data about the web site including keywords, descriptors, as well the title tags (used to display a title on the top of the browser application).**

**the html tags tell the browser that the content contained is to be read as html (not as plain text).**

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**Basic Web Site Text Control and Display**

**Headings**

- `<h1>`Heading Level One</h1>`
- `<h2>`Heading Level Two</h2>`
- `<h3>`Heading Level Three</h3>`
- `<h4>`Heading Level Four</h4>`
- `<h5>`Heading Level Five</h5>`

**Paragraphs**

- `<p>`My first paragraph text here.</p>`
- `<p>`My second paragraph text here.</p>`

**Bold Text**

- `<p>`<b>This text is bold.</b></p>`

**Italicized Text**

- `<p>`<i>This text is italic.</i></p>`

**Line Breaks (single carriage returns)**

- `<p>`Line one followed by<br />
  line two.</p>`

**Hard Rule (horizontal line used for separation)**

- `<hr />

**Div (neutral container with no attributes until assigned)**

- `<div class="box">`<p>`Text</p>`</div>`

---

**Heading Level One**

**Heading Level Two**

**Heading Level Three**

**Heading Level Four**

**Heading Level Five**

- My First Paragraph Text Here.
- My Second Paragraph Text Here.

- **This text is bold.**

- **This text is italic.**

- Line one followed by line two.
More Basic Web Site Text Control and Display

**Bullet Pointed/Unordered Lists**

```html
<ul>
  <li>List Item One</li>
  <li>List Item Two</li>
  <li>List Item Three</li>
</ul>
```

**Numbered/Ordered Lists**

```html
<ol>
  <li>List Item One</li>
  <li>List Item Two</li>
  <li>List Item Three</li>
</ol>
```

**Hypertext Links**

```html
<p><a href="http://www.heartland.edu" title="Heartland Community College" target="_blank">Heartland Community College</a></p>
```

Link tags `<a>` have three attributes: `href` is the URL/path to the web site to be linked, `title` appears when the user mouses over the link and `target` specifies where the link will open (for a new windows use: `target="_blank"`) (for the same window use: `target="_self"`).

**Multimedia HTML Tags**

**Embed Audio in an Online Course** (the audio will play when the student clicks the play button in the embedded media player plug-in: either QuickTime or Windows Media Player depending on the student's browser settings)

```html
<embed src="audiofilename.mp3" VOLUME="100" width="400" height="40" autostart="false"/>
```

In the above embed tag `<embed>` you have five attributes: `src` is the path to and the name of the source file, volume sets the volume setting in the media player (functions as a % of volume; ranges from 0 to 100), width and height set this attribute for the media player display in pixels, `autostart` sets the media player to either begin playing immediately upon loading the file (`autostart="true"`) or to pause at the beginning allowing the user to control the playback by pressing the play button (`autostart="false"`).

**Linking to Streaming Video** (on the Technology Division streaming server)

```html
<a href="mms://stream.heartland.edu/course_coursenumber/Title.wmv" title="Video Title">Hypertext Link Video Title</a>
```

```html
<a href="mms://stream.heartland.edu/anth_101/Cinderella.wmv" title="Cinderella">Cinderella</a> (Windows Media Video, Length: 6:51)
```

The links above start with `mms://` instead of `http://` because `mms://` is the transfer protocol for streaming files on this particular type of streaming server (Microsoft Media Server; hence the `mms`). When a user clicks on the link their computer will automatically load the Microsoft Windows Media Player and begin playing the video.

**Inserting an Image**

```html
<img src="hypoxia.jpg" alt="Diagram showing effects of Hypoxia" />
```

The `<img>` tag has two attributes: `src` is the path to and image file name, `alt` is the alternate text.
### Deprecated HTML Tags (by the W3C to no longer be used according the HTML 4 standards)

"Common" HTML tags that are no longer to be used include:

- `<center>` - for centering text
- `<font>` - for selecting font typefaces, weight and size
- `<u>` - for underlining text

<table>
<thead>
<tr>
<th>Deprecated Tag</th>
<th>Use</th>
<th>Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;applet&gt;</code></td>
<td>Inserts applet</td>
<td><code>&lt;object&gt;</code></td>
</tr>
<tr>
<td><code>&lt;basefont&gt;</code></td>
<td>sets font styles</td>
<td>font style sheets (CSS)</td>
</tr>
<tr>
<td><code>&lt;center&gt;</code></td>
<td>centers elements</td>
<td><code>&lt;div style=&quot;text-align:center&quot;&gt;</code>&lt;ul&gt;</td>
</tr>
<tr>
<td><code>&lt;dir&gt;</code></td>
<td>directory list</td>
<td></td>
</tr>
<tr>
<td><code>&lt;font&gt;</code></td>
<td>applies font styles</td>
<td>font style sheets (CSS)</td>
</tr>
<tr>
<td><code>&lt;isindex&gt;</code></td>
<td>adds search field</td>
<td><code>&lt;form&gt;</code></td>
</tr>
<tr>
<td><code>&lt;menu&gt;</code></td>
<td>menu list</td>
<td>&lt;ul&gt;</td>
</tr>
<tr>
<td><code>&lt;s&gt;</code></td>
<td>strike through</td>
<td>text style sheets (CSS)</td>
</tr>
<tr>
<td><code>&lt;strike&gt;</code></td>
<td>strike through</td>
<td>text style sheets (CSS)</td>
</tr>
<tr>
<td><code>&lt;u&gt;</code></td>
<td>underline</td>
<td>text style sheets (CSS)</td>
</tr>
</tbody>
</table>

### Deprecated HTML Attributes

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Deprecated if used in:</th>
</tr>
</thead>
<tbody>
<tr>
<td>align</td>
<td><code>&lt;caption&gt;, &lt;img&gt;, &lt;table&gt;, &lt;hr&gt;, &lt;div&gt;, &lt;h1..6&gt;, &lt;p&gt;</code></td>
</tr>
<tr>
<td>alink</td>
<td><code>&lt;body&gt;</code></td>
</tr>
<tr>
<td>background</td>
<td><code>&lt;body&gt;</code></td>
</tr>
<tr>
<td>bgcolor</td>
<td><code>&lt;body&gt;, &lt;table&gt;, &lt;tr&gt;, &lt;td&gt;, &lt;th&gt;</code></td>
</tr>
<tr>
<td>clear</td>
<td><code>&lt;br&gt;</code></td>
</tr>
<tr>
<td>compact</td>
<td><code>&lt;ol&gt;, &lt;ul&gt;</code></td>
</tr>
<tr>
<td>color</td>
<td><code>&lt;basefont&gt;, &lt;font&gt;</code></td>
</tr>
<tr>
<td>border</td>
<td><code>&lt;img&gt;, &lt;object&gt;</code></td>
</tr>
<tr>
<td>hspace</td>
<td><code>&lt;img&gt;, &lt;object&gt;</code></td>
</tr>
<tr>
<td>link</td>
<td><code>&lt;body&gt;</code></td>
</tr>
<tr>
<td>noshade</td>
<td><code>&lt;hr&gt;</code></td>
</tr>
<tr>
<td>nowrap</td>
<td><code>&lt;td&gt;, &lt;th&gt;</code></td>
</tr>
<tr>
<td>size</td>
<td><code>&lt;basefont&gt;, &lt;font&gt;, &lt;hr&gt;</code></td>
</tr>
<tr>
<td>start</td>
<td><code>&lt;ol&gt;</code></td>
</tr>
<tr>
<td>text</td>
<td><code>&lt;body&gt;</code></td>
</tr>
<tr>
<td>type</td>
<td><code>&lt;li&gt;</code></td>
</tr>
<tr>
<td>value</td>
<td><code>&lt;li&gt;</code></td>
</tr>
<tr>
<td>vlink</td>
<td><code>&lt;body&gt;</code></td>
</tr>
<tr>
<td>width</td>
<td><code>&lt;hr&gt;, &lt;pre&gt;, &lt;td&gt;, &lt;th&gt;</code></td>
</tr>
<tr>
<td>vspace</td>
<td><code>&lt;img&gt;, &lt;object&gt;</code></td>
</tr>
</tbody>
</table>

More information about the World Wide Web Consortium and deprecated HTML tags can by found at:

http://www.w3.org

http://www.w3.org/TR/REC-html40/index/elements.html

Instead of using deprecated HTML tags and attributes or tables to control the layout of your web pages, use Cascading Style Sheets (CSS) to control the layout and look of the pages.
Cascading Style Sheets (CSS) allows you to control the layout and look of your web pages.

### Three Types of Style Sheets

1. **Embedded**: part of the HTML document in the `<head>` tag; only for one web page (not a whole web site).

```html
<html>
<head>
  <style type="text/css">
    h1 { color: green }
  </style>
</head>
<body>
  <h1>This h1 text is green</h1>
</body>
</html>
```

2. **Linking**: a separate document used to change the look across many web pages (more useful).

```html
<html>
<head>
  <link rel=stylesheet href="styles.css" type="text/css">
</head>
<body>
  <p class="sample">Overview of Cascading Style Sheets</p>
</body>
</html>
```

3. **Inline**: inside the `<body>` tag; only applied to that tag on that one web page.

```html
<html>
<body>
  <a style="position: absolute; left: 65px; top: 180px; width: 90px" href="index.html">Home</a>
</body>
</html>
```

The last style that the browser encounters is the style which overrides all others. (ie, an inline style would override an embedded or linked style because the browser reads an inline style last.)

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**Key Terms**

**CSS**: Cascading Style Sheets; used for formatting the look of web pages (typefaces, margins, spacing, etc.)

---

**This h1 text is green**

---

**Overview of Cascading Style Sheets**

---

**The styles.css document would look like this:**

```
p.sample {font-family:arial; font-weight:bold}
```
More Basic CSS

Class selector
p.super { definition } - a class style called super inside a paragraph tag
.myGraphic { definition } - a class called myGraphic

Id selector
#myPicture { definition } - an id called myPicture

Media Types
The media setting
media="screen"
(Use this appended on the end of the <style type="text/css" media="screen"> to apply the embedded script to the screen)
media="print"
(Use this appended on the end of the <style type="text/css" media="print"> to apply the embedded script to the printer)

CSS Properties- Spacing Issues & Border
margin - space to the outside of an object
(determines all four sides, top/bottom + left/right pairs; all four independent, top, right, bottom, left)
.graphic { margin: 10px 50px 20px 15px }  
This class called graphic would have margins on 10 pixels on top, 50 pixels to the right, 20 pixels on bottom and 15 pixels on the left. (the numbers to around clockwise starting with the top margin)

.graphic { margin: 10px 20px }
This class called graphic would have margins on 10 pixels on top and bottom, 20 pixels to the right and left.

.graphic { margin: 10px }
This class called graphic would have margins of 10 pixels all around (top, right, bottom and left).

border
(set style, width, & color of the border; options: dotted, dashed, solid, double, groove, ridge, inset, outset, none, inherit; length in px, color names or transparent)
.graphic { border: solid 2px silver }
This class called graphic would have a border that is a solid line, 2px wide and is silver in color.

padding - space to the inside of an object
(space between the border and the content; top/bottom + left/right pairs; all four independent, top, right, bottom, left)
.graphic { padding: 10px 50px 20px 15px }

example of margin (outside)

example of padding (inside)
More Basic CSS

CSS Properties - Font

font-family (sets typeface; options: font names, sans-serif, serif, cursive, fantasy, monospace)

```css
p.sample { font-family: verdana, arial, helvetica, sans-serif }
```
multiword named fonts go in single quotes: ex. ‘times new roman’, times, arial, ...

font-size (options: in points(pt), pixels(px), ems(em), inches(in), centimeters(cm), millimeters(mm), percent(%), picas(pc), x-height(ex))

```css
p.sample { font-family: verdana; font-size: 18pt }
```

font-weight (options: normal, bold or numbers: 100-lightest,... 400-normal weight,... up to 900-most bold)

```css
p.sample { font-family: verdana; font-size: 18pt; font-weight: bold }
p.sample { font-family: verdana; font-size: 18pt; font-weight: 700 }
```

font-style (options: normal, italic or oblique)

```css
p.sample { font-family: verdana; font-size: 18pt; font-style: italic }
```

font-variant (not supported by many browsers; options: normal, smallcaps)

```css
p.sample { font-family: verdana; font-variant: smallcaps }
```

text-transform (options: none, uppercase, lowercase, capitalize-Caps For All First Characters)

```css
p.sample { font-family: verdana; font-size: 18pt; text-transform: uppercase }
```

text-decoration (options: none, underline, overline, line-through, blink)

```css
p.sample { font-family: verdana; font-size: 18pt; text-decoration: underline }
```

Controlling Link Displays: a:type (sets properties for <a> anchor links; options: all font properties from above)

```css
a: link { text-decoration: none }
a: active { text-decoration: none }
a: visited { text-decoration: none }
a: hover { color: red }
```

CSS Properties - Miscellaneous

list-style (sets the unordered list or ordered list <li> styles; options: url(filenam.gif), bullet name inside/outside)

```css
li { list-style: url(myBullet.gif) inside }
```

inside (aligns subsequent lines of wrap to bullet); outside (aligns subsequent lines of wrap with first letter)

```css
li { list-style: circle }
```

bullet names: disc, circle, square, decimal, decimal-leading-zero, upper-roman, lower-roman, upper-alpha, lower-alpha, lower-greek

border-collapse (table cells share an adjacent border rather than each cell having a separate wall; options: collapse, separate)

```css
.collapsing { border-collapse: collapse }
```

caption-side (sets where the caption goes on a table using the <caption> tag; options: top, bottom)

```css
.placeCaption { caption-side: top }
```

white-space (setting HTML sensitivity to white space in the code; options: pre, normal, nowrap)

```css
p.sample { white-space: pre }
```

pre makes HTML space sensitive; nowrap: a line runs off the screen
More Basic CSS

CSS Properties- Typography

word-spacing (option: in points (pt))

```css
p.sample { font-family: georgia; word-spacing: 5pt }
```

letter-spacing (like tracking; options: in points (pt))

```css
p.sample { font-family: georgia; letter-spacing: 5pt }
```

line-height (like leading; options: in points(pt))

```css
p.sample { font-family: georgia; line-height: 10pt }
```

text-align (justifying text for block level tags; options: left, right, center, justify)

```css
p.sample { font-family: georgia; text-align: left }
```

vertical-align (alignment; options: baseline, superscript, subscript, top, middle, bottom, text-top, text-bottom)

```css
p.sample { font-family: georgia; vertical-align: superscript }
```

text-indent (indenting; block level tags- auto return like <p>; options: in pixels(px) or %)

```css
p.sample { font-family: georgia; text-indent: 15px }
```

CSS Properties- Color and Images

color (options: use color name (aqua, black, blue, fushia, gray, green, lime, maroon, navy, olive, purple, red, silver, teal, white, and yellow or hexidecimal code (#000000) or rbg (51,204,0))

```css
p { color: green } or p { color: #008000 } or p { color: 51,204,0 }
```

background-color (this code makes the type color green and background yellow)

```css
p { color: green; background-color: #ffff66 }
```

background-image (auto tiles; options: a relative or absolute link to the image)

```css
body { background-image: url(images/backgroundimage.jpg) }
```

background-repeat (options: repeat-x, repeat-y, no-repeat)

```css
body { background-image: url(images/backgroundimage.jpg); background-repeat: repeat-x }
```

background-attachment (floats over top; options: fixed or scroll)

```css
body { background-image: url(images/backgroundimage.jpg); background-attachment: fixed }
```

CSS Properties- Positioning, Layering, Visibility vs. Display

position (controls text and images; options: absolute (no matter what) or relative (relative to the page))

```css
.box { position: absolute; left: 100px; top: 100px }
```

left and top can be in pixels (px) or in percent (%)

z-index (layering; higher number on top)

```css
.graphics { position: absolute; left: 100px; top: 100px; z-index: 10 }
```

display (determines display type; options: block, inline, none, list-item)

```css
.graphic { display: none }
```

block- makes it a block tag with line breaks; inline- suppress line normal breaks; none- no display no space; list-item- makes an item part of a list

visibility (determines the visibility of an item; options: visible, hidden) hidden- hides item but leaves the “space” created by that item.

```css
.graphic { visibility: hidden }
```
History of Aviation: Week One

Assigned Reading: Precursors to Powered Flight

Visit the following link:
U.S. Centennial of Flight Commission: Precursors to Powered Flight
or copy and paste the link into your browser:
http://www.centennialofflight.gov/essay/Prehistory/late_1800s/PH4.htm

Once you are finished reading this web link consider the following:

• Can you imagine living in a time before powered flight?
• Why do you think the problem of flight took so long to solve?
• Do early attempts at flight live on in modern designs you’ve seen?
History of Aviation: Week One: Assigned Reading

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History of Aviation: Week One

Video: How it Works: Century of Flight

Watch the following video on early flight (length: 8:43) (press play to begin video):

Link to original video:

NASADestinationTomorrow - DT12 - First Flight Control
http://video.google.com/videoplay?docid=-373167052116316839&hl=en#

Transcript:

Johnny Alonso speaking:
On the morning of December 17th 1903, history was made off the sands of Kittyhawk, North Carolina. For the first time in history man had achieved controlled flight of a heavier-than-air machine. The Wright Brothers had achieved what all of their predecessors had only dreamed of... flight. While many of their contemporaries had focused on very complicated designs, the Wrights chose a straightforward design as a means of accomplishing flight. Controlling the aircraft was a key aspect most designers took for granted. This is where the Wright Brothers targeted most of their design and innovation.

Most earlier inventors thought that flight control could be achieved by simply shifting his weight back and forth. The Wrights on the other hand knew that controlling the plane would be the key to successful flight. To find out how the Wrights controlled their flight I spoke with Jim Cross to find out how it works.

Jim Cross, NPS Ranger/Lead Interpreter speaking:
Well it started when they were both pretty young. At the time they were living in Cedar Rapids Iowa... they didn't always live in Dayton though that is where they considered their home to be in Dayton, Ohio. Their father was in fact a minister a bishop in the church and he would take long trips away from home. When he would return he would often bring the boys a gift. One time he came back from a trip and he walked into the room and he had something in his hand. And when he opened his hand to show them what it was it flew out of his hand. What he had brought them was a little helicopter I guess is what you'd call it today. At that point Orville was only seven years old at the time and that seed of flight was planted and it never left them.

They really just started as enthusiasts or hobbyists. They knew before they did anything they were going to have to learn everything they could on it. In 1896 they decided that they were going to take active part in solving this problem of flight. And they were in the bicycle shop the Wright cycle co. right there in Dayton. And when the death of Otto Lilienthal. Now he was a great glider pilot.

styles.css - Cascading Style Sheet

body { background-color: #E6E6E6; 
font-family: arial; 
color: gray; 
background-image: url(images/background.jpg); 
background-repeat: repeat-x; 
text-align: center; }

.container { margin: 10px auto; 
border: solid 2px black; 
padding: 20px 20px 20px 20px; 
background-color: white; 
width: 800px; 
text-align: left; }

h1 { color: navy; }

h2 { color: gray; }

h3 { color: gray; }

.video { text-align: center; 
background-color: black; }
Johnny Alonso speaking:<br />
On the morning of December 17th 1903, history was made off the sands of Kittyhawk, North Carolina. For the first time in history man had achieved controlled flight of a heavier than air machine. The Wright Brothers had achieved what all of their predecessors had only dreamed of... flight. While many of their contemporaries had focused on very complicated designs, the Wrights chose a straight forward design as a means of accomplishing flight. Controlling the aircraft was a key aspect most designers took for granted. This is where the Wright Brothers targeted most of their design and innovation...
Further Resources:

Books


Web sites
http://www.w3.org - organization which sets the standards for HTML.

http://www.w3schools.com - good for tutorials on learning everything web design based.


Guide Created by:
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Hexadecimal Colors:
Web browser colors indicated in pairs of 3 letters/number combinations: 00 ... 99 and AA ... FF

For example:
#00 00 00 - black
#80 80 80 - 50% gray
#FF FF FF - White
History of Aviation: Week One

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