

HTML

HTML

- HyperText Markup Language
- Not a programming language
- Stored in text files (just like Perl)

A basic page

```
<html>
  <head>
    <title>My web page title</title>
  </head>
  <body>
    Your HTML content here
  </body>
</html>
```

A kosher page

```
<?xml version="1.0" encoding="utf-8"?>

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://
www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">

<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">

<head>

  <title>An XHTML 1.0 Strict standard template</title>

</head>

<body>

  <p>... Your HTML content here ...</p>

</body>

</html>
```

Why use web Standards?

- Accessibility
 - To robots
 - To people
- Stability

<Tags />

Most tags open and close

- Tags must be nested properly

Right <pre> Strong and emphasis </pre>	Wrong <pre> Strong and emphasis </pre>
---	---

- Some tags stand alone

```
<br /> <hr />
```

- Some tags take attributes

```

```

```
<a href="theonion.com">The Onion</a>
```

- Elements consist of start and end tags flanking content

XHTML tags

<http://www.w3schools.com/tags/>

Text tags

- Heading tag

```
<H1>This is a top level heading</H1>  
<H6>This is the bottom level heading</H6>
```

- Paragraph tag

```
<p>This is definitely a paragraph</p>
```

- Line Break

```
This is just two lines<br /> With a hard break.
```

- Emphasis and Strong

```
That's <em>exactly</em> what I mean - I am <strong>sick</strong> of this slide
```

- Comment Tag

```
<!-- This is a comment. You won't see this on the web-->
```

Tables

```
<table border="1">
<tr>
<th> Column 1 heading</th>
<th> Column 2 heading</th>
<th> Column 3 heading</th>
</tr>
<tr>
<td>Row 2, cell 1</td>
<td colspan="2">Row 2, cell 2, also spanning Row 2, cell 3</td>
</tr>
<tr>
<td rowspan="2">Row 3, cell 1, also spanning Row 4, cell 1</td>
<td>Row 3, cell 2</td>
<td>Row 3, cell 3</td>
</tr>
<tr>
<td>Row 4, cell 2</td>
<td>Row 4, cell 3</td>
</tr>
</table>
```

output:

Column 1 heading	Column 2 heading	Column 3 heading
Row 2, cell 1	Row 2, cell 2, also spanning Row 2, cell 3	
Row 3, cell 1, also spanning Row 4, cell 1	Row 3, cell 2	Row 3, cell 3
	Row 4, cell 2	Row 4, cell 3

<http://htmldog.com/guides/htmlintermediate/tables/>

Lists

```
<ol>
<li>First things first</li>
<ul>
<li>Who you know</li>
</ul>
<li>Not</li>
<ul>
<li>What you know</li>
<li>What you can do with it</li>
</ul>
</ol>
```

output:

- | |
|---|
| <ol style="list-style-type: none">1. First things first<ul style="list-style-type: none">◦ Who you know2. Not<ul style="list-style-type: none">◦ What you know◦ What you can do with it |
|---|

Links

- Relative

```
<a href="myDirectory/index.html">Go down a directory</a>  
<a href="../index.html">Go up a directory</a>
```

- Absolute

```
<a href="/">Go to the root</a>  
<a href="http://nytimes.com">Go to the NY Times</a>
```

- Anchors

```
<a href="#theEnd">Go to the end</a>  
<h1 id="theEnd">This is the end</h1>
```

Images

```

```



Forms

```
<form name="input" action="html_form_submit.pl" method="post">
```

- POST vs GET

GET = Data is in the URL

POST = Data is in the message body

Text Fields

```
<form name="input" action="handleMyForm.pl" method="get">  
  First name:  
  <input type="text" name="firstname" />  
  <br/>  
  Last name:  
  <input type="text" name="lastname" />  
  <input type="submit" value="Submit" />  
</form>
```

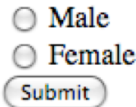
output:

First name:
Last name:

Radio Buttons

```
<form name="input" action="handleMyForm.pl" method="get">
  <input type="radio" name="sex" value="male"/> Male
  <br/>
  <input type="radio" name="sex" value="female"/> Female
  <br/>
  <input type="submit" value="Submit" />
</form>
```

output:



xHTML + CSS = Web

```
<body>
<div id="wrap">
  <div id="header"><h1>Simple 2 column CSS layout, final layout</h1></div>
  <div id="nav">
    <ul>
      <li><a href="#">Option 1</a></li>
      <li><a href="#">Option 2</a></li>
      <li><a href="#">Option 3</a></li>
      <li><a href="#">Option 4</a></li>
      <li><a href="#">Option 5</a></li>
    </ul>
  </div>
  <div id="main">
    <h2>Column 1</h2>
    <p><a href="#">456 Berea Street Home</a></p>
    <p><a href="#">Lab/developing_with_web_standards/csslayout/2-col/>Simple 2 column CSS layout</p>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris vel magna. Mauris risus</p>
    <p>Nulla a lacus. Nulla facilisi. Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p>
    <p>Aenean tempor. Mauris tortor quam, elementum eu, convallis a, semper quis, purus. Cras at</p>
    <h3>Consectetur adipiscing elit</h3>
    <p>Nulla dictum. Praesent turpis libero, pretium in, pretium ac, malesuada sed, ligula. Sed</p>
    <p>Maecenas eu velit nec magna venenatis consequat. In neque. Vivamus pellentesque, lacus eu</p>
  </div>
  <div id="sidebar">
    <h2>Column 2</h2>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris vel magna.</p>
    <ul>
      <li><a href="#">Link 1</a></li>
      <li><a href="#">Link 2</a></li>
      <li><a href="#">Link 3</a></li>
      <li><a href="#">Link 4</a></li>
      <li><a href="#">Link 5</a></li>
      <li><a href="#">Link 6</a></li>
      <li><a href="#">Link 7</a></li>
      <li><a href="#">Link 8</a></li>
      <li><a href="#">Link 9</a></li>
      <li><a href="#">Link 10</a></li>
      <li><a href="#">Link 11</a></li>
      <li><a href="#">Link 12</a></li>
      <li><a href="#">Link 13</a></li>
      <li><a href="#">Link 14</a></li>
      <li><a href="#">Link 15</a></li>
    </ul>
  </div>
  <div id="footer">
    <p>Footer</p>
  </div>
</div>
</body>
```

```
<style type="text/css">
body,html {
  margin:0;
  padding:0;
  color:#000;
  background:#07009a;
}
#wrap {
  width:750px;
  margin:0 auto;
  background:#99c;
}
#header {
  padding:5px 10px;
  background:#ddd;
}
h1 {
  margin:0;
}
#nav ul {
  padding:0;
  background:#c99;
}
#nav li {
  margin:0;
  padding:0;
  list-style:none;
}
#main {
  float:left;
  width:480px;
  padding:10px;
  background:#99c;
}
#h2 {
  margin:0 0 1em;
}
#sidebar {
  float:right;
  width:230px;
  padding:10px;
  background:#99c;
}
#footer {
  clear:both;
  padding:5px 10px;
  background:#c99;
}
#footer p {
  margin:0;
}
html #footer {
  height:1px;
}
</style>
```

Simple 2 column CSS layout, final layout

Option 1 Option 2 Option 3 Option 4 Option 5

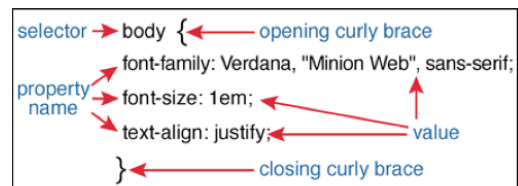
Column 1	Column 2
<p>456 Berea Street Home</p> <p>Simple 2 column CSS layout</p> <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris vel magna. Mauris risus. Nulla a lacus. Nulla facilisi. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fugiat pulvinar libero, purus. Cras varius etiamque penatibus et magna dis parturient montes, nascetur ridiculus mus. Donec tempus ipsum et urna. Ut consequat neque vitae felis. Suspendisse dapibus, magna quis pulvinar laoreet, dolor neque lacina arcu, et lacinia sit enim vestibulum sem. Mauris faucibus lacus lacus. Aliquam nec ante in quam sollicitudin congue. Quisque congue egetas elit. Quisque viverra. Donec feugiat elementum est. Etiam vel lorem.</p> <p>Aenean tempor. Mauris tortor quam, elementum eu, convallis a, semper quis, purus. Cras at turpis in purus tincidunt fringilla. In hac habitasse platea dictumst. Ut eu lectus eu metus molestie iaculis. In ornare. Donec at enim vel erat tempus congue. Nullam varius. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nulla feugiat hendrerit risus. Integer enim velit, gravida id, sollicitudin ac, consequat sit amet, leo. Fusce imperdiet condimentum velit. Phasellus nonummy interdum est. Pellentesque quam.</p> <p>Consectetur adipiscing elit</p> <p>Nulla dictum. Praesent turpis libero, pretium in, pretium ac, malesuada sed, ligula. Sed a urna eu ipsum lacinia faucibus. Curabitur fringilla. Suspendisse sit amet quam. Sed vel pede id libero lacus fermentum. Vestibulum volutpat tempus lectus. Vivamus conwallis tempus ante. Nullam adipiscing elit blandit ipsum. Nullam conwallis lacus et quam. Mauris semper elit at ante. Vivamus risusque. Pellentesque pharetra ante at pede. In ultrices arcu vitae purus. In rutrum, erat et mollis consequat, leo massa consequat libero, ac vestibulum libero tellus sed risus. Lorem ipsum dolor sit amet, consectetur adipiscing elit.</p> <p>Maecenas eu velit nec magna venenatis consequat. In neque. Vivamus pellentesque, lacus eu aliquet tempus, lorem necna dhuica metus, a ornare orci ante a diam. Nunc sem nisl, aliquet quis, elementum nec, imperdiet in, wisi. Praes in laoreet. Etiam molestie diam eget ante. Mushi quis tortor id lacus mollis venenatis. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aliquam vel orci sit amet tellus mollis element. Donec urna diam, viverra eget, ultrices gravida, ultrices eu, erat. Praes vel arcu. Sed diam. Cras hendrerit arcu sed neque. Sed justo felis, lacus a, accumsan in, tincidunt facilisis, libero. Phasellus eu eros.</p> <p>Footer</p>	<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris vel magna.</p> <ul style="list-style-type: none">Link 1Link 2Link 3Link 4Link 5Link 6Link 7Link 8Link 9Link 10Link 11Link 12Link 13Link 14Link 15

Cascading Style Sheets

- Help separate **content** from **appearance**
- One style sheet can be applied to hundreds of web pages
- Change styles in just one location

How CSS works

- Statements consist of
 - Selectors
 - Declarations
 - Properties:Values (units)



CSS: Where do I put it?

- Embedded in the `<head>` of each page

```
<head><style type="text/css"> </style></head>
```

- Linked in the `<head>`

Advantages: templating, speed

```
<link rel="stylesheet" type="text/css"
href="/styles/style.css" />
```

- Inline (avoid this)

```
<p style="color: red">text</p>
```

CSS Selectors

- HTML selectors - raw tags in the style sheet)

- Class selectors

use `.className` in style sheet

use `class="className"` in HTML

- ID selectors

use `#idName` in style sheet

use `id="idName"` in HTML

Divs and Spans

- Divs
 - Use `<div id="myDiv"> </div>` to define block elements. Useful for both formatting and positioning.
 - The id is unique. It refers to one element
- Spans
 - Use when you want to apply a class to some text inline
 - This is my sequence

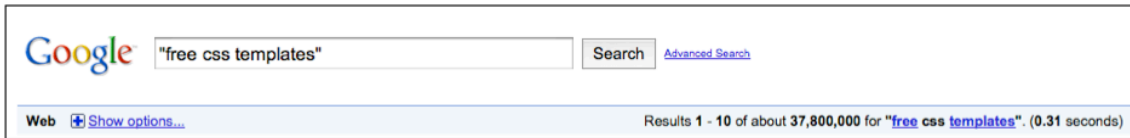
```
<span class="dna">ACTGATCTAGCT</span>
```

BlueprintCSS

CSS framework

- grid
- “sensible typography”
- stylesheet for printing

Do Not Reinvent the Wheel



Results 1 - 10 of about 317,000 for "two column css". (0.40 seconds)

<http://www.freecsstemplates.org>

Where does my website go?

- On Mac OS X
 - Personal web: `~/Sites`
 - Main web: `/Library/Webserver/Documents`
- Linux: `/var/www/html` or `/var/apache2/htdocs`
- XP Home: `C:\Program Files\ApacheGroup\Apache\htdocs`
- Could be elsewhere. Don't give up!

Naming your html files

- .html .htm
- Why index.html is special

Resource: HTML

- HTML Dog
<http://htmldog.com>



- W3C tags
<http://www.w3schools.com/tags>



Resources: CSS

Selectors	Box Model	Boxes
<p>* All elements</p> <p>div <div></p> <p>div * All elements within <div></p> <p>div span within <div></p> <p>div span <div> and </p> <p>div > span with parent <div></p> <p>div = span preceded by <div></p> <p>.class Elements of class "class"</p> <p>div.class <div> of class "class"</p> <p>#idname Element with id "idname"</p> <p>div#idname <div> with id "idname"</p> <p>id[attr] <div> with attribute "attr"</p> <p>id[attr~="v"] <div> when "attr" is "v"</p> <p>id[attr = "v"] <div> when class is a list containing "v"</p> <p>id[attr^="v"] <div> when lang begins "v"</p>	<p>The diagram illustrates the CSS Box Model. It shows a central 'Visible Area' surrounded by 'Padding', then a 'Border', and finally an outer 'Margin'. Labels indicate 'Height' and 'Width' for the visible area and padding.</p>	<p>margin = border-color + border-top-color + border-right-color + border-bottom-color + border-left-color</p> <p>margin-top border-top-color</p> <p>margin-right border-right-color</p> <p>margin-bottom border-bottom-color</p> <p>margin-left border-left-color</p> <p>padding = border-style + border-top-style + border-right-style + border-bottom-style + border-left-style</p> <p>padding-top border-top-style</p> <p>padding-right border-right-style</p> <p>padding-bottom border-bottom-style</p> <p>padding-left border-left-style</p> <p>border = border-width + border-style + border-color</p> <p>border-top = border-top-width + border-top-style + border-top-color</p> <p>border-bottom = border-bottom-width + border-bottom-style + border-bottom-color</p> <p>border-left = border-left-width + border-left-style + border-left-color</p> <p>border-right = border-right-width + border-right-style + border-right-color</p> <p>border-top-width border-top-width</p> <p>border-bottom-width border-bottom-width</p> <p>border-left-width border-left-width</p> <p>border-right-width border-right-width</p>
<p>Pseudo-Selectors and Pseudo-Classes</p> <p>:first-child First child element</p> <p>:first-line First line of element</p> <p>:first-letter First letter of element</p> <p>:hover Element with mouse over</p> <p>:active Active element</p> <p>:focus Element with focus</p> <p>:link Unvisited link</p> <p>:visited Visited link</p> <p>:lang(x) Element with language "x"</p> <p>:before Before element</p> <p>:after After element</p>	<p>display clear</p> <p>position z-index</p> <p>top direction =</p> <p>right unresizable</p> <p>bottom overflow</p> <p>:lang lang</p> <p>float visibility</p>	<p>Table</p> <p>caption-size = border-spacing + border-spacing</p> <p>table-layout = empty-cells =</p> <p>border-collapse = collapse-header =</p>
<p>Size and Colors</p> <p>0 0 requires no unit</p> <p>Relative Size</p> <p>em 1em equal to font size of parent (same as 100%)</p> <p>ex height of lower case "x"</p> <p>% Percentage</p> <p>Absolute Sizes</p> <p>pt Points</p> <p>cm Centimeters</p> <p>mm millimeters</p> <p>in inches</p> <p>px 1px = 1/96in</p> <p>pc 1pc = 1/24in</p> <p>Colors</p> <p>#HEX RGB hex notation</p> <p>rgb(0,25,50) Value of each of red, green, and blue, 0 to 255, may be swapped for percentages.</p>	<p>Color / Background</p> <p>color = background-repeat</p> <p>background = background-image</p> <p>background-color background-position</p> <p>background-attachment</p>	<p>Text</p> <p>text-indent = word-spacing =</p> <p>text-align = text-decoration =</p> <p>text-decoration white-space =</p> <p>text-shadow line-height =</p> <p>letter-spacing =</p>
<p>Font</p> <p>font-size = font-size-adjust =</p> <p>font-weight = font-weight</p> <p>font-family = font-stretch =</p> <p>font-style = font-size =</p> <p>font-variant = font-size-adjust =</p>	<p>Font</p> <p>font-size = font-size-adjust =</p> <p>font-weight = font-weight</p> <p>font-family = font-stretch =</p> <p>font-style = font-size =</p> <p>font-variant = font-size-adjust =</p>	<p>Font</p> <p>font-size = font-size-adjust =</p> <p>font-weight = font-weight</p> <p>font-family = font-stretch =</p> <p>font-style = font-size =</p> <p>font-variant = font-size-adjust =</p>

Cheat sheet:

<http://www.addedbytes.com/download/css-cheat-sheet-v2/pdf/>

CSS tutorial

http://westciv.com/wiki/Main_Page

Two column style sheet and tutorial

<http://www.456bereastreet.com/lab/>

[developing_with_web_standards/csslayout/2-col/](http://www.456bereastreet.com/lab/developing_with_web_standards/csslayout/2-col/)

Tools of the Trade

- Web Developer Plugin for Firefox
- CSS editors
 - MacRabbit CSSEdit
 - SimpleCSS
 - TopStyle (Windows