

HTML Light

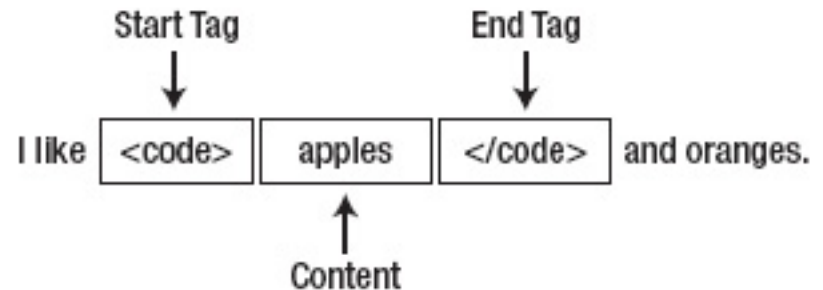
Let's Learn the Language

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">
<html>
  <head>
    <meta name="TITLE" content="Example" />
    <meta name="KEYWORDS" content="example" />
    <meta name="DESCRIPTION" content="example" />
    <link rel="stylesheet" type="text/css" href="example.css" />
    <script language="javascript" type="text/javascript">
      // Example script
    </script>
  </head>
  <body bgcolor="#ffffff" width="100%">
```

Markup Means Tags

■ HTML Element

- Start tag, content, end tag
- Element names are not case sensitive, but lower case more readable.



■ HTML Document

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
.
```

```
.
```

```
</head>
```

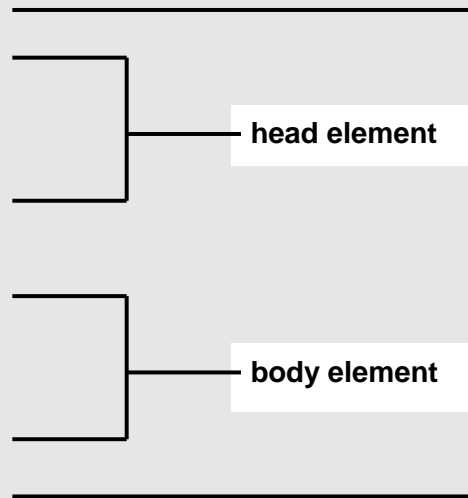
```
<body>
```

```
.
```

```
.
```

```
</body>
```

```
</html>
```



DOCTYPE declaration

- Must be the first thing in an HTML document
- Defines the document type

Basic Tags

Element	Description
DOCTYPE	Must be the first tag in an HTML document. <code><!DOCTYPE html></code>
html	Container of all HTML elements except DOCTYPE. Tells the browser that the page is an HTML document.
head	Defines the document's head; i.e., the invisible portion of document. Contains title tag (required) and meta tags, style tags, script tags...
title	Defines the web page title. Used to define the title of the browser window, provide a title for search engines as well as bookmarks
body	Defines the document's body; i.e., the visible portion of a document.
a	Defines a hyperlink.
hr	The "horizontal rule" places a line across the page. Defines a "thematic break" or shift in content type.
p	Defines a paragraph, generally with white space above and below.
img	Defines an image in a HTML page.

Elements, Tags and Attributes

- Most HTML elements are containers: they contain content for display and have opening and closing tags:

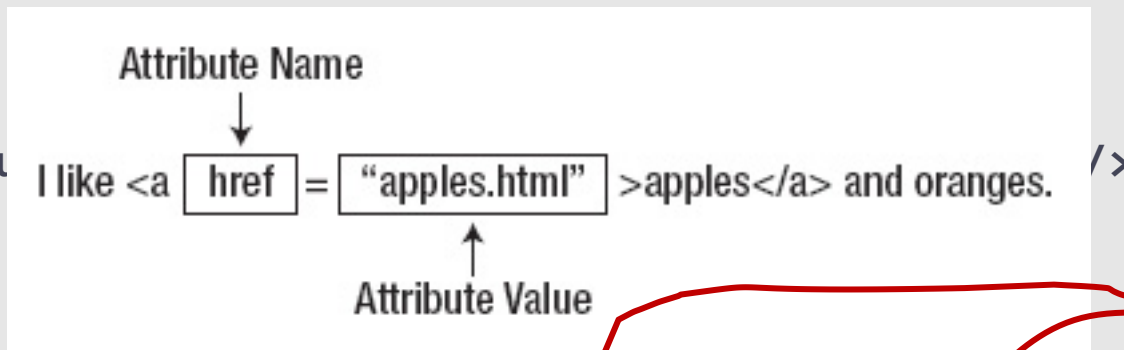
```
<p>This text is defined as a paragraph.</p>
```

- Some HTML elements are not containers (known as "**void elements**"); the opening tag and closing tag are combined into one tag:

A line will appear between foo `<hr />` and bar.

- HTML elements also contain attributes, enclosed in quotation marks.

- Multiple attributes



Attribute order does not matter

Parents, Children, Descendants, Siblings

- HTML elements have defined relationships with the other elements in an HTML document.
- An element that contains another element is the parent of the second element.

■ Relationships

- `<body>` is **parent** to `<code>`
- `<code>` is a **child** of `<body>`
- `<html>` is **parent** to both `<head>` and `<body>`
- `<head>` and `<body>` are **siblings** of one another
- `<head>`, `<body>`, `<title>` and `<code>` are **descendants** of `<html>`
- Only `<head>` and `<body>` are **children** of `<html>`

```
<!DOCTYPE HTML>
<html>
  <head>
    <!-- metadata goes here -->
    <title>Example</title>
  </head>
  <body>
    <!-- content and elements go here -->
    I like <code>apples</code> and oranges.
  </body>
</html>
```

Well Formed HTML

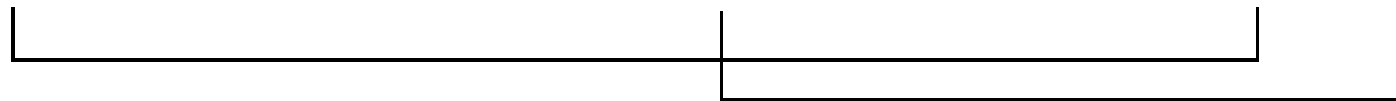
- An interior element cannot end after the exterior element.

```
<p>This paragraph has some <em> emphasized text </em>.</p>
```



CORRECT

```
<p>This paragraph has some <em> emphasized text </p>.</em>
```



INCORRECT

- Technically, you don't need to end tags that have no </ > counterpart
 - ``
 - `` ← better, XHTML & XML compliant



Common HTML Coding Errors

- An opening tag without a closing tag.
- Misspelled tag or attribute names.
- Quotation marks that aren't paired.
- Incorrect file references in link, img, or <a> elements.

A Simple HTML Document

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <title>San Joaquin Valley Town Hall</title>
  </head>
  <body>
    <h1>San Joaquin Valley Town Hall</h1>
    <p>Welcome to San Joaquin Valley Town Hall.</p>
    <p>We have some amazing speakers in store for you
      this season!</p>
    <p><a href="speakers.html">Speaker
      information</a></p>
  </body>
</html>
```

Text Elements

Element	Description
a	Hyperlink.
b	Offsets a span of text without additional emphasis or importance. Formerly, "bold"
br	Line break
cite	Citation; title of another work
del	Deleted text
dfn	Definition of a term.
em	A span of text with emphatic stress.
i	A span of text that is different from the surrounding words, such as Latin species and family names. Formerly, "italics"
ins	Inserted text

Element	Description
mark	Highlighted text because of its relevance in another context.
q	Quoted text
small	Fine print
span	Used to apply global attributes, like style, or class, or hidden
strong	Used to mark important text
sub	Subscript
sup	Superscript
time	A time or a date
u	Offsets a span of text without additional emphasis or importance. Formerly, "underline"

Some Sample Text Elements

```
<p>If you don't get 78% or more on your final, <em>you won't pass.</em></p>
```

```
<p>Save a bundle at our <strong>big yearend sale</strong>.</p>
```

```
<p>When the dialog box is displayed, enter <kbd>brock21</kbd>.</p>
```

```
<p>The chemical symbol for water is H<sub>2</sub>O.</p>
```

```
<p><q>To sleep, perchance to dream-ay, there's the rub.</q></p>
```

If you don't get 78% or more on your final, *you won't pass.*

Save a bundle at our **big yearend sale.**

When the dialog box is displayed, enter `brock21`.

The chemical symbol for water is H₂O.

"To sleep, perchance to dream-ay, there's the rub."

Grouping Elements

Element	Description
dl	A definition list containing terms and definitions
dt	A defined term within a definition list
dd	A definition within a definition list
hr	"Horizontal Rule," now known as a "thematic break" (e.g. for a scene change in a movie, or a new topic within a section of a reference book)
ul	An unordered list of items
ol	An ordered list of items
li	A list item in an unordered list or an ordered list (... or a menu)
p	Paragraph

Ordered and Unordered Lists

```
<p>We have books on a variety of languages, including</p>
```

```
<ul>
```

```
  <li>JavaScript</li>
```

```
  <li>PHP and MySQL</li>
```

```
  <li>Servlets and JSP</li>
```

```
  <li>ASP.NET</li>
```

```
</ul>
```

```
<p>You will need to complete the  
  following steps:</p>
```

```
<ol>
```

```
  <li>Enter your billing  
    information.</li>
```

```
  <li>Enter your shipping  
    information.</li>
```

```
  <li>Confirm your order.</li>
```

```
</ol>
```

We have books on a variety of languages, including

- JavaScript
- PHP and MySQL
- Servlets and JSP
- ASP.NET

You will need to complete the following steps:

1. Enter your billing information.
2. Enter your shipping information.
3. Confirm your order.

Nested Lists (1)

```
<h1>How to use the WinZip Self Extractor program</h1>
```

```
<ul>
```

```
  <li>Before you start the WinZip Self Extractor
```

```
    <ol>
```

```
      <li>Create a text file that contains the message you  
        want to be displayed when the executable starts.</li>
```

```
      <li>Create a batch file that copies the exercises, and  
        store it in the main folder for the files to be  
        zipped.</li>
```

```
      <li>Create the zip file.</li>
```

```
    </ol>
```

```
  </li>
```

```
  <li>How to create an executable file
```

```
    <ol start="4">
```

```
      <li>Run the WinZip Self Extractor program and click  
        through the first three dialog boxes.</li>
```

```
      <li>Enter the name of the zip file in the fourth dialog  
        box.</li>
```

```
      <li>Click the Next button to test the executable.</li>
```

```
    </ol>
```

```
  </li>
```

```
</ul>
```

A list
within a
list item

Definition Lists

(sometimes called Description Lists)

```
<h2>Components of the Internet architecture</h2>
<dl>
  <dt>client</dt>
  <dd>A computer that accesses the web pages of a web
    application using a web browser.</dd>
  <dt>web server</dt>
  <dd>A computer that holds the files for each web
    application.</dd>
  <dt>local area network (LAN)</dt>
  <dd>A small network of computers that are near each
    other and can communicate with each other over
    short distances.</dd>
  <dt>wide area network (WAN)</dt>
  <dd>A network that consists of multiple LANs that
    have been connected together over long distances
    using routers.</dd>
  <dt>Internet exchange point</dt>
  <dd>Large routers that connect WANs together.</dd>
</dl>
```

Section Elements

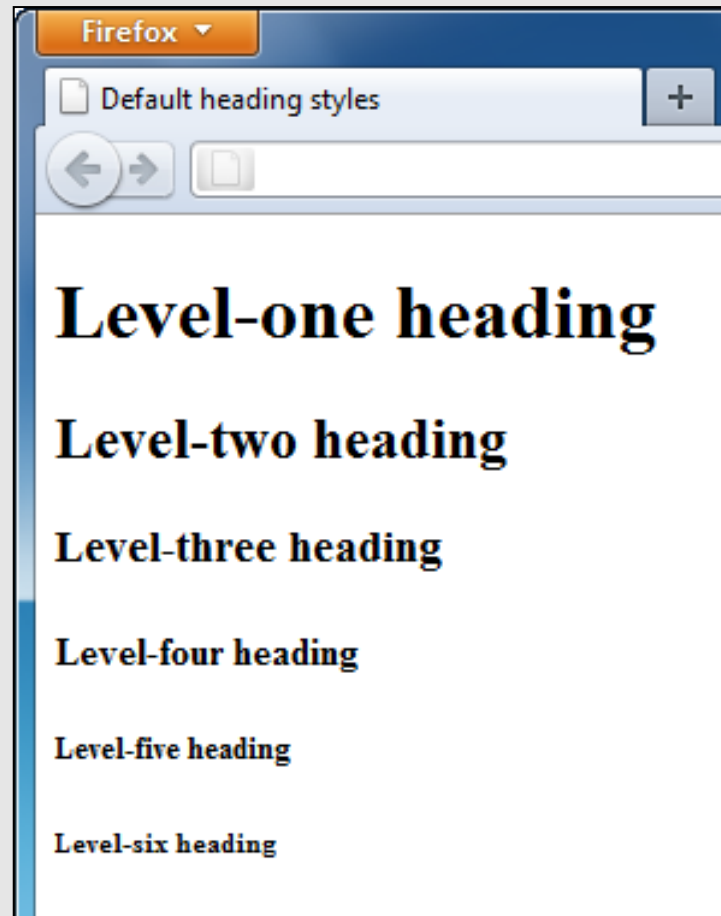
Element	Description
address	Contact information for a document or article
article	An independent block of content
aside	Content only tangentially related to the surrounding content
header	A header region
footer	A footer region
h1, h2, h3, h4, h5, h6	A heading. Begin with h1 and then h2 (sub heading), then h3 (sub sub heading), and so on.
nav	Groups navigation elements
section	A significant concept or topic
details	A section which can be expanded to show more details
summary	The title and/or description for corresponding <details>

Heading Tags

- Headings have multiple levels

```
<h1>Level-one heading</h1>  
<h2>Level-two heading</h2>  
<h3>Level-three heading</h3>  
<h4>Level-four heading</h4>  
<h5>Level-five heading</h5>  
<h6>Level-six heading</h6>
```

- Although tempting, do not use `<h2>` tag if there is no `<h1>` just to get a smaller font size. Search engines pay more attention to `<h1>`s
- Examine <http://jackmyers.info/html/HeadingsAsSectionElements.html>



Sample HTML Using Heading and Paragraph Tags

```
<h1>San Joaquin Valley Town Hall Programs</h1>
<h2>Pre-lecture coffee at the Saroyan</h2>
<p>Join us for a complimentary coffee hour, 9:15 to 10:15
  a.m. on the day of each lecture. The speakers usually
  attend this very special event.</p>

<h2>Post-lecture luncheon at the Saroyan</h2>
<p>Extend the excitement of Town Hall by purchasing
  tickets to the luncheons</p>
```

San Joaquin Valley Town Hall Programs

Pre-lecture coffee at the Saroyan

Join us for a complimentary coffee hour, 9:15 to 10:15 a.m. on the day of each lecture. The speakers usually attend this very special event.

Post-lecture luncheon at the Saroyan

Extend the excitement of Town Hall by purchasing tickets to the luncheons.

Tables

- Every table must have, at a minimum, the following tags:
 - `<table>` Defines the table
 - `<td>` Table Data. Defines a cell
 - `<tr>` Table Row. Defines a row
- Columns are defined by the number of `<td>`'s within a `<tr>`

```
<table>
```

```
<tr>
```

```
<td>Column 1</td> <td>Column 2</td> <td>Column 3</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Also column 1</td> <td>Also column 2</td> <td>Also column 3</td>
```

```
</tr>
```

```
</table>
```

<th>

- Tables will automatically size for you.
- <th> for a table header (column headings)

```
<table>
```

```
<caption>Quarterback Passer Ratings <br />(4 Nov 2012)</caption>
```

```
<tr>
```

```
  <th> Quarterback </th> <th> Team </th> <th> Passer Rating </th>
</tr>
```

```
<tr><td> Peyton Manning </td> <td> DEN </td> <td> 109.0 </td></tr>
```

```
<tr><td> Aaron Rodgers </td> <td> GB </td> <td> 107.9 </td></tr>
```

```
<tr><td> Matt Ryan </td> <td> ATL </td> <td> 103.0 </td></tr>
```

```
<tr><td> Kevin Kolb </td> <td> ARI </td> <td> 86.1 </td></tr>
```

```
<tr><td> Michael Vick </td> <td> PHL </td> <td> 78.6 </td></tr>
```

```
</table>
```

Spanning Rows or Columns

Artist	Work of Art	
	Painting	Year
Claude Monet	The Riverbank at Le Petit Gennevilliers, Sunset	1875
	Sunset on the Seine in Winter	1880
	The Church at Varengeville, against the Sunset	1882
	Willows at Sunset	1889
Paul Cézanne	Judgment of Paris	1864
Camille Pissarro	Sunset	1872
	Setting Sun and Fog, Eragny	1891
	Sunset, Rouen	1898
Edouard Manet	The Athenauem - Boats at Seat, Sunset	1868
	Sunset at Sea	1879
Alfred Sisley	Sunset at Port Marley	1876
	The Moret Bridge at Sunset	1892

- "Work of Art" spans two columns
- `<th colspan="2"> Work of Art</th>`
- "Claude Monet" spans four rows
- `<td rowspan="4"> Claude Monet</td>`

Example of

An img element

```

<h1>Mike Murach & Associates, Inc.</h1>
```

The image in a web browser



Images in figures

Images often work very well when embedded in <figure> and labeled with <figcaption>.

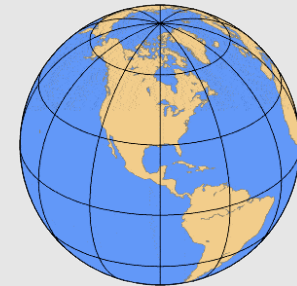
Image Formats

Image formats supported by most browsers

- JPEG (Joint Photographic Experts Group) – 16 million colors
- GIF (Graphic Interchange Format) – 256 colors. Icons, logos, transparency animations (if you must). Smaller files, faster loading. Unisys format.
- PNG (Portable Network Graphics) – copyright-free replacement to GIF. highly compressed files when colors are limited. Can also be transparent.



Typical JPEG image



Generally, you want your GIFs to be transparent.
Old shareware version of GIF Construction Set.

Typical GIF images

Style

- Adding style is easy
- Use the `<style>` attribute
 - `<h1 style="background-color: green;">`
 - `<p style="font-size: 14pt;">`
 - `<td style="color: red; font-family: Calibri; font-size: 10pt;">`
- You need to follow this format
 - Style element: value;
 - Enclose the entire style in quotations