

# HTML 5

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# Basic page structure

- `<!DOCTYPE html>`
- `<html lang="en">`
- `<head>`
- `<title>My First HTML5 Web Page</title>`
- `<meta charset="utf-8">`
- `</head>`
- `<body>`
- Hello World
- `</body>`
- `</html>`

# Webpage Syntax

- `<tag attribute1="value" attribute2 = "value " ...>`
- *Single or double quotes may be used*
- Most elements have starting and ending tags:
- `<tag> ..... </tag>`
- Some are stand-alone elements, technically called void elements
- No closing tag, and the ending space / is optional
- `<img ...>` or `<img ... />`
- Structure must be well-formed with proper nesting

# Paragraph and heading elements

- `<!DOCTYPE html>`
- `<html lang="en">`
- `<head>`
  - `<title>Paragraph Example</title>`
  - `<meta charset="utf-8">`
  - `<!-- This is an HTML comment -->`
- `</head>`
- `<body>`
  - `<h1>Heading Level 1</h1>`
  - `<p>`This is a sample paragraph. Heading tags can help to make your pages more accessible and usable. It is good coding practice to use heading tags to outline the structure of your web page content.`</p>`
  - `<h2>Heading Level 2</h2>`
  - `<h3>Heading Level 3</h3>`
  - `<h4>Heading Level 4</h4>`
  - `<h5>Heading Level 5</h5>`
  - `<h6>Heading Level 6</h6>`

# Logical style elements: Phrase elements

- **Element**      **Usage**
- `<a>`          a link
- `<br>`          an explicit line break
- `<cite>`        identifies a citation or reference; usually displayed in italics
- `<code>`        code text; usually a fixed-space font
- `<em>`          emphasized text; usually displayed in italics
- `<kbd>`        keyboard text; identifies user text to be typed; usually a fixed-space font
- `<mark>`        mark text; stronger text that is highlighted in order to be easily referenced (HTML5 only)
- `<samp>`        sample computer output; usually a fixed-space font
- `<small>`        small text; for example legal disclaimers and notices (“fine print”) displayed in small font-size
- `<span>`        generic inline element; usually used to associate a style with text not associated with an element
- `<strong>`      strong importance; usually displayed in bold
- `<sub>`        subscript
- `<sup>`        superscript
- `<var>`        var text; identifies and displays a variable’s output; usually displayed in italics

# Elements that create ordered (numbered) and unordered (Bulleted) lists

- `<ol>`  
ORDERED LIST

- `<ul>` UNORDERED LIST

- `<li>` LIST ITEM

- HTML that creates two lists
- `<p>We have books on a variety of languages, including</p>`
- `<ul>`
- `<li>Java</li>`
- `<li>JavaScript</li>`
- `<li>Visual Basic</li>`
- `<li>C#</li>`
- `<li>C++</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>`

# The lists in the browser

We have books on a variety of languages, including

- Java
- JavaScript
- Visual Basic
- C#
- C++

You will need to complete the following steps:

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

# Description List

- Useful to display a list of terms and descriptions or a list of FAQ and answers

`<dl>`

Contains the description list

`<dt>`

Contains a term/phrase/sentence

Configures empty space above and below the text

`<dd>`

Contains a description of the term/phrase/sentence

Indents the text

Configures empty space above and below the text



# Description List Example

**<dl>**

**<dt>IP</dt>**

**<dd>Internet Protocol</dd>**

**<dt>TCP</dt>**

**<dd>Transmission Control Protocol</dd>**

**</dl>**

IP

Internet Protocol

TCP

Transmission Control Protocol

# Special Characters

- Display special characters such as quotes, copyright symbol, etc.

Character	Code
©	&copy;
<	&lt;
>	&gt;
&	&amp;
	&nbsp;

A complete list can be found at:

[http://www.w3.org/MarkUp/html-spec/html-spec\\_13.html](http://www.w3.org/MarkUp/html-spec/html-spec_13.html)

# Anchor Element

- Specifies a hyperlink reference (href) to a file
- Text between the `<a>` and `</a>` is displayed on the web page.
- **`<a href="contact.html">Contact Us</a>`**
- href attribute
  - Indicates the file name or URL

# Absolute & Relative Hyperlinks

- Absolute link

- Link to other websites

**`<a href="http://yahoo.com">Yahoo</a>`**

- Relative link

- Link to pages on your own site

**`<a href="index.htm">Home</a>`**

# Referencing

- Examples of absolute and relative URLs
- Absolute URLs
- <http://www.peachpit.com/index.html>
- <http://www.peachpit.com/books/javascript/toc.html>
- 
- Relative URLs that are based on the root\books directory
- index.html  
(refers to root\books\index.html)
- javascript/overview.html  
(refers to root\books\javascript\overview.html)

# Examples

- Examples of absolute and relative URLs (cont.)
- Relative URLs that navigate up from root\books\javascript
- ../index.html *up one level*  
(refers to root\books\index.html)
- ../../index.html *up two levels*  
(refers to root\index.html)
- /login.html  
(refers to root\login.html)
- /images/murachlogo.gif  
(refers to root\images\logo.gif)

# Examples

- Basic attribute of the `<a>` tag: `href`
- A link to a web page in the same directory:
  - `<p>Go view our <a href="products.html">product list</a></p>`
- A link to a web page in a subdirectory of the parent directory:
  - `<p>Read about the <a href=" ../company/services.html">services we provide</a> </p>`
- A link to a web page based on the root directory:
  - `<p>View your <a href="/orders/cart.html">shopping cart</a></p>`

# Tables

- The entire table is contained between the tags
- `<table> </table>`
- Rows are indicated with the tags
- `<tr></tr>`
  
- Cell contents may be contained in either
  - Heading tags `<th></th>` or
  - Data tags: `<td></td>`
  
- Indentation helps outline the structure of the table



# Example

```
<table>  
  <tr>  
    <th> Heading 1 </th>  
    <th> Heading 2 </th>  
  </tr>  
  <tr>  
    <td> Cell 1 </td>  
    <td> Cell 2 </td>  
  </tr>  
  <tr>  
    <td> Cell 3 </td>  
    <td> Cell 4 </td>  
  </tr>  
</table>
```

Heading 1	Heading 2
Cell1	Cell2
Cell3	Cell4

# Images

- Attributes of the `<img>` tag
  - `src`
  - `alt`
  - `longdesc`
  - `height`
  - `width`
- An `img` element
- `<h2>`
  - `&nbsp;&nbsp; My Company & Associates, Inc.</h2>`

# Creativecommons.org

- What is Creative Commons?
- Creative Commons is a nonprofit organization that enables the sharing and use of creativity and knowledge through free legal tools.
- Our free, easy-to-use [copyright licenses](#) provide a simple, standardized way to give the public permission to share and use your creative work — on conditions of your choice. CC licenses let you easily change your copyright terms from the default of “all rights reserved” to “[some rights reserved](#).”
- Creative Commons license conditions for images and icons
- Attribution
- Share Alike
- Non-Commercial
- No Derivative Works

# Image resources

- Popular web sites for images
  - [www.sxc.hu](http://www.sxc.hu)
  - [www.freefoto.com](http://www.freefoto.com)
  - [www.openphoto.net](http://www.openphoto.net)
  - [www.google.com/imghp](http://www.google.com/imghp)
- Popular web sites for stock photos
  - [www.istockphoto.com](http://www.istockphoto.com)
  - [www.gettyimages.com](http://www.gettyimages.com)
- A popular search engine for stock photos
  - [www.everystockphoto.com](http://www.everystockphoto.com)

# Div Element

- Configures a structural block area or “division” on a web page with empty space above and below.
- Can contain other block display elements, including other div elements
- A better semantic choice when the text isn’t a paragraph but when block formatting is desired.
- `<div>Home Services Contact</div>`

# XHTML-style blocks

- `<body>`
- `<div id="page">`
- 
- `<div id="main">`
- `<h1>San Joaquin Valley Town Hall</h1>`
- `<p><span id="welcome">Welcome to San Joaquin Valley Town Hall.</span>`
- `We have some amazing speakers in store for you this season!</p>`
- `</div>`
- 
- `<div id="footer">`
- `<p>&copy; Copyright 2009 San Joaquin Valley Town Hall.</p>`
- `</div>`
- 
- `</div>`
- `</body>`

# HTML5 Core Attributes

id	uniquely identifies the element on a page, must be distinct from other id's on the page
style	specifies an inline CSS style for an element
class	specifies a style class to apply consistent styles to all elements belonging to the same class
title	may be used for tool-tips in browsers
hidden	prevents the element from being displayed when set to true

# HTML5

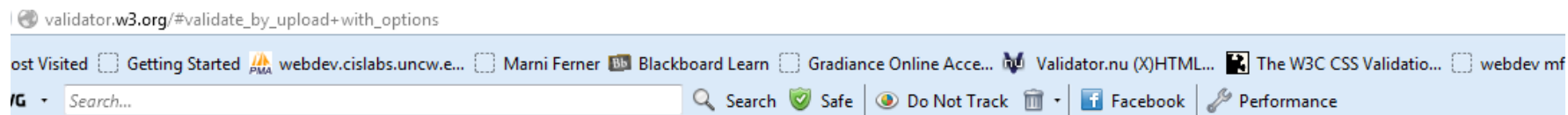
- The primary HTML5 structural elements
  - header
  - section
  - article
  - nav
  - aside
  - footer
- Accessibility and SEO guideline:
- Use the HTML5 semantic elements to indicate the structure of your pages.

**A page with header, section, and footer elements**

```
<body>  
  <header>  
    <h1>Town Hall</h1>  
  </header>  
  <section>  
    <p>Welcome to the Town Hall  
      Website. </p>  
    <p>We have some fascinating  
speakers for you this season! </p>  
  </section>  
  <footer> <p>&copy; Copyright 2012 San  
Joaquin Town Hall.</p>  
</footer>  
</body>
```



# Validation: w3c



## Markup Validation Service

Check the markup (HTML, XHTML, ...) of Web documents

Validate by URI

Validate by File Upload

Validate by Direct Input

### Validate by File Upload

Upload a document for validation:

File:  Lab02SOL.html

#### More Options

**Character Encoding** (detect automatically)  Only if missing

**Document Type** (detect automatically)  Only if missing

List Messages Sequentially  Group Error Messages by Type

Show Source

Clean up Markup with HTML-Tidy

Show Outline

Validate error pages

Verbose Output

Check

**Note:** file upload may not work with Internet Explorer on some versions of Windows XP Service Pack 2, see our [information page](#) on the W3C QA Website.