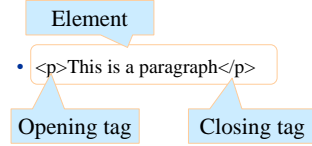


XHTML Standards

- XHTML 1.0
 - Reformulation of HTML 4.0 on XML rather than SGML
 - Strict
 - No deprecated elements
 - www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd
 - Transitional
 - Supports deprecated elements and attributes
 - www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd
 - Frameset
 - Transitional + support for frames
 - www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd
- XHTML 1.1
 - Reformulation of XHTML 1.0 Strict based on modularization
- XHTML 2
 - Working draft
 - More structuring tags, navigation lists

XML Syntax

- All elements must have closing tags



- `
` *Empty element tag*

Shorthand for `
</br>`

- In HTML: `<p>`, `
`, ...

XML Syntax

- Tags are case sensitive
 - `<a>Illegal`
 - `<a>Correct`
- Elements must be properly nested
 - `<a>Illegal`
 - `<a>Correct`
- Attribute values must always be quoted
 - ``
 - ``

Outline

- Global HTML structure
- Frames
 - Multi-view presentation of documents
- Forms
 - User-input: text fields, buttons, menus, etc.
- XHTML validator

Document Structure

```
<?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>
  <head>
    .....
  </head>
  <body>
    .....
  </body>
</html>
```

<head>

- *Must* contain a `<title>` element
 - Used as window titles, in favourite lists, search engine results, ...
 - Choose a good, content-rich one - it's displayed a lot.
 - POOR:
 - `<title>Introduction</title>`
 - BETTER:
 - `<title>Introduction to Bee-Keeping</title>`
- May contain
 - `<meta>`
 - `<link>`

<meta>

- Provides meta-information about your page
 - Descriptions
 - Keywords for search engines
 - Refresh rates

```
<meta name="Author" content="Joe Smith">
<meta http-equiv="Expires" content="Tue, 20 Oct 2004
14:25:27 GMT">
<meta name="keywords" lang="en" content="vacation,
sunshine">
```

- Efforts underway to standardize document meta-data

<link>

- Relationship information
- Some uses
 - Rendered by user agents
 - e.g., a tool-bar with a drop-down menu
 - Used by search engines

```
<head>
<link rel="Index" href=" ../index.html" />
<link rel="Next" href="ch3.html" />
<link rel="Prev" href="ch1.html" />
<link rel="Start" href="grtitlepage.html" />
</head>
```

<body>

- Displayable content
 - Text, images, graphics, etc.
- Style attributes have been deprecated in favour of style sheets.
- Contains two types of elements
 - Block-level
 - Begin on new line
 - Contains other block-level or inline
 - <table>
 - Inline
 - Do not start a new line
 - Contain other inline elements
 - <i>

Frames

- Allow authors to present documents in multiple views
- May be independent windows or subwindows.
- Multiple views offer designers a way to keep certain information visible, while other views are scrolled or replaced.
- Use with caution!

Frames cont.

frameset : [frameset|frame]+

frameset attributes

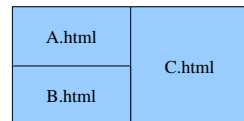
rows	number	-- dimensions of rows --
cols	number	-- dimensions of cols --

frame attributes

name	string	-- name for targeting --
src	URL	-- source of frame content --
frameborder	(1 0)	1 -- request frame borders? --
scrolling	(yes no auto)	auto -- scrollbar or none -->

Example1

```
<?xml version=" 1.0" encoding=" UTF-8 " ?>
<!DOCTYPE html PUBLIC "-//w3c//DTD XHTML 1.0 Frameset//EN "
"www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd">
<head>
<title>frames example</title>
</head>
<frameset cols="50%, 50%">
<frameset rows="50%, 50%">
<frame src="A.html">
<frame src="B.html">
</frameset>
<frame src="C.html">
</frameset>
```



Frames - Size Control

- `<frameset rows="50%, 50%">`
 - divides the space in half
- `<frameset cols="1*,250,3*">`
 - middle frame has a width of 250px
 - left gets 25% of remaining, right 75%
- `<frameset rows="30%,70%" cols="33%,34%,33%">`
 - creates a 2x3 grid
- `<frameset rows="30%,400,*2*">`
 - first takes 30%, next takes 400px
 - second last takes 1/3 of remainder, last 2/3.

Frames - Linking Control

- Frames have names
 - `<frame name="foo-frame" />`
 - `<frame name="foo-frame" src="original.html"/>`
- Link can have a "target"
 - ``
- Pre-defined and reserved targets
 - `_blank` (new target window)
 - `_self` (**(default)**)
 - `_parent` (embedded frame sets)
 - `_top` (browser, replace frameset)

Example2



- www.cdf.toronto.edu/~radu/csc309/2007-05-23/frame_example/frames.html

Forms

- Gather user input
 - Communicate information to server
- Contain widgets/controls
 - Single and multi-line text boxes
 - Checkboxes
 - Radio buttons
 - Menus
 - Submit and Reset
- Each control has a value
- On submit
 - Encode control values, and send to web server

`<form>`

- Contains all controls
 - Attributes
 - *action*
 - URL of program to call on server when user presses Submit button
 - *method*
 - Either GET (default) or POST
- `<form method='get' action='someURL'>`

`<input>`

- Specifies text boxes, checkboxes, buttons, radio buttons, reset and submit buttons
- Attributes
 - *type*
 - text, checkbox, button, ...
 - *name*
 - *value*
 - For checkboxes and radio buttons

<input>

Payment Method Visa MasterCard American Express

`<input type = "text" name = "number" />`

Credit Card Number

`<input type = "radio" name = "card" value = "visa" checked = "checked"/>`

Visa

`</input>`

`<input type = "radio" name = "card" value = "mastercard" />`

MasterCard

`</input>`

`<input type = "radio" name = "card" value = "amex" />`

American Express

`</input>`

Submit and Reset

- Submit

- Code all control values into a string
- Ask server to execute application specified in the form's *action* attribute

`<input type="submit" value="Google Search" />`

- Reset

- Clear all form fields

`<input type = "reset" value = "Clear Form" />`

Submit and Reset

- e.g., www.cdf.toronto.edu/~radu/csc309/form_example/form2.html

Google search box on your website

- `<form method="get" action="http://www.google.com/search">`
- `<input type="text" name="q" size="25" maxlength="255" value="" />`
- `<input type="submit" value="Google Search" />`
- <http://www.google.com/search?q=sometext>

Buttons

`<input type="button" onclick="javascript:test();" value="Click Me!"/>`

<select>

- Menus
- Attributes
 - *name*
 - *size*
 - 1 – drop down box
 - > 1 – scrolled list
 - *multiple*
 - Allow multiple selection
 - *option*
 - Elements of the list

Forms Example

XHTML Validation Service

- <http://validator.w3.org>



Text - Lines and Paragraphs

- `<p>` starts a new, logical paragraph.
 - Can contain only inline elements
 - no block elements allowed
- `
` forces a line break
 - clear attribute indicated where the next line should start

Text - Phrase Elements

- Phrase elements add structural information to text fragments.

<code>em</code>	emphasis
<code>dfn</code>	defining instance
<code>cite</code>	citation to another source
<code>code</code>	fragment of computer code
<code>samp</code>	sample output from programs
<code>kbd</code>	text entered by the user
<code>var</code>	instance of a variable from a program
<code>abbr</code>	abbreviated form, such as WWW
<code>acronym</code>	indicates an acronym, such as laser

Text - misc.

- Subscripts and superscripts
 - `E = mc²`
 - `H₂O`
- Inserts and deletions
 - `<ins>` These markup tags are useful for indicating inserted information and for showing what has been removed
 - ``
- Preformatted text
 - `<pre>`
 - Preserves spaces and line breaks

Text - Headings

- Six levels in decreasing order of importance
 - `<h1>` to `<h6>`
 - Visual browsers usually render more important headings in larger fonts than less important ones.
- Headings do not surround their section, only their titles
 - Use `<div>` for that

Grouping Elements

- Used in conjunction with class and id CSS
- `<DIV>`
 - Generic block-level element
- ``
 - Generic inline tag

Section Delimiters

```
<DIV class="section" id="forest-elephants">
  <H1>Forest elephants</H1>
  <P>In this section, we discuss the lesser
    known <span class="sp1">forest</span>
    elephants.
  ...this section continues...
  <DIV class="subsection" id="forest-habitat">
    <H2>Habitat</H2>
    <P>Forest elephants do not live in trees
      but among them.
    ...this subsection continues...
  </DIV>
</DIV>
```

Lists

- Unordered lists

-

- Ordered lists

-

```
• This is a long list element to illustrate what
• Element two
• Element three
  ○ Nested element
  ○ Nested element
• Element four

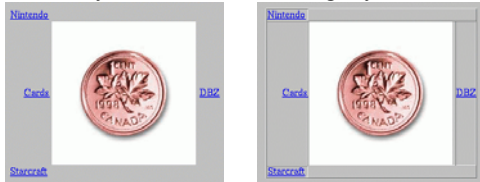
1. This is a long list element to illustrate what
10. Element two
  1. Nested element
  2. Nested element
11. Element four
12. Element three
```

Tables

- Laying out tables of data

	Average	Red	
	height	weight	#yes
Males	1.9	0.003	40%
Females	1.7	0.002	43%

- Extremely useful for controlling layout



Links

- "anchor" element

- UofT

- Can tag a part of the document with an *anchor name*:

-

- Can then jump there using a *fragment identifier*:

- go to chapter 1
-