

<html>

- XHTML is an XML *application* (set of tags).
- XML is case-sensitive.
 - All elements and attributes in the xhtml namespace are *lower-case*!
 - Differs from HTML 4.0
- Definitive references:
 - html 4.01 Specification 24 Dec. 1999
 - <http://www.w3.org/TR/html4>
 - xml 1.0 (2nd edition)
 - <http://www.w3.org/TR/2000/REC-xml-20001006>
 - xhtml 1.0: The Extensible HyperText Markup Language
 - <http://www.w3.org/TR/xhtml1>

Sections

- Global Structure
- Text
- Lists
- Tables
- Links
- Object, Images, and Applets
- Style Sheets
- Alignment, font styles, and horizontal rules
- Frames
 - Multi-view presentation of documents
- Forms
 - User-input Forms: Text Fields, Buttons, Menus, and more
- Scripts
 - Animated Documents and Smart Forms

Global - <head>

- *must* contain a <title> element
 - used as window titles, in favourite lists, search engine results, ...
 - choose a good, context-rich one - it's displayed a lot.
 - POOR: "Introduction"
 - BETTER: "Introduction to Medieval Bee-Keeping"
- May contain
 - <meta>
 - <link>
 - <base>

Global - <meta>

- Allowed meta-attributes/values may be specified via a "profile".
 - won't get into that here.
- e.g.,

```
<meta name="Author" content="Dave Penny">
<meta http-equiv="Expires" content="Tue, 20 Aug
  199 14:25:27 GMT">
<meta name="keywords" lang="en"
  content="vacation, sunshine">
<meta name="keywords" lan="fr" content="vacances,
  soleil">
```
- Efforts underway to standardize document meta-data
 - e.g., The Dublin Core Metadata Initiative

Global - <link>

- Conveys relationship information that may be rendered by user agents in a variety of ways or used by search engines
 - e.g, a tool-bar with a drop-down menu of links

```
<html>
<head>
  <title>General Relativity - Chapter 2</title>
  <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>
...
```

%attrs; = Common Attributes

- Certain attributes are fairly common across all elements (but check individual element)
 - %i18n;
 - lang and dir
 - %coreattrs;
 - id, class, style, title
 - %events;
 - onclick, ondblclick, onmousedown, ...

Global - <body>

- %attrs;
- Most of the former most commonly used attributes are deprecated in favour of stylesheets.

Global - Grouping Elements

- Used in conjunction with class and id and stylesheets
 - <DIV>
 - generic block-level element
 -
 - generic inline tag

Global - Headings

- There are six levels of headings in HTML with H1 as the most important and H6 as the least.
 - 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

Global - Section Delimiters

```
<DIV class="section" id="forest-elephants">
  <H1>Forest elephants</H1>
  <P>In this section, we discuss the lesser
  known forest 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>
```

Text - White Space

- White-space is defined as
 - ASCII space ` `
 - ASCII tab `	`
 - ASCII form-feed ``
 - Unicode zero-width space `​`
 - line breaks
 - carriage return ``
 - line feed `
`
 - or any combination of them
- Within an element, sequences of white space separate "words"
 - Layout *may* involve inserting inter-word spacing.
- Except for the `<pre>` element

13 - HTML

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11

Text - Phrase Elements

- Phrase elements add structural information to text fragments.
- [phraseelements.html](#)

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12

Text - Quotations

- `<blockquote>`
 - for a block of text
 - indents the entire paragraph
 - ought to add " signs, but doesn't because of historical use as simply an indented paragraph
- `<q>`
 - for in-line quotes
 - can be nested
 - doesn't work
- [quotes.html](#)

13 - HTML

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13

Text - Lines and Paragraphs

- `<p>` starts a new, logical paragraph.
 - Can contain only inline elements
 - no block elements allowed
- `<br/>` forces a line break
 - clear attribute indicated where the next line should start
- An non-breaking space prohibits a line break
 - ` `; ` `
- soft hyphen encourages a line break
 - `­`; `­`
- [lines.html](#)

13 - HTML

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14

Text - misc.

- Subscripts and superscripts
 - [supb.html](#)
- Inserts and deletions
 - [insdel.html](#)
- Preformatted text
 - [pre.html](#)

Lists

- Unordered lists
- Ordered lists
- Definition lists
- [lists.html](#)

Tables

- Extremely useful for controlling layout
 - [penny.html](#)
 - You can even use them for laying out tables of data
 - [basictable.html](#)
- Features
 - row and column groups
 - to apply the same style across them
 - rules
 - backgrounds
 - header and footer sections
 - controlling width
 - decimal-point alignment
 - ...

13 - HTML

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17

Links

- Use an "anchor" element
 - Can tag a certain part of the document with an *anchor name*:
 - `<a name="chapter1"/>`
 - `<div id="chapter1"> ... </div>`
 - Can then jump there using a *fragment identifier*:
 - `<a href="#chapter1">go to chapter 1</a>`
 - `<a href="http://www.foo.com/book.html#chapter1">`

13 - HTML

CSC309

18

Frames

- HTML 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.
- [frames.html](#)

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

- Each link can have a "target"
 - `<a target="_top" href="foo.html">`
 - Pre-defined and reserved targets
 - `_blank`
 - `_self` (**default**)
 - `_parent`
 - `_top`
 - `<frame name="top-frame" src="bar.html"/>`
 - `<a target="top-frame">`

Objects

- `<object>` allows authors to include
 - images (or use `<img>`)
 - applets (replaces deprecated `<applet>`)
 - video clips (no other standard way of doing it)
 - sound files (no other standard way of doing it)
 - other HTML documents (or use `<iframe>`)
- `<object>` not yet fully supported