
Announcements

- ❖ Paper due this Wednesday
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Client and Server

- Client and server are two terms frequently used
- Client/Server Model
- Client/Server model when talking about software
- Client/Server model when talking about hardware
- Examples of Client/Server systems
 - Web browser/Web Server
 - E-mail client/E-mail Server

Creating Web Pages

- ❖ HTML - Hypertext Markup Language
- ❖ HTML Standard
 - ❖ Developed by the World Wide Web Consortium (W3C)
 - ❖ <http://www.w3.org>
 - ❖ Latest version HTML 4.01
- ❖ Document is described through a series of commands and directives present in a text file.
- ❖ HTML goal is to describe structure only. Presentation should be left to cascading style sheets.
- ❖ When interpreted by an HTML **viewer**, those commands determine the appearance of the page
- ❖ HTML documents are entirely ASCII text
- ❖ Commands are explicitly inserted
- ❖ Site with great information:
<http://www.htmlcompendium.org/>

HTML

- Three versions of HTML
 - HTML 4.01 Strict (excludes deprecated tags and attributes)
 - HTML 4.01 Transitional (less restrictive including appearance elements)
 - HTML 4.01 Frameset (identical to transitional but allows <body> to be replaced with <frameset>)
- Web Standards Project (www.webstandards.org)
 - Industry watchdog convincing web browsers developers to adhere to web standards.
- HTML 4.01 is the last version for HTML. Next version is XHTML 1.0
- XHTML
 - Uses same tags as HTML 4.01
 - Enforces rules like closing tags, tags in lowercase, and others.

Validation

- You can use Page Valet 4.2 (<http://valet.webthing.com/page/upload.html>) to validate your code.
- Also through firefox you can use ***tidy*** for html validation. Tidy also provides suggestions for code that cannot be validated.
- You can also validate using the w3 validator (<http://validator.w3.org/#validate-by-upload>)
- Let's validate the previous example

HTML Tags

- ❖ Tag – specifies a command or directive
- ❖ General format:

<elementName attributes>

- ❖ Most HTML elements have two tags:
 - ❖ start tag and end tag
 - ❖ Example: <h1> text </h1>
- ❖ Although tags and attributes can be in uppercase we will use lowercase (XHTML will require this style)
- ❖ For some tags the end tag is optional, however for XHTML compliance, we will always have a closing tag

Tags without end tags

- `<hr>`
- `<br>`
- `<col>`
- `<area>`
- `<base>`
- `<img>`
- `<input>`
- `<input>`
- `<isindex>`
- `<param>`
- `<link>`
- `<basefront>`
- `<frame>`
- `<meta>`

Attributes

- ❖ An attribute extends or modify a tag
- ❖ Attributes
 - ❖ Only appear in the start tag
 - ❖ You can have several attributes in one tag each separated by spaces
 - ❖ Order is immaterial
 - ❖ Some take values which are specified after an =
- ❖ General format
 - ❖ `<ELEM ATTR="attrValue">Displayed Text</ELEM>`
- ❖ Example
 - ❖ ``
- ❖ All attribute values will be enclosed in “ ” for XHTML compliance.

HTML

- Message***

- Multiple spaces are converted to one space

Mary

John Mary Peter

- Unrecognized tags are ignored

- Represented by <!-- COMMENT GOES HERE -->

- ## ■ Examples

- <!-- The html code example starts at this point -->

- A space is required after <!-- and before -->

- Comments can not be nested

A Basic Skeleton for an HTML Document

- ❖ An html document has two parts
 - ❖ **Header** – provides information about the document
 - ❖ **Body** – contents of the page
- ❖ **Example 1 (htmlDoc1.html)**

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
    "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html>
  <head>
    <title>Example #1</title>
  </head>
  <body>
    Hello.
  </body>
</html>
```

How to develop html documents

- Text Editor

- Any text editor (e.g., wordpad, notepad, pico, etc.)

- HTML Editors

- Utilities designed to write HTML

- Authoring tools

- Frontpage – Good for beginners
 - Dreamweaver – Fairly complex but powerful
 - Free (Open Source) Web Authoring tool
 - <http://www.nvu.com/>

Tags

1. <head> </head>

- It does not generate displayed contents
- Contains other tags (e.g., <title> </title>)

2. <title> </title>

- Part of the header
- It is required
- Search engines depend on it, so use meaningful titles

Frequently Used Tags

- Heading tags
 - `<h1> text </h1>`
`<h2> text </h2>` ... and so on until
`<h6> text </h6>`
 - Higher numbers imply smaller headers
 - Alignment can be controlled by the **align** attribute which can assume the values **left** and **right**
- Paragraph tag
 - `<p> paragraph </p>`
 - Encloses a paragraph
 - Alignment can be controlled by the **align** attribute which can assume the values **left** and **right**
- Bold
 - `<b> text that will appear in bold </b>`
- Code
 - `<code> </code>`
- Emphasis
 - `<em> text here </em>` Text usually rendered in italics
 - `<strong> text here </strong>` Text usually rendered in bold
- Super/Sub script
 - `<sub> text here </sub>`
 - `<sup> text here </sup>`

Frequently Used Tags

- Quotations
 - `<q> quote here </q>`
- Line Breaks
 - `<br>`
- Verbatim (text displayed exactly as it appears)
 - `<pre> text here </pre>`
- Example 2 (htmlDoc2.html)

Lists

■ Unordered lists

- `<ul>` `</ul>` tags to represent beginning and end
- `<li>` `</li>` to represent elements in the list
- **Example 3 (htmlDoc3Lists.html)**

■ Ordered lists

- `<ol>` `</ol>` tags to mark beginning and end
- `<li>` `</li>` to represent elements in the list
- Style of numbering dictated by ***type*** attribute
 - “1” – numbers default
 - “A” – Uppercase letters
 - “a” – Lowercase letters
 - “I” – Uppercase Roman
 - “i” – Lowercase Roman
- You can change start number by using ***start*** attribute
- **Example 3 (htmlDoc3Lists.html)**

Lists

■ Definition lists

- ❑ Consist of terms and definitions like in a glossary
- ❑ Tags - `<dl>` `</dl>`
- ❑ Terms specified using `<dt>` `</dt>` and definitions with `<dd>` `</dd>`
- ❑ Example:

■ Nested Lists

- ❑ Lists can be nested as shown by the following **Example 4 (htmlDoc4DefLists.html)**

Character References

- Special Characters can be specified by
 - Name specification - *&name*
 - Numeric specification - *&#xxx*
- Commonly used characters

<i>Copyright</i>	<i>&copy;</i>	<i>&#165;</i>
<i>Registered Trademark</i>	<i>&reg;</i>	<i>&#174;</i>
<i>&</i>	<i>&amp;</i>	<i>&#038;</i>
<i><</i>	<i>&lt;</i>	<i>&#060;</i>
<i>></i>	<i>&gt;</i>	<i>&#062;</i>
<i>Non break space</i>	<i>&nbsp;</i>	<i>&#160;</i>

Suggestions for Writing HTML Code

- Add the corresponding end tag immediately
- Use indentation
- Have a consistent style
- Use comments to separate sections of your code.
- Make sure your code satisfies HTML 4.01