HTML –HyperText Markup Language

❖ **HTML is a format description language**
- ◆ **Web publishing file format**
  - ◆ Processor Independence
  - ◆ Browser Independence
- ◆ **Provides layout information for:**
  - ◆ Text, Images, Animation, Sound
  - ◆ Interaction with server forms and programs
- ◆ **HTML Element Tags**
  - ◆ ASCII text based
  - ◆ Denoted by enclosing in < >
  - ◆ Not case sensitive – May use upper or lower case
- ◆ **HTML is NOT a programming language**

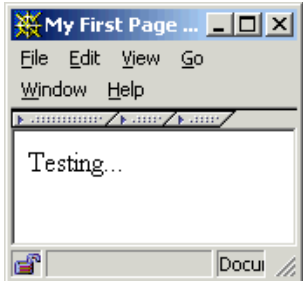Copyright © 2007 R.M. Laurie   1

HTML: Document Elements

❖ **<html>**   *Beginning of html code*

❖ **<head>**   *Beginning of head*

❖ **<title>**My Page**</title>**   *Document title*

❖ **</head>**   *End of head closing tag*

❖ **<body>**   *Beginning of body*

❖ **</body>**   *End of body closing tag*

❖ **</html>**   *End of html code closing tag*

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HTML: Simple Document Example

HTML nesting order: Last Open is First Closed

```
<html>
  <head>
    <title>My First Page</title>
  </head>
  <body>
    Testing...
  </body>
</html>
```

My First Page ...
File Edit View Go
Window Help

Testing...

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HTML and XHTML

❖ **HTML= Hyper-Text Markup Language**
- ◆ Describes web document's *Structure* and *Presentation*
- ◆ The original web page coding method
- ◆ Considered a deprecated technology

❖ **XHTML = Extensible Hyper-Text Markup Language**
- ◆ Intended to describe web document's *Structure*
❖ **CSS = Cascaded Style Sheets**
- ◆ Describes web document's *Presentation*
❖ **Warning: XHTML and CSS have limited support by version 4 and earlier browsers**

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XHTML Requirements

1. XHTML **elements** contain **start** and **end tags**
2. Elements and attributes must be *lower case*
3. Attribute values must be enclosed in *"double quotes"* or *'single quotes'*
4. DOCTYPE must be included
   `<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">`
5. Html element must include xmlns attribute
   `<html xmlns="http://www.w3.org/1999/xhtml">`
6. Nesting order: *Last Opened must be First Closed*
7. *Empty elements that* contain only attributes and do not mark up text may end with **/>**
   `<img />   <hr />   <br />`

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XHTML Code Validation

❖ **World Wide Web Consortium = W3C**
- ◆ Standards organization for the web
- ◆ Online validation service at http://validator.w3.org

❖ **XHTML version 1 comes in four flavors:**
- ◆ **XHTML 1.1**: Too new for good browser support.
- ◆ **XHTML 1.0 Strict**: Deprecated elements, attributes, frames, and link targets are not allowed in XHTML 1.0 Strict. Very similar to XHTML 1.1
- ◆ **XHTML 1.0 Transitional**: Includes all elements and attributes of XHTML Strict and presentational attributes, deprecated elements, and link targets.
- ◆ **XHTML 1.0 Frameset**: Variant of XHTML Transitional for documents that use frames.

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XHTML: Simple Document Example

```
1. <?xml version = "1.0"?>        Don't use because IE goes into quirks mode
2. <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
3.  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
4. <!-- Place optional page description comment here -->
5. <html xmlns = "http://www.w3.org/1999/xhtml">
6.  <head>
7.    <title>Welcome to XHTML</title>
8.  </head>
9.  <body>
10.   <p>
11.      What are the differences between this and HTML?
12.   </p>
13.  </body>
14. </html>
```

Welcome to XHTML - Mozilla Firefox
File Edit View Go Bookmarks Tools Help
What are the differences between this and HTML?

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XHTML: Comments

❖ **XHTML Comments are considered hidden text**
- ◆ Comments are ignored by the web browser rendering engine and display nothing in client area
- ◆ Permits writing notes to those that view xhtml code
- ◆ Can be used for debugging by disabling sections of code which may extend across multiple lines.

❖ **Syntax:**

`<!-- This is a Comment -->`

- ◆ Can extend across multiple lines
- ◆ Can not contain "-->" in comment
- ◆ Can not nest comments

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XHTML: Block Level Elements

- ❖ **Paragraph = Normal text**
  - ◆ **\<p\>This is a paragraph\</p\>**
- ❖ **Headings = Bold text**
  - ◆ **\<h1\>XX-Largest\</h1\>** = XX-Large
  - ◆ **\<h2\>X-Larger\</h2\>** = X-Large
  - ◆ **\<h3\>Large\</h3\>** = Large
  - ◆ **\<h4\>Medium\</h4\>** = Medium
  - ◆ **\<h5\>Small\</h5\>** = Small
  - ◆ **\<h6\>X-Small\</h6\>** = X-Small
- ❖ **Warning: Nesting of block level elements is not permitted!**

XHTML: Block Level Example

```
1.   <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
2.     "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
3.   <!-- Block Level Element Example Page  -->
4.   <html xmlns="http://www.w3.org/1999/xhtml">
5.     <head> <!--Head section executes first-->
6.       <title>Welcome to XHTML</title>
7.     </head>
8.     <body>
9.     <!-- Body section displayed in browser-->
10.       <p>This is a paragraph</p>
11.       <h1>XX-Large</h1>
12.       <h2>X-Large</h2>
13.       <h3>Large</h3>
14.       <h4>Medium</h4>
15.       <h5>Small</h5>
16.       <h6>X-Small</h6>
17.     </body>
18.   </html>
```

XHTML: Horizontal Rules p. 101

- ❖ **The Horizontal Rule \<hr /\> element draws a horizontal bar across the web page**
- ❖ **\<hr /\> is a block level element**
  - ◆ **Typically used to separate document sections**
  - ◆ **Represents element placement not text markup**
  - ◆ **Therefore, \<hr /\> is an *empty element* and the shorter form may be used instead of an end tag**
  - ◆ **Avoid "sandwich" effect don't overuse**
    - ◆ **Limit to one \<hr /\> element per web page**
  - ◆ **Warning: Nesting of \<hr /\> within heading or paragraph elements is not permitted! It is a block level element.**

XHTML: Assignment 1 (15 Points)

- ❖ **Write the XHTML code to display the following and your interpretation of Freedom with your name.**
- ❖ **Print the XHTML valid code and the browser output.**

Philosophy of Freedom - Mozilla Firefox

File   Edit   View   Go   Bookmarks   Tools   Help

Freedom

Freedom is just another word for nothing left to lose.
--Janis Joplin

The chains that keep us from true freedom are bad experiences of the past, good experiences of the past, fears and anxieties about the future, ambitions for the future, clinging to present things, and delusions about our own importance.
-- Anthony Demello