

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

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HTML: Document Elements

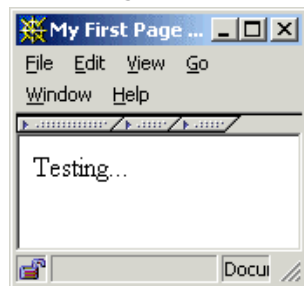
- ❖ <html> *Beginning of html code*
- ❖ <head> *Beginning of head*
- ❖ <title>My Page</title> *Document title*
- ❖ </head> *End of head closing tag*
- ❖ <body> *Beginning of body*
- ❖ </body> *End of body closing tag*
- ❖ </html> *End of html code closing tag*

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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>
```



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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*
- ❖ **Caution: 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 `/>`
` <hr />
`

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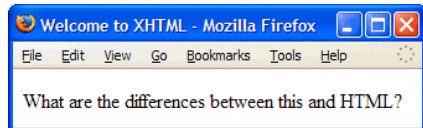
XHTML Code Validation

- ❖ 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. `<meta http-equiv="Content-Type"`
9. `content="text/html; charset=iso-8859-1" />`
10. `</head>`
11. `<body>`
12. `<p>`
13. `What are the differences between this and HTML?`
14. `</p>`
15. `</body>`
16. `</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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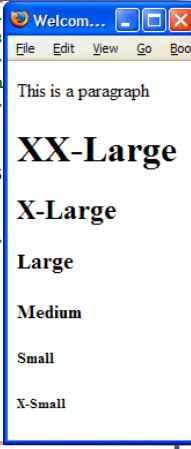
XHTML: Block Level Elements

- ❖ 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 heading and paragraph elements is not permitted!**

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XHTML: Block Level Example

```
1. <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
2. <html xmlns="http://www.w3.org/1999/xhtml" >
3. <!-- Block Level Element Example Page -->
4. <head> <!--Head section executes first-->
5. <title>Welcome to XHTML</title>
6. <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
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>
```



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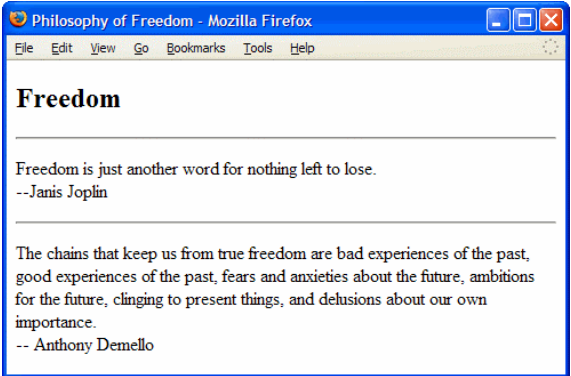
XHTML: Horizontal Rules

- ❖ 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!**

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XHTML: Exercise

- ❖ Write the XHTML code to display the following.



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