IT350 Web and Internet Programming
Fall 2007

XHTML vs. HTML
XHTML Validation
Web Markup Languages

- HTML 2.0
- ... (omitted)
- HTML 4.01
- XHTML 1.0
- XHTML 1.1
- XHTML 2.0
HTML vs. XHTML
XHTML: Differences from HTML (part 1)

• Documents must be “well-formed”
  1. All start tags must be closed

  2. All tags must properly nest
XHTML: Differences from HTML (part 2)

• Tag and attribute names must be lowercase

• Attribute values must be double-quoted

• Use `id` instead of `name`

  <a name=bottom> Stuff </a>
  <a id="bottom"> Stuff </a>
  <h1 id="ships"> … </h1>
  
  <a id="bottom"> Stuff </a>
  <h1 id="ships"> … </h1>
XHTML: Differences from HTML (part 3)

• Many “style” tags/attributes removed

http://webdesign.about.com/od/htmlxhtmltutorials/l/bltags_deprecat.htm

• What to do?
XHTML: Differences from HTML (part 4)

• Frames allowed in XHTML 1.0…
  But removed in XHTML 1.1

• A few more technical differences…
  – See http://www.w3.org/TR/2000/REC-xhtml1-20000126/#diffs
Exercise #1 – Correct any invalid XHTML syntax

```xml
<?xml version = "1.0" encoding=utf-8 ?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
 "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
<!-- An example file
<!-- Our first Web page -->
<html xmlns = "http://www.w3.org/1999/xhtml">
<body>
  <h1> Welcome to <b> IT350!  </b> </h1> </b> 
  <h2> Today’s Agenda </h2> 
  <li> XHTML 
  <li> JavaScript
</body>
</html>
```
Exercise #2 – Correct any invalid XHTML syntax

<?xml version = "1.0"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
"http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
<html xmlns = "http://www.w3.org/1999/xhtml">

<title>Internet and WWW How to Program - Welcome</title>

<body>

<img src = "xmlhtp.jpg" height = "238" width = "183" >

<h1 align="center">Under construction</h1>

</body>
</html>
Exercise #3 – Correct any invalid XHTML syntax

<?xml version = "1.0"?>
<html xmlns = "http://www.w3.org/1999/xhtml">
<head>
    <title>Internet and WWW How to Program - Links</title>
</head>
<body>
    <b> <h1>Here are my favorite links</h1> </b>
    <p><A href = "http://www.yahoo.com">Yahoo!</A></p>
    <p><A mailto = "webmaster@ussmichigan.org">Webmaster</A></p>
</body>
</html>
Exercise #4 – Correct any invalid XHTML syntax

```xml
<?xml version = "1.0"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
  "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
<html xmlns = "http://www.w3.org/1999/xhtml">
  <head>  <title>Best features of the Internet</title>  </head>

  <body>
    <ul>
      <li>Meet new people from around the world.</li>
      <li>Access to new media as it becomes public: </li>
      <ul>
        <li>New games</li>
        <li>New applications & software</li>
      </ul>
      <li>Search engines</li>
    </ul>
  </body>
</html>
```
History of the World in Just 4 Slides, Part 1

- **ARPANET**
  - Implemented in late 1960’s by ARPA (Advanced Research Projects Agency of DOD)
  - Networked computer systems of a dozen universities and institutions with 56KB communications lines
  - Grandparent of today’s Internet
  - Intended to allow computers to be shared
  - Real benefit?
History of the World in Just 4 Slides, Part 2

• ARPA’s goals
  – Allow multiple users to send and receive info at same time
  – Use *packet switching* technique
    • Digital data sent in small packages called *packets*
    • Packets contained data, address info, error-control info and sequencing info
    • Greatly reduced transmission costs of dedicated communications lines
  – Operate without centralized control
    • If portion of network fails, remaining portions still able to route packets

• Huge variety of networking hardware and software appeared
  – Development of TCP/IP protocols enabled interoperation
History of the World in Just 4 Slides, Part 3

- Internet initially just for universities and research labs
  - Military became big user
  - Next, government decided to access Internet for commercial purposes

- Internet traffic grew
  - Businesses spent heavily to improve Internet
    - Better service their clients
  - Fierce competition among communications carriers and hardware and software suppliers
  - Result
    - *Bandwidth* (info carrying capacity) of Internet increased tremendously
    - Costs plummeted
History of the World in Just 4 Slides, Part 4

- **WWW**
  - Allows computer users to locate and view multimedia-based documents
  - Introduced in 1990 by *Tim Berners-Lee*

- **W3C –** [www.w3.org](http://www.w3.org)
  - Founded in 1994 by Tim Berners-Lee
    - Devoted to developing non-proprietary and interoperable technologies for the World Wide Web and making the Web universally accessible
  - **Standardization**
    - *W3C Recommendations*: technologies standardized by W3C
      - include Extensible HyperText Markup Language (XHTML), Cascading Style Sheets (CSS) and the Extensible Markup Language (XML)
    - Document must pass through *Working Draft, Candidate Recommendation* and *Proposed Recommendation* phases before considered for W3C Recommendation