Web Markup Languages

- HTML 2.0
- ... (omitted)
- HTML 4.01
- XHTML 1.0
- XHTML 1.1
- XHTML 2.0
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>`

XHTML: Differences from HTML (part 3)

- Many “style” tags/attributes removed

http://webdesign.about.com/od/htmlxhmtutorials/l/blktags_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!  </h1> </b>
    <h2> Today’s Agenda </h2>
    <li> XHTML
    <li> JavaScript
  </body>
</html>
```
Exercise #2 – 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">
  <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
<?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 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>

XHTML → XML

1 <xml version = "1.0"?>
2   <!-- Fig. 20.1: article.xml  -->
3   <!-- Article structured with XML  -->
4 <article>
5   <!-- Simple XML. -->
6   <date>July 13, 2003</date>
7   <author>
8     firstName=Carpenter</firstName>
9     lastName=Cal
10   </author>
11   <summary>XML is pretty easy.</summary>
12   <content>Once you have mastered XHTML, XML is easily learned. You must remember that XML is not for displaying information but for managing information.</content>
13 </article>
Another example

```xml
<?xml version="1.0"?>
<!-- Fig. 20.3: letter.xml -->
<!-- Business letter formatted with XML -->
<!DOCTYPE letter SYSTEM "letter.dtd">
<letter>
  <contact type = "From">
    <name>John Doe</name>
    <address1>123 Main St.</address1>
    <address2></address2>
    <city>Anytown</city>
    <state>Anystate</state>
    <zip>12345</zip>
    <phone>555-1234</phone>
    <flag gender = "M"/>
  </contact>
  <contact type = "To">
    <name>Joe Schmoof</name>
    <address1>Box 12345</address1>
    <address2>15 Any Ave.</address2>
    <city>Othershow</city>
```
Document Type Definitions

```xml
<-- Fig. 3B.5: letter.dtd -->
<-- DTD document for letter.xml -->

<element letter ( contact, salutation, paragraphs, closing, signature )>

<element contact ( name, address1, address2, city, state,
                      zip, phone, flag )>
<elementlist contact type CONTA #IMPLIED>

<element name ( #PCDATA )>
<element address1 ( #PCDATA )>
<element address2 ( #PCDATA )>
<element city ( #PCDATA )>
<element state ( #PCDATA )>
<element zip ( #PCDATA )>
<element phone ( #PCDATA )>
<element flag EMPTY>
<elementlist flag gender ( M | F ) "W"

<element salutation ( #PCDATA )>
<element closing ( #PCDATA )>
<element paragraph ( #PCDATA )>
<element signature ( #PCDATA )>
```

XML Validator

Enter a url to load:

or paste in some XML:

Select This Sample

check the "Validation" box if you

Validation

click the "Validate" button to see

Your XML is well formed and is validated

- PL xml
  - COMMENT: Fig. 3B.3. letter.xml
  - COMMENT: Business letter formatted with XML
  - SCHEMA: letter
    - ELEMENT: letter
      - ELEMENT: contact
        - ELEMENT: contact
          - ELEMENT: salutation
          - ELEMENT: paragraph
            - TEXT: It is our privilege to inform you about our new database managed
class with XML. This new system allows you to reduce the load of your inventory
list server by having the client machine perform the work of sorting and
filtering the data.
        - ELEMENT: closing
          - ELEMENT: signature
```