

IT350 Web and Internet Programming

History and HTML

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History of the World in Just 5 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 5 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 5 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 5 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
 - 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

History of the World in Just 5 Slides, Part 5

- Web 2.0
 - Users create the content
 - Facebook
 - Wikipedia
 - del.icio.us
 - Amazon – how?
 - Tagging
 - Richer user interfaces
 - Google Maps vs. original Mapquest
 - AJAX
 - And more... see IT452!

Web Markup Languages

- HTML 2.0
- ...
- HTML 4.01
- XHTML 1.0
- XHTML 1.1
- XHTML 2.0
- HTML 5

HTML 4 vs. XHTML vs. HTML 5

Exercise #1 – Correct any invalid HTML 5 syntax

```
<!DOCTYPE html>
<!-- An example file
<!-- Our first Web page -->
<html>

<body>
    <h1> Welcome to <b> IT350! </h1> </b>
    <h2> Today's Agenda </h2>
    <li> XHTML
    <li> JavaScript
</body>
```

Exercise #2 – Correct any invalid HTML 5 syntax

```
<!DOCTYPE htm>
<html>

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

    <body>

        <img scr = "xmlhttp.jpg" height = "238" width = "183" >

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

    </body>
</html>
```

HTML 5 / XHTML (part 1)

- Documents should be “well-formed”
 1. Req: All tags must properly nest
 2. Rec: All start tags should be closed

HTML 5 / XHTML (part 2)

- Rec: Tag and attribute names should be lowercase
- Rec: Attribute values should be double-quoted
- Use `id` instead of `name`
 - ` Stuff `
 - ` Stuff `
 - `<h1 id=“ships”> ... </h1>`

HTML 5 / XHTML (part 3)

- Many “style” tags/attributes removed

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

- What to do?

HTML 5 / XHTML (part 4)

- Frames allowed in HTML4, XHTML 1.0...
But removed in XHTML 1.1, HTML 5

- A few more technical differences...
 - See <http://www.w3.org/TR/html5-diff/>

Exercise #3 – Correct any invalid HTML 5 syntax

```
<html>
  <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 HTML 5 syntax

```
<!DOCTYPE html>
<html>
  <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
        </ul>
      <li>Search engines</li>
    </ul> </body>
</html>
```