

Lecture 3

The Web and HTML

The World Wide Web

Tim Berners-Lee's "Information Mesh"

The Web – an application on the Internet

- Working titles: Information Mesh; the information Mine
- “Web” turned into “World Wide Web”
- First web page 1991
- Hypertext – the killer app
 - Jump to cited text

- .com domain names
 - Introduced by ICANN, 1985
 - Took off – companies (marketing departments) discovered the web (circa mid 1990s)

History of the web

- Tim Berners-Lee
 - Proposed "The Information Mesh" in 1989
- Web - introduced 1991
- “System of interlinked **hypertext** documents connected by the internet”
- Three technologies
 - Documents on the internet
 - Markup languages
 - hypertext



Hypertext

- Vannevar Bush, 1945
- Ted Nelson, 1965
- Apple's HyperCard, 1987



Marc Andreessen

- Created the first graphical web browser for common operating systems AND...
- It could display inline images!
- Proposed IMG tag
- Mosaic → Netscape → Mozilla → Firefox



Hypertext Markup Language

Document Type Definition (DTD)

- HTML5 template review
 - NEW requirement: lang="en"
 - what is CHARSET?
 - Unicode Transformation Format.
 - The '8' means it uses 8-bit blocks to represent a character.
- doctype statement: <!doctype html>
 - Sometimes seen as uppercase - okay
- Documentation about how HTML5 is defined is held and maintained by the W3C
- The DOCTYPE identifies the version of HTML contained in your document.
- Everything in the BODY tag shows up in the browsers "**viewport**"

doctype

- `<!doctype html>` - this is version 5 of HTML
- Tells the web browser what type and what version of markup
- Example:
 - Old: ``
 - Current: ``
- Other web related markup languages
 - xml – text based structured markup language; transmit data → internet
 - xhtml – merge between HTML and XML
 - HTML 5 – latest version (standardized in 2014)

Hypertext Markup Language (HTML)

- HTML: The set of markup symbols or codes placed in a file intended for display on a Web browser page
- Each markup code represents an HTML **element**
 - Element = Tag
- Tags are enclosed in angle brackets, "<" and ">" symbols
 - Web browsers don't show anything inside < and >
- Most elements are coded as a pair of tags: an opening tag and a closing tag.

HTML Tags

- Some are self-closing or stand-alone
 -
 - <doctype>
 - <meta ...>
 - ...more
- Use tags based on their meaning
 - <p> means one paragraph - sentences!
 - means emphasis
 - means important
- Catch-all (meaningless) tags
 - <div>
 -

Common HTML elements

- Hundreds of HTML elements but we only commonly use a few dozen
 - Most webpages just use about 10 or so over and over again
- Heading levels: H1 - H6...
 - Never skip levels!
 - Lower levels must be subordinate to the one above it
 - Document should have document outline
- Other common:
 - paragraph, lists (ordered, unordered, definition)
 - image tags
 - anchor tags (hypertext)
 - et cetera

The W3C

World Wide Web Consortium

The W3C – World Wide Web Consortium

- took over from TBL
- recommendations and prototypes for the web browsers and web technologies
- Web browser – publishers (not W3C)...
 - Apple Safari
 - Google Chrome
 - Firefox
 - Microsoft IE and Edge
- "Bullet Proof Websites"

W3C HTML validator

- <http://validator.w3.org>
- Does not check for "logical" errors - only syntactical
- Fix TOP error first and only, then recheck
 - Never skip errors
 - Never try to fix anything but error #1
- In CSC 170: errors only (don't bother with warnings)