The Web and HTML

An Application on the Internet

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
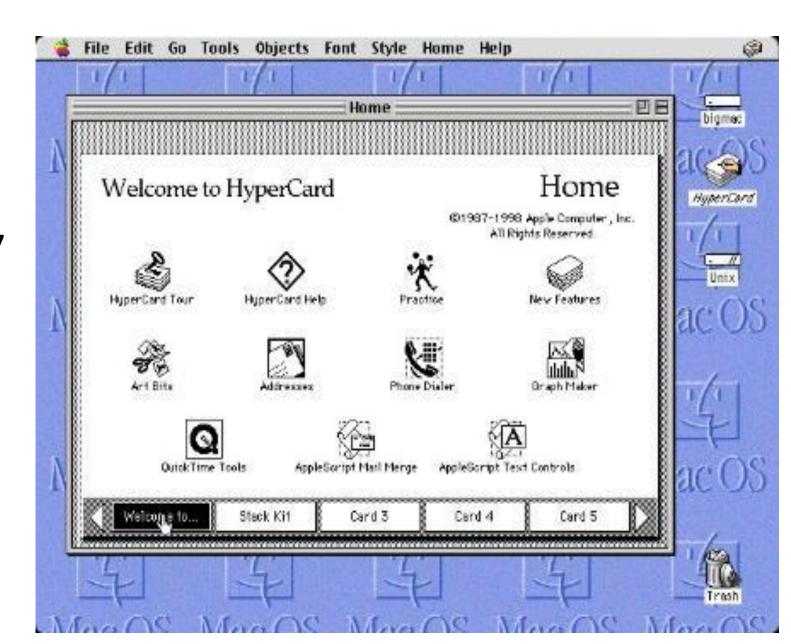 - Took off – companies (marketing departments) discovered the web (circa mid 1990s)

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 Andreesen

- 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: <img src="" alt="">
- 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
  - <img>
  - <doctype>
  - <meta ...>
  - ...more
- Use tags based on their meaning
  - <p> means one paragraph - sentences!
  - <em> means emphasis
  - <strong> means important
- Catch-all (meaningless) tags
  - <div>
  - <span>

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)