

**IT350**  
**Web & Internet Programming**

**Fall 2005**  
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**Outline**

- Class Survey / Role Call
- What is:
  - the web/internet?
  - web programming?
  - this class?
- Course Admin
  - Syllabus
  - Policy
  - Tips

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**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?

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**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

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### 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

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### 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

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### Web vs. Internet

- Internet – collections of computers/devices that can communicate
  - telnet, ftp, SMTP(mail)
- Web – software/protocols that has been installed on (most of) these computers
  - http / https

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### Client/Server Computing

Computation can occur in \_\_\_\_\_ location

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## Browser Portability

- Browser portability
  - Great challenge
    - Great diversity of client browsers in use
    - Many different platforms also in use
- Difficult to
  - Know capabilities and features of all browsers and platforms in use
  - Find correct mix between absolute portability, complexity and usability of features

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## Things we'll learn and do

- XHTML – basics, tables, forms, frames
- Cascading Style Sheets
- JavaScript
- Dynamic HTML
- CGI

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## Things we'll hear about

- Accessibility
- Web ethics
- “Semantic Web”
- XML
- And maybe touch upon...
  - Flash
  - Image creation (PhotoShop)

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## Things we won't have time for

- ASP, .NET
- Perl
- Java Servlets
- JavaServer Pages (JSP)
- PHP

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## Admin – Assignments

- Assignments will be on the course calendar
- First reading – due Wednesday in class
  - Skim chapters 1-2 (see calendar for notes on Ch. 2)
  - Read chapter 4 (**likely quiz Wednesday**)
- First homework – email due Wednesday by 1600
  - Read course policy
  - Read Lab Guidance (on the web) – pick a topic
  - Email topic to instructor (subject: “IT350 Lab topic”)
- Deadlines
  - Reading (+ quiz) – usually due Wednesday
  - Lab – usually due Wednesday **start of class**
- Late assignments
  - After start of class, before 0755 next day: -10%
  - Before 0755 of 2<sup>nd</sup> day: -25%
  - After that, not accepted
  - Late quizzes not accepted!

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## Textbook Structure

- Chapters 1-20
  - Covers XHTML, JavaScript, Dynamic HTML, Flash and Extensible Markup Language (XML)
  - For applications running on *client side* (typically Netscape and Microsoft Internet Explorer)
- Chapters 21-38
  - Covers Web servers, databases, Active Server Pages, Perl/CGI, PHP, ColdFusion, Python, Java servlets and JavaServer Pages
  - For applications running on *server side* (complex computer systems where Web sites usually reside)

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## Textbook Analysis

- Good
  
  
- Less good

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## Success in IT350

- Do the reading – usually due Wednesday
  - Brief lecture to highlight key points
- Lecture – stay engaged
  - Ask & answer questions
  - Take notes – provided slides are not enough!
- Make the most of in-class lab time
  - Read lab in advance
  - Think before you start typing
  - Don't stay stuck!
- Don't fall behind
  - Finish lab early and leave time for reading
  - See me for help and/or talk to friends
  - Course material builds on itself and gets more complex

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