LIS650

Web Site Architecture and Design

2003–12–17

See the course web site at http://openlib.org/home/krichel/courses/lis650p04s for the latest online version of this file.

Course Description
This course focuses on the construction of a web site. Students will learn how web sites work, and how to design good web sites. Students will be provided with free web space where they can design their own sites. This web space will be available even after the course ends.
The course will not be conducted using an application package to generate pages. Instead, students will be taught how to hand-code the pages. The emphasis is on the use of standard compliant HTML 4.01 and CSS level 2.0. Validity control will be an integral part of the composition process. Students are allowed whatever tool they wish to use to create their sites, but final project sites must be standards compliant.
The course will cover all of HTML, except the following

- forms
- frames
- scripting objects
- minor points of table construction

Thus the course will be limited to static web sites, i.e. that do not change as a response to user interaction.
The course will cover most, but not all of CSS 2 revision 1. At the time of writing, this is a draft W3C recommendation.
In addition, the course will cover extensively cover the issue of web site usability. There will be no special lecture on this topic. Instead, every lecture will contain a usability component that will survey all major contributors to the topic.

Course objectives
After taking this course students

- they will be able to interact with a UNIX based server for storage and retrieval of pages;
- they will understand fundamental concepts of http;
- they will have sufficient knowledge of HTML in order to create simple but interoperable pages;
- they will have sufficient knowledge of CSS in order to create simple style sheets;
- they will have a grounding in information architecture and web usability

Prerequisites
There are no other formal prerequisites for this course. However this course is not suitable for technophobes. Students should be familiar with the World Wide Web, and should be able to use a MS Windows computer, i.e. click on an icon to run a program. Students should also be familiar with basic concepts of computer hardware and software, concepts like files, memory, as well as an understand of the Internet and of client/server architecture. Everything that goes beyond that will be explained in class or by personal tuition from the instructor. No prior knowledge of HTML and CSS is assumed.

Instructor

Thomas Krichel

Palmer School of Library and Information Science
C.W. Post Campus of Long Island University
720 Northern Boulevard
Brookville, NY 11548–1300
krichel@openlib.org
work phone: +1–(516)299–2843
Private contact details may be obtained from the online CV at /home/krichel/cv.html.

Class structure

Each class will have a lengthy presentation by the instructor. For some small part of class time the students will work directly with their computers under the supervision of the instructor. However, give the hefty weight of the class material, students are expected to do much of the work on the web site at home.

Classes will be held in the computing lab of the Palmer School between 12:30 and 16:30. The instructor will be around in the lab from 11:00 and until 17:00 to answer questions and allow the students to work on their web sites under some supervision. Class details:

0	2004–01–30	introduction to the course	
1	2004–02–06	major HTML	
2	2004–02–13	major CSS	
3	2004–02–20	minor HTML	
4	2004–02–27	minor CSS	Slides for all classes are downloadable from the course web site.
5	2004–03–05	CSS advanced selectors	
6	2004–03–12	http and apache	

Readings

As far as the design of web sites is concerned, Krug (2000) and Nielsen (2000) are classic references. Morville and Rosenfeld (2002) is a good book on information architecture. The most relevant contents of all three books will be discussed by the instructor.

The technical specifications of HTML and CSS are on the web. HTML 4.01 is defined in Raggett, Le Hors, and Jacobs (1999). CSS level 2 revision 1 is defined in Bos, Çelik, Hickson, and Lie (2004). http is defined in Fielding, Gettys, Mogul, Frystyk, Masinter, Leach, and Berners-Lee (1999). URLs are defined in Berners-Lee, Masinter, and McCahill (1994), but that definition was updated in Berners-Lee, Fielding, and Masinter (1998). MIME types are documented in IANA (2001). The documentation of apache is online at http://www.apache.org.

If students want a textbook on HTML and CSS, they are spoiled for choice. However, students should be aware that must books teach the loose version of HTML and place much less of an emphasis on stylesheets as the course contents does. This is a LIS-style course with an emphasis on separation of contents and presentation. Castro (2002) is a widely used and reasonably priced book for beginners. Werbach (2002) is a good online source. A book that the instructor likes a lot is Musciano and Bill (2002) . But it is expensive. A good, though outdated book on CSS is Bos and Lie (1999) .

Assessment

Before each class except the first, there will be a quiz on the issued covered in the previous class. The average of all the quiz results will count for 50% of the assessment. On the second class meeting, the students will hand in a one-page typed statement about the web site that they want to build. This statement should cover both the purpose of the web site and the site's architecture. The assessment of this statement will count for the 10% of the grade.

The remaining 40% will be assessed through the student's ability to build a web site. The site must validate against the *strict* version of the HTML 4.01 specification. The site must have a style sheet with the main presentational elements. The site should provide an information source about a topic, though it need not to be comprehensive by any means. The informational contents should go beyond simple link collections or path finders. The total amount of information contained should roughly be equivalent to a conventional student essay. The web site will count for 40% of the final grade. It has to be finalized one week after the last class.

Students

Aimee Ackell[1]
Jeri Cohen[2]
SuzieMarie Gregorovius[3]
Bill Molinelli[4]
Mary Szollosi[5]
Michael Tarrant[6]

References

Berners-Lee, Tim, Roy T. Fielding, and Larry Masinter (1998). Uniform Resource Identifiers (URI): Generic Syntax. RFC 2396 available at http://www.ietf.org/rfc/rfc2396.txt.

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Bos, Bert, Taniek Çelik, Ian Hickson, and Håkon Wium Lie (2004). Cascading Style Sheets, level 2, revision 1. available at http://www.w3.org/TR/CSS21.

Bos, Bert and Håkon Wium Lie (1999). *Cascading Style Sheets: Designing for the Web* (1st ed.). Addison Wesley.

Castro, Elizabeth (2002). *HTML for the World Wide Web, Fifth Edition with XHTML and CSS: Visual QuickStart Guide*. Peachpit Press. described at http://www.cookwood.com/html/.

Fielding, Roy T., James Gettys, Jeffrey C. Mogul, Henrik F. Frystyk, Larry Masinter, Paul J. Leach, and Tim Berners-Lee (1999). Hypertext Transfer Protocol – HTTP/1.1. RFC 2616 available at http://www.ietf.org/rfc/rfc2616.pdf.

IANA (2001). Media Types. available at http://www.iana.org/assignments/media-types/.

Krug, Steve (2000). *DON'T MAKE ME THINK! A Common Sense Approach to Web Usability*. New Riders.

Morville, Robert and Louis Rosenfeld (2002). *Information Architecture for the World Wide Web*. O'Reilly. described at http://www.oreilly.com/catalog/infotecture2/.

Musciano, Chuck and Kennedy Bill (2002). *HTML and XHTML: The Definitive Guide, 5th Editon*. O'Reiley.

Nielsen, Jakob (2000). *Designing Web Usability: The practice of Simplicity*. New Riders.

Raggett, Dave, Arnaud Le Hors, and Ian Jacobs (1999). HTML 4.01 Specification. available at http://www.w3.org/TR/html4/.

Werbach, Kevin (2002). Bare Bones Guide to HTML. available at http://werbach.com/barebones/.

[1] http://dlib.info/home/kellygray/exceptional.html
[2] http://dlib.info/home/jecoh/yicmain.html
[3] http://dlib.info/home/suziemarie/englishbulldoghomepage.htm
[4] http://dlib.info/home/wmolinelli/gihome.html
[5] http://dlib.info/home/marylsam/tennishome.html
[6] http://dlib.info/home/mtarrant/Home