

LIS650

Passive Web Site Architecture and Design

2006-09-11

See the course web site at <http://openlib.org/home/krichel/courses/lis650p06a> for the latest online version of this file.

Course Description

This course focuses on the construction of a web site. Students learn how web sites work, how to build them, and how to build them well. Students are provided with free web space where they can design their own sites. This web space continues to be available after the course ends.

The course is not conducted using an application package to generate pages. Students can use any package that they want. Instead, students are taught how to hand-code the pages. The emphasis is on the use of standard compliant XHTML 1.0 and CSS level 2.1. Validity control is 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 covers all of HTML, except the following

- forms
- frames
- scripting objects
- minor points of table construction
- and some other minor features.

Thus the course is limited to passive web sites, i.e. that do not change as a response to user interaction.

The course covers most, but not all of CSS 2 revision 1. At the time of writing, this is a W3C working draft.

In addition, the course covers the issue of web site design. There is a special lecture on this topic once the bulk of the technical material has been covered.

Course objectives

After taking this course students

- will be able to interact with a UNIX based server for storage and retrieval of pages;
- will understand fundamental concepts of http;
- will have sufficient knowledge of HTML in order to create simple but interoperable pages;
- will have sufficient knowledge of CSS in order to create simple style sheets;
- 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 computer neophytes or technophobes. Students should have been using the web before. They should be able to use a MS Windows computer, e.g. click on an icon to run a program, cut and paste between applications, copy files from one location to another. Students should also be familiar with basic concepts of computer hardware and software, concepts like files, memory, as well as an having an understanding of the Internet and of client/server architecture. Everything that goes beyond that is explained in class or by personal tuition from the instructor. No prior knowledge of HTML and CSS is assumed.

Instructor

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Class structure

Classes are held in the PC lab of the Palmer School on Sunday between 13:00 and 18:00. The instructor promises to be there shortly after 12:00 for extra help and questions. Each class has a lengthy presentation by the instructor. For some small part of class time the students 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 their web site at home. To support the students in this process, the instructor will be on campus in extra sessions for students who need additional support. Support via skype is available pretty much around the clock, i.e. unless the instructor is moving around or is asleep.

Class details:

2006-09-10	introduction to the course and to XML
2006-09-17	HTML
2006-09-24	<i>no class</i>
2006-10-01	major CSS
2006-10-08	web design
2006-10-15	minor CSS and accessibility
2006-10-22	javascript, http and apache

Slides for all classes are downloadable from the course web site.

Readings

The technical specifications of HTML and CSS are on the web. XHTML 1.0 is defined in Group (2002). To understand it, you need to refer to the definition of HTML 4.01 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>.

As far as the design of web sites is concerned, Krug (2005) and Nielsen (2000) are classic references. The most relevant contents of these books is covered in the course, but there are also bits and pieces from various web sites. Morville and Rosenfeld (2002) is a book on information architecture, but is so boring that is no longer covered. Recently I have been made aware of of Health and Services (2006).

If students want a textbook on HTML and CSS, they are spoiled for choice. However, students should be aware that most books teach the loose version of HTML and place much less of an emphasis on style sheets than the course contents does. This is a really 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) . Finally there a bunch of home-grown resources <http://openlib.org/home/krichel/courses/lis650>.

Finally, the following mailing lists are worth subscribing to.

- Web4Lib at <http://lists.webjunction.org/web4lib/> is a US-based list that specifically deals with the issues if library web site.
- WEB-SUPPORT at <http://www.jiscmail.ac.uk/lists/web-support.html> is a UK-based list that deals with the issues if web services in academic environment. Discussions tend to be more technical than on Web4Lib.

Mailing list

There is a mailing list for the course at <https://lists-1.liu.edu/mailman/listinfo/cwp-lis650-krichel>. All students are encouraged to subscribe. As a rule, answers to email sent to the instructor are copied to the list. There are exceptions to this rule

- if the question writer requests the answer not to be posted;
- if the question is a purely private matter.

Assessment

Before each class except the first, there is a quiz on the issues covered in the previous class. The average of all the quiz results counts for 5/12 of the assessment. The worst performance in a quiz is discounted. On the second class meeting, the students 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 counts for 1/12 of the grade. On the last meeting, students also hand in a web site assessment. This assessment should cover the web site of a LIS academic department in the US or abroad. The assessment should not aim to describe the web page, but assess its strength and weaknesses in terms of the usability criteria reviewed in the class meeting from the week before. Each student should announce what web site they want to cover to the class email lists. The assessment should roughly be two typed pages long. If students don't like the first grade they get on the assessment are given a chance to improve it. The web site assessment counts for 2/12 of the course.

The remaining 4/12 are assessed through the student's ability to build a web site. The site must validate against the *strict* version of the XHTML 1.0 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 be comprehensive by any means. Students are recommended to develop the web site on behalf of someone else, just to get useful feedback on the site and to avoid creating something that is too designer-centered. The informational contents of the site should go beyond simple link collections or path finders. Personal web sites, such as for the student describing herself, are not allowed. However students may build a personal site for someone else. The total amount of information contained should roughly be equivalent to a conventional student essay. It has to be finalized one week after the last class.

Students

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Design sins

Here is a checklist of common design sins

- title element different for each page, and meaningful?
- pages linking to themselves?
- src= attribute in points to external image?
- absence of scaling for images?

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>.
- Berners-Lee, Tim, Larry Masinter, and Mark McCahill (1994). Uniform Resource Locators (URL). RFC 1738 available at <http://www.ietf.org/rfc/rfc1738.txt>.
- 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>.

¹<http://dlib.info/home/jomcn>

²<http://dlib.info/home/jbrink/home.html>

³<http://dlib.info/home/xescal>

⁴<http://dlib.info/home/gtoell/mainpage.html>

⁵<http://dlib.info/home/crivera>

⁶<http://dlib.info/home/mcats>

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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>.

Group, W3C HTML Working (2002). XHTML 1.0 The Extensible HyperText Markup Language (Second Edition). W3C recommendation, available at <http://www.w3.org/TR/xhtml1/#html4>.

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

Krug, Steve (2005). *DON'T MAKE ME THINK! A Common Sense Approach to Web Usability* (2nd ed.). 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 Edition*. O'Reiley.

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

of Health, US Department and Social Services (2006). Research-Based Web Design and Usability Guidelines. draft available at <http://www.usability.gov/pdfs/guidelines.html>.

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/>.