

LIS651

Active Web Site Architecture

2006–03–08

See the course web site at <http://openlib.org/home/krichel/courses/lis651n06s> for the latest online version of this file.

Course Description

This course focuses on the construction of active web sites. Such web sites change contents depending on what the user does with them. Many times, such sites involve users filling in a form, which is then processed. For an example, think of a query in a web-based library catalog. But active sites may also be as simple as saying "Merry Xmas" before 25 December, and leave it out afterwards. Students will learn how build simple active web sites. There are two aspects to this process. The first is the information itself. It is usually held in relational databases. The course therefore studies relational databases. It introduces the mySQL database software. The second aspect is the interface between the data in the database and the web. This is achieved with a procedural computing language. The course studies PHP, a purpose-built language for active web sites.

Course objectives

After taking this course the students

- will be able to interact with a UNIX based server for the construction of active web sites;
- will have seen all of the form elements of HTML;
- will understand fundamental concepts of computer programming, such as variables and functions;
- will have a basic grounding in PHP that allows them to build PHP-based sites;
- will have elementary knowledge of SQL that will allow for simple database management.

Finally, in the last class, students may build their own Linux servers on machines that they may bring along.

Prerequisites

Student normally must have passed LIS650 before taking this course. Students must be comfortable with the LIS650 material because this course is a lot more difficult than LIS650. Students who wish to qualify for an exception should contact the instructor prior to registering.

Instructor

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Private contact details may be obtained from the online CV at </home/krichel/cv.html>.

Class structure

Classes will be held in PC2 at Bobst Library normally on Saturdays between 12:00 and 17:00.

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, given the hefty weight of the class material, students are expected to do much of the work on the web site at home.

Class details:

| | | | |
|---|------------|----------------|---------------------------------------------|
| 0 | 2006-03-11 | 12:00 to 17:00 | getting and presenting data |
| 1 | 2006-03-18 | 12:00 to 17:00 | more on PHP, introduction to database |
| 2 | 2006-03-25 | 12:00 to 17:00 | intrduction to mySQL and PHP mySQL function |
| 3 | 2006-04-01 | 12:00 to 17:00 | PHP sessions and functions |
| 4 | 2006-04-22 | 12:00 to 17:00 | regular expressions |
| 5 | 2006-04-29 | 12:00 to 17:00 | use of wotan |

Slides for all classes are down-

loadable from the course web site.

Readings

PHP is documented on its web site at <http://www.php.net> that students will probably find all gobbledigook when they first look at it. Most books on PHP also cover some relational database theory and practice. Students may find Ullman (2004) as reasonably priced introductory books on the topics of the course.

The instructor found that Sklar (2004) did bring much good material. This book and Welling and Thomson (2005) is where much of the teaching material is lifted from. Earlier, he used Lea, Choi, Kent, Prasad, and Ullman (2001) as an introduction that is probably suitably paced for the beginner. Meloni (2000) receives favorable reviews as a beginners' book.

Assessment

Before each class except the first and second, there will be a quiz on the issued covered in the previous class. The average of all the quiz results will count for 40% of the assessment. For the third class meeting, the students will prepare a one-page web site that will state 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 not count for assessment. The remaining 60% will be assessed through the final web site. This site has to be handed at the date of the last class meeting.

Mailing list

There is a mailing list for the course at <https://lists.liu.edu/mailman/listinfo/cwp-lis651-krichel>. All students are encouraged to subscribe. As a rule, answers to email sent to the instructor will be 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

Students

Nadia J. Charles¹
 Annteresa Cusenza²
 Susan Kriete³
 Adriana Suarez⁴
 Nai Yu Liu⁵
 Yin Li⁶
 Stephen Amoah⁷
 Lisa Rappaport⁸
 Michelle Schwartz⁹
 Jill R. Novenstein¹⁰
 Peter Femenella¹¹

¹http://wotan.liu.edu/~nadia/recipe_search.php

²<http://wotan.liu.edu/~atcln1>

³http://wotan.liu.edu/~sukriete/nancycastle_function.php

⁴http://wotan.liu.edu/~adrsuarez/opera_form.php

⁵<http://wotan.liu.edu/~liu/top300.php>

⁶<http://wotan.liu.edu/~zyili/quote.php>

⁷http://wotan.liu.edu/~sla/all_nations_church.php

⁸<http://wotan.liu.edu/~lisaraps/drink6.php>

⁹<http://wotan.liu.edu/~manta/musiclibrary.php>

¹⁰<http://wotan.liu.edu/~jnovenstein/home.html>

¹¹<http://wotan.liu.edu/~petefem/index.html>

References

- Lea, Chris, Wankyu Choi, Allan Kent, Ganesh Prasad, and Chris Ullman (2001). *Beginning PHP 4*. Wrox Pres.
- Meloni, Julie C. (2000). *PHP Essentials*. Prima Publishing.
- Sklar, David (2004). *Learning PHP*. O'Reilley.
- Ullman, Larry (2004). *PHP for the World Wide Web: Visual QuickStart Guide, 2nd Edition* (2nd ed.). Peachpit Pless.
- Welling, Luke and Laura Thomson (2005). *PHP and MySQL Web Development* (3rd ed.). Sams Publishing.