LIS651

Web Content Management

2012–06–06

See the course web site at http://openlib.org/home/krichel/courses/lis651n12a for the latest online version of this file.

Course Description
This course considers two fundamental technologies that are used to build large scale, interactive web sites. These are relational database systems and scripting languages. For the former, we use mySQL. For the latter, we use PHP. We could have used others, but these are the most common choices. In order to build a prototype for a large-scale site quickly, we use a contents management system. The choice here is Drupal. Drupal is not trivial to learn. But it is a very flexible system. It allows for the rapid development of extensions to Drupal, provided that a number of rules are observed. These rules make sure that the custom code fits into the larger Drupal function base. Drupal itself is written in PHP, and uses mySQL, so it is just a toolbox sitting on the general PHP/mySQL technology stack.

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 elementary knowledge of SQL that will allow for simple database management
- will understand fundamental concepts of computer programming, such as variables and functions and objects;
- will have been introduced to the architecture of Drupal;
- will have a basic grounding in PHP that allows them to build simple Drupal extensions;

The Palmer School Student Learning Objectives covered by the course are

- 2.E Students will build information systems and/or records used in such systems.

Prerequisites
Student normally must have passed LIS650 before taking this course, or take it in the same semester where LIS650 is running. Students who wish to qualify for an exeption should contact the instructor prior to registering.

Instructor
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Class structure
Classes will be held on Saturdays between 13:00 and 18:00 in the PC1 lab of Bobst Library.
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. The instructor will closely work with students on their sites on a one-to-one basis, if required.
These slides are drafts from the previous edition of the course.
Class details:

2012–09–22	13:00 to 18:00	introduction to PHP, setup of Drupal, mySQL, and phpmyadmin
2012–10–13	13:00 to 18:00	PHP arrays and Drupal architecture
2012–10–27	13:00 to 18:00	PHP functions and Drupal themes
2012–11–10	13:00 to 18:00	PHP objects and Drupal modules
2012–12–01	13:00 to 18:00	developing modules in Drupal
2012–12–08	13:00 to 18:00	conclusions

Readings
Drupal is documented on its web site at `http://www.drupal.org`. We are using Melançon (2011) , and Butcher, Wilkins, Farina, Rickard, and Dunlap (2010) as the main books we will follow. But you are welcome to get any introductory book to Drupal 7 and work with it as well. The main job of the course is to go through the PHP code.
PHP is documented on its web site at `http://www.php.net`. Students will probably find all gobbledigook when they first look at it. But by the end of the course students should be able to use the site to get help from it. Students may find Ullman (2004) as reasonably priced introductory book on the PHP. The instructor found that Sklar (2004) did bring much good material. Lea, Choi, Kent, Prasad, and Ullman (2001) as an intoduction that is probably suitably paced for the beginner. Meloni (2000) receives favorable reviews as a beginners' book.
Most books on PHP also cover some relational database theory and practice. But Welling and Thomson (2005) do more than most.
There are many books on PHP in the instructor's library in his LIU Post office.
Finally there a bunch of home-grown resourceshttp://openlib.org/home/krichel/courses/lis651.

Assessment
Before each class except the first, there will be a quiz on the issued covered in the previous class. The weakest quiz is discounted. The average of all the remaining quizzes results will count for 5/19 of the assessment. Each student will complete an individual exercise every class except the first and last class. The exercise consist of writing a PHP script that fullfills a task. The script does not only have to accomplish the task, the complete task and nothnig but the task. The script also needs to be documented. There has to be at least as many characters of documentation as there has to be characters in the instructions. The average of these scripts count for 8/19. In the last class, the students hand in a two-page description of the architecture of a final site. This covers a brief description the files, and overview on how information is flowing through the pages. If database tables are used, it covers a list of all tables with all columns, and the relationship that the columns have to user input or to an external source of data. This paper counts for 1/19 of the course. The remaining 5/19 will be assessed through the final web site. This site has to be handed on the date of the last class meeting. This assessment assessess Palmer learning objective 2E.

Mailing list
There is a mailing list for the course at https://lists-1.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

References

Butcher, Matt, John Albin Wilkins, Matt Farina, Ken Rickard, and Greg Dunlap (2010). *Drupal 7 Module Development*. Packt Publishing. available at http://local.openlib.org/home/krichel/courses/read/butcher11_drupal_modul_devel.pdf.

Lea, Chris, Wankyu Choi, Allan Kent, Ganesh Prasad, and Chris Ullman (2001). *Beginning PHP 4*. Wrox Pres.

Melançon, Benjamin (Ed.) (2011). *The Definitive Guide to Drupal 7*. Apress. available at http://local.openlib.org/home/krichel/courses/read/melancon11_defin_guide_drupal.pdf.

Meloni, Julie C. (2000). *PHP Essentials*. Prima Publishing.

Sklar, David (2004). *Learning PHP*. O'Reilly.

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.