

Web Applications Development I (CIS340.W08)

Syllabus

Course Description

3 credits

Today, a "basic website" for even a small organization can include sophisticated interactivity. Increasingly, companies are putting some (if not all) of their business processes online. What is the basic architecture of these "web applications"? What technologies are available and what are their capabilities? The structure, design, and implementation of basic web applications is discussed in this course, defining and synthesizing the roles of browser, web server, database, and middleware.

Prerequisites: CIS328, CIS330

Intended Audience and Rationale

Students enrolled in Marlboro College Graduate Center's BSMIS program.

Goals

Students will learn the basics of web application programming, differentiating between 'static' and 'dynamic' content, storage of data in a relational database, processing of user input, and presentation of data to the end user. Students will also get an introduction to database design concepts.

Topical Outline

Note: Dates below are approximate. These topics are also not cast in stone. We may wander off topic a bit depending on people's interests.

Topic 1 (1/5 - 1/18)	Introductions and course overview; Intro to web technologies; basics of web servers; static vs dynamic content; Install of Apache and PHP;
Topic 2 1/19 - 2/1)	Intro to PHP; Programming basics; flow of control; variables; functions; arrays;
Topic 3 (2/2 - 2/15)	Forms; String handling; Errors and Exceptions;
Topic 4 (2/16 - 2/29)	Intro to relational databases; Database design basics; mysql installation;

Topic 5 (3/1 - 3/14)	SQL basics; sql from PHP;
Topic 6 (3/15 - 3/28)	Sessions; Cookies;
Topic 7 (3/29 - 4/5)	authentication;

Instructional Procedures

This class will be conducted entirely online, using Marlboro Gradcenter's moodle. The class is divided into seven topics, with approximately two weeks devoted to each topic. During each two week period, there will be a reading assignment, exercises, and a homework assignment due at the end of the period.

You will be expected to log in to the moodle periodically (at least 4 times per week), and participate (asynchronously) in online discussions. We will be using Apache for our web server, PHP as our web programming language, and MySQL for our relational database. Note that students will need access to a personal computer where this software can be installed.

Note that this class will be conducted entirely asynchronously. There is no specific time that you need to log in to the moodle. I will have set 'office hours' (see contact information below) during which I'll be available for online chats.

Evaluation Criteria/Components

- Homework Assignments -- 60%
- Online Participation -- 40%

Textbook

Beginning PHP and MySQL 5, From Novice to Professional, Second Edition by W. Jason Gilmore (ISBN: 1-59059-552-1)

Other readings will be assigned from various online resources, including the online PHP documentation at: <http://www.php.net/manual/en/>

Software

Apache, PHP5, and MySQL. Note that versions are available for Windows, Mac and Linux.

Contact Info

Instructor: Bob Distelberg

Email: rdistelberg@gradcenter.marlboro.edu

Phone: 802-365-7916 (daytime), 802-365-9629 (evenings before 9:00 PM)

Skype: bob.distelberg (frequently on in the evenings)

I will attempt to answer all emails and respond to all posts within 24 hours. Feel free to email me anytime with questions, although I would encourage you to post your questions on the Moodle. If you have a question, other students probably do too. They also may very well have the answer!

I will also have online 'office hours' every Tuesday evening from 7PM to 9PM. I'll be available via Skype (voice or chat) or phone to discuss any problems or questions, either individually or as a group. If anyone's interested, we can also try online contact through SecondLife.