

Bay Area Video Coalition

Introduction to PHP and MySQL

Syllabus

23 & 24 July 2011

Time: 10:00 a.m. to 6:00 p.m.

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Web site: www.urchar.com/teaching/php_mysql/

Course description

This course is an introduction to server-side programming using PHP and MySQL. Concepts will be introduced in the context of using them for coding a simple phone-number list.

Course Objectives

- Learn about the command line on a Macintosh
- Learn how to use MAMP
- Learn how to use phpinfo and phpMyAdmin.
- Learn useful Unix commands and programs, e.g. pico text editor.
- Learn some basic PHP.
- Learn some basic database handling using SQL.
- Learn about Model-View-Controller frameworks for building robust web applications quickly.

Bibliography

George Schlossnagle. *Advanced PHP Programming*. Sams Publishing. 2004.

Luke Welling, Laura Thomson. *PHP and MySQL Web Development*. Addison-Wesley Professional. 2008.

PHP official site:	www.php.net/
tutorial:	www.php.net/manual/en/tutorial.php
W3 Schools:	www.w3schools.com/php/default.asp
Public Library e-books: (requires library card and PIN)	sfpl.org/index.php?pg=2000005001
PHP Documentor:	manual.phpdoc.org/HTMLframesConverter/phpedit/
Unix/Linux:	www.computerhope.com/unix.htm

Course Outline—Day 1

- I. Introductions
 - A. What does everyone know about HTML, CSS, and JavaScript, PHP, databases, programming?
 - B. What does everyone hope to get from this class?
 - C. My background ...
- II. Getting started
 - A. Setting up an environment for development
 1. Text editors and IDEs
 2. Browser developer tools
 - a. Mozilla: Firebug, DOM Inspector, Web Developer
 - b. Safari: from the Safari Preferences, click 'Advanced', then select 'Show Develop menu in menu bar'.
 - c. Internet Explorer: IE Developer Toolbar for IE7/8
 3. Setting the browser default background color
 4. Using your localhost server (<http://127.0.0.1/> etc.).
 5. Synchronization: local_dev, dev, staging, production
 6. Unix command line
 - B. MAMP
 1. phpinfo
 2. phpMyAdmin
 - C. Advanced topics
 1. Pico
 2. Custom local domains

- 3. Version control
- III. PHP—overview (crash course)
 - A. What is PHP?
 - B. Basic syntax: PHP and HTML used together.
 - C. Comments and phpDoc
 - D. Data types and variables
 - E. Constants
 - F. Operators
 - G. Comparisons and conditions
 - H. Expressions: statements and blocks (i.e. compound statements)
 - I. Controlling program flow
 - 1. if, else, and elseif
 - 2. while
 - 3. for
 - J. More program flow control
 - 1. switch
 - 2. break and continue
 - 3. foreach
 - 4. do ... while
 - K. Functions
 - L. Classes and objects
- IV. MySQL
 - A. Introduction to databases: relationships between tables.
 - B. Analyze the desired functionality
 - 1. site diagram
 - 2. functionality specification
 - 3. ERDs—entity relationship diagrams: they are your friends
 - C. Using phpMyAdmin
 - 1. Creating a database
 - 2. Setting up the phone-list tables
 - 3. Entering dummy data

Day 2

- V. Let's start coding a simple phone list
 - A. Building a script to read the data from the table(s)
 - 1. connecting to a database
 - 2. using SQL to select data
 - 3. displaying the data with HTML
 - B. Building scripts to manipulate the data
 - 1. creating
 - a. using HTML forms to submit data
 - b. validating data: client-side, server-side, or both
 - c. using SQL to insert data into the table(s)
 - 2. updating
 - a. using HTML forms to display and submit data
 - b. validating data
 - c. using SQL to update data in the table(s)
 - 3. deleting
 - a. confirming user action
 - b. using SQL to delete data from the table(s)
- VI. How this can be done in a MVC framework: a brief overview CodeIgnitor
 - A. Installation
 - B. Setup
 - C. Where everything goes
 - 1. the SQL—the model
 - 2. the HTML—the view
 - 3. the code that control everything—the controller
 - 4. the part that's accessible via HTTP