Introduction to PHP & MySQL

Course Summary

Description

This class shows students how to create dynamic web pages that interact with a web server and store data in a MySQL database. It includes basic syntax, built-in functions, and branching logic conditions. The emphasis of this class is to develop and validate web-based forms to pass data in and out of a database.

Objectives

At the end of this course, students will be able to:

- Use all basic features of PHP
- Create PHP-based dynamic web pages
- Use the PHP language to create custom functions
- Create error checking routines
- Build modular code for reuse with HTML PHP-enabled pages
- Create and use MySQL databases and tables
- Query and update MySQL tables
- Use basic JavaScript for client-side programming

Topics

- Working with dynamic web pages
- Setting up an Apache/MySQL/PHP server
- Basics of PHP
- PHP logic
- Working with arrays
- PHP Input and output
- MySQL Basics
- Building MySQL databases
- Accessing MySQL from PHP
- Processing web forms
- Using Smarty templates
- Restricting access
- Building sessions
- Basics of JavaScrip

Audience

This course is designed for anyone who needs to create dynamic web pages backed up by a full-featured database.

Prerequisites

Students need to have basic knowledge of Windows or UNIX (directory/file management, using an editor to post files on a web server). Experience programming in any programming language is helpful. They must also know basic HTML coding, especially with FORMS.

Duration

Four days

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Course Outline

I. Introduction to dynamic web content
- A. HTTP and HTML
- B. Benefits of PHP, MySQL, and JavaScript
- C. The Apache Web Server
- D. About Open Source
- E. Bringing It All Together

II. Setting up a development server
- A. What Is a WAMP or LAMP?
- B. Installing a WAMP on Windows
- C. Installing a LAMP on Linux
- D. Using a Program Editor
- E. Using an IDE

III. Introduction to PHP
- A. Placement of PHP in HTML documents
- B. Incorporating PHP within HTML
- C. Course Examples
- D. The Structure of PHP

IV. Expressions and control flow
- A. Expressions
- B. Operators
- C. Conditionals
- D. Looping
- E. Implicit and Explicit Casting
- F. PHP Dynamic Linking

V. PHP Functions and objects
- A. PHP Functions
- B. Including and Requiring Files
- C. PHP Version Compatibility
- D. PHP Objects

VI. PHP Arrays
- A. Basic Access
- B. The foreach...as Loop
- C. Multidimensional Arrays
- D. Using Array Functions

VII. Practical PHP
- A. Using printf
- B. Date and Time Functions
- C. File Handling
- D. System Calls
- E. XHTML

VIII. Introduction to MySQL
- A. MySQL Basics
- B. Summary of Database Terms
- C. Accessing MySQL via the Command Line
- D. Indexes
- E. MySQL Functions
- F. Accessing MySQL via phpMyAdmin

IX. Mastering MySQL
- A. Database Design
- B. Normalization
- C. Relationships
- D. Transactions
- E. Using EXPLAIN
- F. Backing Up and Restoring

X. Accessing MySQL using PHP
- A. Querying a MySQL Database with PHP
- B. A Practical Example
- C. Practical MySQL

XI. Form Handling
- A. Including other PHP pages
- B. Building Forms
- C. Retrieving Submitted Data
- D. An Example Program

XII. Templating with Smarty
- A. Reading files
- B. Why Smarty?
- C. Installation
- D. Creating Scripts
- E. Creating Templates
- F. A Practical Example

XIII. Cookies, Sessions, and Authentication
- A. Reading files
- B. Using Cookies in PHP
- C. HTTP Authentication
- D. Using Sessions

XIV. Exploring JavaScript
- A. JavaScript and HTML Text
- B. Variables
- C. Operators
- D. Variable Typing
- E. Functions
- F. Global Variables
- G. The Document Object Model

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