

Introduction to PHP Training

Course Summary

Description

In this PHP training course, students will learn to create database-driven websites using PHP and MySQL.

Objectives

After taking this course, students will:

- Learn how PHP works.
- Learn the basic syntax of PHP.
- Learn to create dynamic interactive pages with PHP.
- Learn to handle exceptions in PHP.
- Learn to work with arrays in PHP.
- Learn to process and validate forms with PHP.
- Learn to write functions in PHP.
- Learn to manipulate and manage database data with PHP.
- Learn to manage sessions and cookies with PHP.
- Learn to create a complete and secure registration process with PHP.
- Learn to send email with PHPMailer.
- Learn to upload files with PHP

Topics

- PHP Basics
- PHP Conditionals
- Arithmetic Operators and Loops
- Arrays
- Working with Databases
- Exception Handling
- PHP and HTML Forms
- Sending Email with PHP
- Authentication with PHP and SQL
- Lab: Inserting, Updating, and Deleting Poems

Prerequisites

Experience in the following *is required* for this PHP class:

- HTML

Experience in the following *would be useful* for this PHP class:

- CSS
- JavaScript
- Some SQL

Duration

Four Days

Introduction to PHP Training

Course Outline

I. PHP Basics

- A. Welcome to the Server-side
 - 1. What is a web server?
 - 2. Dynamic Websites
- B. Google Chrome DevTools: Network Tab
 - 1. Status Codes
- C. How PHP Works
 - 1. The php.ini File
 - 2. PHP Tags
 - 3. Hello, World!
- D. Comments
- E. PHP Statements and Whitespace
- F. PHP Functions
- G. php.net
- H. Variables
 - 1. Variable Types
 - 2. Variable Names (Identifiers)
 - 3. Type Juggling and Casting
 - 4. Hello Variables!
- I. Variable Scope
- J. Superglobals
- K. Single Quotes vs. Double Quotes
- L. Concatenation
- M. Passing Variables on the URL
- N. User-defined Functions (UDFs)
 - 1. Defining and Calling Functions
 - 2. Default Values
 - 3. Variable Scope
 - 4. By Reference vs. By Value
- O. Introduction to the Poet Tree Club
- P. Including Files
 - 1. require
 - 2. require_once
- Q. Constants
- R. Error Reporting
- S. Displaying Errors
- T. Including a Secure Configuration File

II. PHP Conditionals

- A. if / if - else / if - elseif - else
 - 1. Simple if Condition

- 2. if-else Condition
- 3. if-elseif-else statement
 - 4. False Equivalents: Falsy Values

- B. Testing for Variable Existence
- C. Exercise: Checking for Variable Existence
- D. switch/case
- E. Ternary Operator
- F. Null Coalescing Operator

III. Arithmetic Operators and Loops

- A. Arithmetic Operators
- B. The Modulus Operator
- C. Loops
 - 1. while
 - 2. do...while
 - 3. for
 - 4. break and continue

IV. Arrays

- A. Indexed Arrays
 - 1. Initializing Arrays
 - 2. Appending to an Array
 - 3. Reading from Arrays
 - 4. Looping through Arrays
- B. Associative Arrays
 - 1. Initializing Associative Arrays
 - 2. Reading from Associative Arrays
 - 3. Looping through Associative Arrays
 - 4. Superglobal Arrays
- C. Multi-dimensional Arrays
 - 1. Reading from Two-dimensional Arrays
 - 2. Looping through Two-dimensional Arrays
 - 3. Two-dimensional Associative Arrays
 - 4. Non-tabular Multi-dimensional Arrays
- D. Array Manipulation Functions
- E. in_array() Function

Introduction to PHP Training

Course Outline (cont.)

V. Working with Databases

- A. Objects
- B. Attributes / Properties
- C. Behaviors / Methods
- D. Classes vs Objects
- E. Connecting to a Database with PDO
- F. Introducing the Poetree Database
- G. phpMyAdmin
- H. Querying Records with PHP
- I. Queries Returning Multiple Rows
- J. Creating the Poems Listings
- K. Adding Pagination
- L. Sorting
- M. Filtering

VI. Exception Handling

- A. Uncaught Exceptions
- B. Throwing Your Own Exceptions
- C. Catching Exceptions
 - 1. Getting Information about Exceptions
- D. PDO Exceptions
- E. When Queries Fail to Execute

VII. PHP and HTML Forms

- A. HTML Forms
 - 1. How HTML Forms Work
- B. Form Submissions
- C. Sanitizing Form Data
 - 1. htmlspecialchars()
 - 2. htmlentities()
 - 3. filter_var()
 - 4. filter_input()
- D. Validating Form Data
 - 1. Was the Field Filled In?
 - 2. Is the Entered Value an Integer?
 - 3. Is it an Email?
 - 4. Is it a Valid Password and Do the Passwords Match?
 - 5. Do the Combined Values Create a Valid Date?
 - 6. Did the User Check the Box?

VIII. Sending Email with PHP

- A. mail()
 - 1. Shortcomings of mail()
- B. Setting Up PHPMailer

- 1. Get and Install the Latest Version of PHPMailer
- C. Mail Server
- D. Including a Mail Configuration File
- E. Sending Email with PHPMailer
- F. PHPMailer Methods and Properties
- G. Creating a Contact Form

IX. Authentication with PHP and SQL

- A. The Registration Process
- B. Passwords and Pass Phrases
- C. Registration with Tokens
- D. Creating a Registration Form
- E. Sessions and Session Variables
- F. Cookies
- G. Logging In and Out
- H. \$_REQUEST Variables
- I. Resetting the Pass Phrase

X. Lab: Inserting, Updating, and Deleting Poems

- A. Submitting a New Poem
- B. Editing an Existing Poem
- C. Deleting a Poem