

PHP with MySQL Course Content

Course Description:

PHP scripting language and MySQL database are the most popular open-source development tools used to build robust and scalable websites or internet/ intranet applications. PHP is a server-side scripting language and a powerful tool for building dynamic and interactive web pages. PHP is widely used, versatile runs faster and more efficiently. MySQL is an open-source database server designed based on a relational database management system (RDBMS) and handles large database connections. MySQL is popular for its fast processing, reliability, flexibility and easy usage.

A combination of PHP and MySQL offers a wide range of web application development. Even non-technical candidates can also easily develop web applications with combo PHP script and MySQL database. There is always a demand for open source technologies like PHP, MySQL in the IT industry. Developers always need to get updated with the latest versions of the technologies to sustain in the IT job market.

Hachion PHP with MySQL online tutorial curated by industry professionals from scratch. PHP and MySQL course content covers all basic and advanced concepts. Beginners who want to develop web applications can easily learn the PHP with MySQL course to gain practical knowledge and hands-on experience with real-time projects.

Course Content:

Introduction

- Introduction to PHP
- History of PHP
- Comparison with dynamic content alternatives (Perl, CGI, ASP, JSP, Servlets , CGI, etc)
- PHP tools and set up (web browser/server, editor, libraries, etc)
- Create a basic PHP Script
- Opening and Closing tags
- PHP as a command line or batch language
- Taking user input (HTML forms)
- Self Referring Forms
- Selecting alternatives
- Use PHP to generate HTTP headers
- Generating HTTP redirects
- Pass PHP variables via the URL
- Debugging Tips
- Where to find PHP documentation

Taking User Input from Forms Via PHP

- Creating forms with PHP
- Security Protection from Cross Site Scripting

- Using the form GET method
- Using the form POST method
- Obtaining data from forms through variables\$_REQUEST,\$_POSTor\$_GET?
- Using hidden fields
- Secure Web Forms (HTTPS and SSL)
- Calling pages from themselves using forms
- Quoting HTML entities in user input

Variables and Expressions in PHP

- Identifiers
- Data Types (integers, floats, strings and booleans)
- Type juggling
- Text constants, interpolation (strings, arrays, objects, functions), here & now documents
- Creating Variables
- Variable assignment
- Variable Scope
- Namespaces
- User-defined Constants
- String constants,variable interpolation into strings
- Array, Object&Function interpolation
- HTTP environment variables
- Magic ConstantsGLOBALSarray
- Variable References
- PHP Operators
- Arithmetic Operators
- Logical Operators
- Relational (Comparison) Operators
- The Identity Operator
- The Assignment Operators
- Increment & Decrement Operators
- Bitwise Operators
- Error Suppression Operator
- The Conditional (Ternary) Operator
- The Default Operator
- Execution Operators
- Other Operators
- Assignment Operators
- Operator Precedence and Associativity

Conditional Tests and Events in PHP

- True and Falseif

- Comparing Strings and Numbers else and elseif
- Hierarchical conditions (nested if statements)
- The ? : Operator
- Comparing for equality or identity
- The switch/case statement
- Alternative Syntax for Control Structures
- PHP Flow Control
- Loops while do

PHP Configuration

- The php.ini file
- Module Vs CGI Usage register_globals
- Control of error logging
- Control of resource limits
- Commonly set configurations
- File system security safe_mode and open_basedir
- PHP4 compatibility in PHP5
- A glance at upcoming PHP6
- PHP Functions
- Purpose of functions
- Built-in functions
- Declaring functions
- Functions Arguments
- Default Arguments
- Arguments - Call by Reference
- Return
- Returning References
- Variable Scope (global vs local)
- Static variables
- Recursion include and require

Storing Data in Arrays using PHP

- What are arrays?
- How and when to use arrays
- Indexing arrays, numeric and hashes
- Initialising arrays
- Using foreach
- Add/remove elements from arrays
- One-dimensional arrays
- Multi-dimensional arrays
- References to array elements

- Arrays in forms
- Array operators
- Array related functions
- Handling Databases With PHP
- Error-handling Strategies
- Connection/disconnection to the database, log in/log out
- Escaping strings in SQL statements
- Including common access functions
- Doing simple SQL queries via PHP
- Building HTML tables using SQL Queries
- Avoiding SQL Injection attacks
- Access to: MySQL, Mysqli, Oracle and MS-SQL
- Using PEAR DB
- Using PHP Data Objects - PDO
- An Insight to Smart Programming

String Manipulation in PHP

- Substring and [] operators
- Case conversion, trimming
- Formatting output data with printf
- Adding & removing backslashes
- Regular expressions
- Metacharacters: character classes, repetitions
- Regular Expression Examples
- Alternation and Grouping

Sessions and Cookies in PHP

- What is a session?
- Dependencies on the php.ini file
- Understanding PHP session variables
- Create a PHP session variable
- Register and modify PHP session variables
- Putting PHP session IDs in pages
- Good Practise with sessions and PHP
- Cookie properties
- Setting a cookie in PHP
- Retrieving PHP cookies
- Expiring/Deleting PHP cookies
- Drawbacks to cookies
- Using cookies well
- Testing for cookie support

- Sessions without cookies
- Cookie Security Issues

File and Directory Access Using PHP

- Opening files, local and remote
- Reading & writing and moving about in filesflush(),file(),fpassthru(),readfile()
- PHP portability on different Operating Systems
- Finding file metadata: size, ownership, modification time
- Handling file permissions
- Handling file ownership
- Copying, Renaming and Deleting Files
- File locking
- Opening and reading directories
- File uploads from the browser/user
- Other I/O Issues In PHP
- Getting IP addresses from visitors
- Getting referring URLs from visitors
- Environment variables
- Showing different content to different browsers (IE, Netscape, Firefox, Mozilla, Opera, etc)
- Handling HTTP and MIME headers

Object Orientation in PHP

- Object basics
- Classes in PHP
- PHP4 - constructors
- PHP5 - constructors and destructors
- Inheritance
- Accessing instance data and functions__sleepand__wakeup__autoload
- Class constants
- PHP5 OO Additions,type hints,foreach,__autoload
- PHP 5.4— instantiate & member access
- Objects: Assignments and Referencestry,throwcatchexception handling

PEAR, PECL and Smarty

- PECL quick tour
- APC - Alternative PHP Cache
- Xdebug - debugging and profiling
- PEAR installation and quick tour
- PEAR Config
- PEAR Log
- PEAR Auth (login)

- PEAR HTML_QuickForm2
- Smarty Templates
- Smarty and HTML_QuickForm2
- Smarty and QuickForm2 help with security
- Handling Email With PHP
- Sending email
- Sending multi part email-MIME
- Accessing mail boxes – IMAP and POP

Graphics in PHP

- Graphics basics,referencing a PHP scrip in an IMG tag
- Image MIME type
- Basic examples,line/box drawing
- Creation from an existing image
- Image copying and resizing
- Drawing text on images
- True Type fonts

Apache Virtualhost config

- Simple project-2 table database
- Project skeleton
- Configuration:test&live sites
- Structure of web program
- Smarty templates for the project
- Structure of a Smarty template
- Example Smarty template
- Firefox Add-ons:Web Developer,Firebug,YSlow
- Using rsync to copy test to live
- Putting It All Together-Database
- The database behind the application
- Designing the database
- Metadata management
- Entity-relationship (ER) diagrams
- ER Diagram example
- Data Modelling tools
- Users to access the database
- Creating the databases and tables
- Creating test data

Displaying Data

- Displaying data from the database
- Outline of data display function

- Example list display function
- Displaying a list with Smarty
- More succinct use of SQL
- QLWHEREclauses
- Combine tests in a WHERE clause
- SQL:grouping and Ordering of results
- SQL JOIN LEFT,RIGHT&FULL JOINs
- Displaying long lists in pages withLIMIT
- Showing lists a page at a time
- Implementing pages in Smarty Templates
- Making Smarty and SQL play well

Acting on items in a List

- Choosing items from a list
- Big picture
- Multiple items chosen at once
- One item only to be chosen
- One item with selectaction onChange:auto submit the form
- Greying out options
- Searching in a list
- What to do with something chosen

Create and Edit Data

- Creating & editing data
- Creating & editing are much the same
- Use the same names everywhere
- outline use of a HTML_QuickForm2form
- Adding fields to the form
- Field validation
- Validation types
- Smarty Template withHTML_QuickForm2
- Form validation and processing
- Display of validation errors

Putting it all together - Conclusion

- Other issues
- Version control
- Audit trail
- security and access control
- Performance
- Styling and accessibility