Faysal Aziz

PHP with MySQL

5-day comprehensive course

FA-0347 · 5-day

Software Development · Data & Analytics

Introduction

This is a comprehensive 5-day training course designed to equip you with the essential skills and knowledge to develop dynamic, data-driven web applications using PHP and MySQL. This course is meticulously structured to take you from the foundational concepts of PHP programming and MySQL databases to the advanced techniques of deploying your applications on a Linux Ubuntu server using both Apache and Nginx web servers.

Throughout this immersive training experience, you will engage in practical, hands-on projects that simulate real-world scenarios, enabling you to solidify your learning and gain confidence in applying your new skills. By the end of this course, you will be adept at creating robust web applications that efficiently interact with a MySQL database, and you'll be ready to deploy them to a live server environment.

Learning outcomes

Upon successful completion of this course, you will be able to:

1. Understand the syntax and fundamental concepts of PHP programming.
2. Design and manipulate databases in MySQL.
3. Develop and implement PHP scripts to perform CRUD (Create, Read, Update, Delete) operations on a MySQL database.
4. Integrate user authentication and maintain session control in your web applications.
5. Handle errors and exceptions effectively in PHP.
6. Utilize PHP and MySQL to create dynamic web pages that respond to user input.
7. Deploy web applications on a Linux Ubuntu server using Apache and Nginx web servers.
8. Configure secure connections and manage web server settings to optimize application performance.
9. Implement best practices for secure web development and database management.

Prerequisites

Before enrolling in this course, participants should have:

- A basic understanding of web development concepts.
- Familiarity with HTML and CSS.
- A working knowledge of programming fundamentals.
- Access to a computer with internet connectivity, capable of running a virtual server environment (SSH / Terminal / PowerShell etc).
- An eagerness to learn and experiment with new technologies.

Training outline

1. Introduction to PHP

1. History and evolution of PHP
2. Setting up a development environment (Linux)
3. Basic syntax and constructs of PHP
4. Variables, data types, and operators
5. Control structures: if-else, switch, loops
6. Functions: defining, invoking, and scope
7. Working with forms: GET and POST methods
8. PHP in web pages: embedding PHP in HTML

2. Fundamentals of MySQL

1. Introduction to databases: understanding SQL and MySQL
2. Setting up MySQL: installation and configuration
3. Designing a database: tables, keys, and indexing
4. Basic SQL queries: SELECT, INSERT, UPDATE, DELETE
5. Advanced SQL features: joins, transactions, and subqueries
6. MySQL administration: users, permissions, and backups

3. Integrating PHP and MySQL

1. Connecting to a MySQL database with PHP
2. Performing CRUD operations using PHP
3. Handling data from forms and validating user input

4. Using sessions and cookies for maintaining state and user sessions
5. Error handling and exception management in PHP and MySQL

4. Advanced PHP Techniques

1. Object-oriented programming (OOP) in PHP
2. Working with files and directories in PHP
3. Utilizing third-party PHP libraries and frameworks
4. Introduction to AJAX and JSON for dynamic web pages
5. Security practices: preventing SQL injection, XSS, and CSRF attacks

5. Deploying PHP and MySQL Applications

1. Introduction to Linux Ubuntu server environment
2. Installing and configuring Apache and Nginx web servers
3. Deploying PHP applications on a Linux server
4. Setting up MySQL databases on a live server
5. Secure connections: implementing SSL certificates
6. Server management and maintenance: monitoring, updating, and optimizing performance

This training course is designed not only to impart technical knowledge but also to inspire you to explore the vast possibilities of web development with PHP and MySQL. By engaging with the course materials, participating in hands-on projects, and applying best practices, you will be well on your way to becoming a proficient web developer capable of bringing your digital ideas to life.

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