

PHP Developer

Prerequisites: Knowledge of Programming (Any Language)

Day 1: PHP Fundamentals and Environment Setup

- Overview of PHP
- PHP versions and history
- Role of PHP in web development
- Installing XAMPP/WAMP/MAMP
- Setting up a local server
- Configuring PHP and Apache
- PHP syntax and tags
- Variables and data types
- Echo and print statements
- Conditional statements (if, else, elseif, switch)
- Looping statements (for, while, do-while, foreach)

Lab 1: Setting Up and Writing Basic Scripts

- Setting up the development environment
- Writing basic PHP scripts
- Using control structures in simple programs

Day 2: Working with Data and Functions

- Indexed arrays
- Associative arrays
- Multidimensional arrays
- String functions
- Regular expressions
- Handling and validating user input
- Defining and calling functions
- Function parameters and return values
- Variable scope and global variables
- Understanding superglobals (\$_GET, \$_POST, \$_SESSION, \$_COOKIE)
- Handling form data
- Validating and sanitizing user input

Lab 2: Data Handling and Functions

- Creating and manipulating arrays
- Writing functions for various tasks
- Handling form submissions and validating input

Day 3: Working with Databases and Sessions

- Setting up a MySQL database

- Using PHPMysqlAdmin for database management
- Basic SQL commands (SELECT, INSERT, UPDATE, DELETE)
- Connecting to a database with PDO
- Executing SQL queries with PDO
- Prepared statements and parameter binding
- Understanding sessions
- Starting and managing sessions
- Setting and retrieving cookies
- Reading and writing files
- File functions (fopen, fread, fwrite, fclose)
- File upload handling
- Setting up Doctrine ORM
- Defining entities and relationships
- Using the QueryBuilder
- Advanced DQL (Doctrine Query Language)
- Indexing and query optimization
- Caching strategies

Lab 3: Database Interaction and Sessions

- Setting up and interacting with a MySQL database
- Using PDO for database operations
- Implementing sessions and handling files
- Writing complex SQL queries and optimizing them
- Setting up Doctrine ORM and defining entities
- Performing advanced queries with Doctrine
- Implementing caching for database queries

Day 4: Object-Oriented Programming (OOP) in PHP

- Advanced array functions (array_map, array_filter, array_reduce)
- Sorting arrays (usort, uasort, ksort)
- Regular expressions in PHP
- Using preg_match, preg_replace, and preg_split
- Using json_encode and json_decode
- Working with serialize and unserialize
- Classes and objects
- Properties and methods
- Constructors and destructors
- Inheritance and polymorphism
- Interfaces and abstract classes
- Traits and namespaces
- Using try-catch blocks
- Custom exception handling
- Error reporting and logging

- Designing classes and objects
- Implementing OOP principles in a project
- Refactoring code to use OOP

Lab 4: Object-Oriented Programming

- Creating and using classes and objects
- Implementing inheritance and interfaces
- Building a simple application using OOP

Day 5: Advanced Topics and Project Deployment

- Consuming RESTful APIs
- Using cURL to make API requests
- Parsing JSON responses
- Creating RESTful routes in PHP
- Handling different HTTP methods (GET, POST, PUT, DELETE)
- Implementing API key-based authentication
- Using OAuth for secure API access
- Data validation and sanitization
- Preventing SQL injection
- XSS and CSRF protection
- Using PHPUnit for unit testing
- Debugging techniques and tools
- Profiling PHP applications
- Preparing an application for deployment
- Using version control (Git)
- Best practices for PHP development

Lab 5: Final Project

- Building a comprehensive PHP application
- Implementing security measures
- Deploying the application to a live server