

PHP Programming (03 Months)

Syllabus

01: Introduction to Web and PHP

- ✓ What is PHP? History and Features
- ✓ Client-Side vs Server-Side Scripting
- ✓ Setting up XAMPP/LAMP/WAMP server
- ✓ Basic PHP syntax
- ✓ Embedding PHP in HTML
- ✓ Comments, variables, constants
- ✓ Data types and type casting

02: Operators and Control Structures

- ✓ Arithmetic, Assignment, Comparison, Logical operators
- ✓ if, if-else, if-elseif-else
- ✓ switch-case
- ✓ while, do-while, for loops
- ✓ break and continue
- ✓ Ternary operator and null coalescing

03: Arrays and Loops

- ✓ Indexed arrays
- ✓ Associative arrays
- ✓ Multidimensional arrays
- ✓ Array functions (count, sort, explode, implode, etc.)
- ✓ Looping through arrays

04: Functions in PHP

- ✓ Creating and calling functions
- ✓ Function arguments (by value, by reference)
- ✓ Default arguments
- ✓ Return values
- ✓ Variable scope
- ✓ Built-in functions

05: Working with Forms

- ✓ GET vs POST
- ✓ Handling form submission
- ✓ Validating form data
- ✓ HTML Injection & Sanitization
- ✓ \$_GET, \$_POST, \$_REQUEST, \$_FILES, \$_SERVER

06: File Handling

- ✓ Reading and writing files
- ✓ fopen(), fread(), fwrite(), fclose()
- ✓ File upload via forms
- ✓ File permissions
- ✓ Directory handling

07: Session and Cookies

- ✓ Introduction to state management
- ✓ Using cookies: setcookie(), \$_COOKIE
- ✓ Using sessions: session_start(), \$_SESSION
- ✓ Destroying sessions and cookies
- ✓ Session security practices

08: PHP and MySQL Integration

- ✓ Introduction to MySQL
- ✓ Connecting PHP with MySQL (MySQLi or PDO)
- ✓ Performing CRUD operations:
 - Insert, Select, Update, Delete
- ✓ Displaying data in HTML tables
- ✓ Using prepared statements (PDO or MySQLi)

09: Form Validation and Security

- Server-side validation
- Input sanitization & validation
- SQL Injection prevention
- XSS protection
- Password hashing (password_hash, password_verify)
- Captcha integration (Google reCAPTCHA optional)

10: PHP with JavaScript, AJAX, and JSON

- ✓ Basics of JavaScript
- ✓ Introduction to AJAX
- ✓ Making AJAX calls to PHP
- ✓ Working with JSON encode/decode
- ✓ Dynamic form validation and updates using AJAX

11: Error Handling and Debugging

- ✓ Types of errors in PHP
- ✓ Error handling using try-catch
- ✓ error_reporting(), ini_set()
- ✓ Logging errors to a file

12: PHP Mini Project

- ✓ Full dynamic website (e.g., Blog, Contact Form, or Admin Panel)
- ✓ Project includes:
 - Login/Registration system
 - Form handling
 - MySQL CRUD operations
 - Session and validation
 - Dashboard with PHP and MySQL