Syllabus for Learning PHP

❖ **Module 1: Introduction to PHP**

- Understanding server-side scripting

- Introduction to PHP and its features

- Setting up a local development environment (XAMPP, WAMP, MAMP)

- Writing and running your first PHP script

❖ **Module 2: Basic PHP Syntax**

- PHP tags and syntax

- Variables and data types

- Constants

- Comments in PHP

❖ **Module 3: Control Structures**

- Conditional statements (if, else, elseif)

- Switch statements

- Loops (for, while, do-while)

- Break and continue statements

❖ **Module 4: Functions**

- Defining and calling functions

- Function parameters and return values

- Variable scope (global and local)

❖ Module 5: Arrays

- Understanding arrays (indexed, associative, multidimensional)

- Array functions (count, sort, shuffle, etc.)

- Iterating through arrays (foreach, while)

❖ Module 6: Strings and Regular Expressions

- String manipulation functions

- Working with string operators and functions

- Introduction to regular expressions in PHP

❖ Module 7: Working with Forms and Form Handling

- Creating HTML forms

- Accessing form data using `$_GET` and `$_POST`

- Form validation and sanitization

- Uploading files with PHP

❖ Module 8: PHP and Databases (MySQL/MariaDB)

- Introduction to databases and SQL

- Connecting to MySQL/MariaDB using PHP

- Executing SQL queries from PHP

- Fetching data and displaying results

❖ Module 9: Error Handling and Debugging

- Handling errors in PHP (try-catch blocks)

- Displaying errors and error logging

- Debugging techniques (var_dump, error_reporting)

❖ Module 10: Object-Oriented Programming (OOP) in PHP

- Introduction to OOP concepts (classes and objects)

- Defining classes and creating objects

- Class properties, methods, and visibility

- Constructor and destructor methods

❖ Module 11: PHP Sessions and Cookies

- Using sessions to persist data across requests

- Setting and retrieving session variables

- Using cookies for client-side data storage

❖ Module 12: PHP Security Practices

- Data validation and sanitization

- Preventing SQL injection and XSS attacks

- Securing file uploads

- Using prepared statements and parameterized queries

❖ Module 13: PHP Frameworks (Optional)

- Introduction to popular PHP frameworks (e.g., Laravel, Symfony, CodeIgniter)

- Understanding MVC architecture

- Building a basic application with a PHP framework

❖ Module 14: Introduction to APIs and JSON

- Consuming APIs with PHP (GET and POST requests)

- Parsing JSON data with PHP

- Building a simple RESTful API using PHP

❖ Module 15: Deployment and Hosting

- Preparing a PHP application for deployment

- Choosing a hosting provider

- Configuring a web server (Apache, Nginx) for PHP

- Deploying PHP applications to a live server

❖ Learning Resources

- Online tutorials and courses (e.g., Udemy, Coursera, freeCodeCamp)

- PHP documentation (php.net)

- Interactive coding platforms (Codecademy, LeetCode)

- PHP books and ebooks

❖ Projects and Exercises

- Build a CRUD (Create, Read, Update, Delete) application with PHP and MySQL

- Develop a user authentication system using PHP sessions and MySQL

- Create a simple e-commerce website with PHP and a framework

- Implement form validation and error handling in a project