

PHP Tutorial

What is PHP?

PHP is an open-source general purpose scripting language, widely used for website development. It is developed by Rasmus Lerdorf. PHP stands for a recursive acronym PHP: Hypertext Preprocessor.

PHP is the world's most popular server-side programming language. Its latest version PHP 8.2.8, released on July 4th, 2023.

PHP is a server-side scripting language that is embedded in HTML. PHP is a cross-platform language, capable of running on all major operating system platforms and with most of the web server programs such as Apache, IIS, lighttpd and nginx.

A large number of reusable classes and libraries are available on PEAR and Composer. PEAR (PHP Extension and Application Repository) is a distribution system for reusable PHP libraries or classes. Composer is a dependency management tool in PHP.

Why Learn PHP?

PHP one of the most preferred languages for creating interactive websites and web applications. PHP scripts can be easily embedded into HTML. With PHP, you can build

- Web Pages and Web-Based Applications
- Content Management Systems, and
- Ecommerce Applications etc.

A number of PHP based web frameworks have been developed to speed-up the web application development. The examples are WordPress, Laravel, Symfony etc.

Advantages of Using PHP

PHP is a MUST for students and working professionals to become great Software Engineers, especially when they are working in Web Development Domain.

Some of the most notable advantages of using PHP are listed below –



- PHP is a multi-paradigm language that supports imperative, functional, object-oriented, and procedural programming methodologies.
- PHP is a server-side scripting language that is embedded in HTML. It is used to manage dynamic content, databases, session tracking, even build entire e-commerce sites.
- PHP is integrated with a number of popular databases including MySQL, PostgreSQL, Oracle, Sybase, Informix, and Microsoft SQL Server.
- PHP is pleasingly zippy in its execution, especially when compiled as an Apache module on the Unix side. The MySQL server, once started, executes even very complex queries with huge result sets in record-setting time.
- PHP supports a number of protocols such as POP3, IMAP, and LDAP. PHP supports distributed object architectures (COM and CORBA), which makes n-tier development possible.
- PHP is forgiving: PHP language tries to be as forgiving as possible.
- PHP has a familiar C-like syntax.

There are five important characteristics of PHP that make its practical nature possible: Simplicity, Efficiency, Security, Flexibility, and Familiarity.

Hello World using PHP

Just to give you a little excitement about PHP, I'm going to give you a small conventional PHP Hello World program. You can try it using the Demo link.

```
<html>
<head>
  <title>Hello World</title>
</head>
<body>
  <?php echo "Hello, World!";?>
</body>
</html>
```

Audience


This PHP tutorial is designed for programmers who are completely unaware of PHP concepts but have a basic understanding on computer programming.

Prerequisites

Before proceeding with this tutorial, all that you need to have is a basic understanding of computer programming. Knowledge of HTML, CSS, JavaScript, and databases will be an added advantage.

Frequently Asked Questions about PHP


There are some very Frequently Asked Questions(FAQ) about PHP, this section tries to answer them briefly.

Do I Need Prior Programming Experience to Learn PHP? 


PHP is that's relatively easy to learn, even for beginners with little or no programming experience. To learn PHP, one needs to only have a basic understanding of computer programming, Internet, database, and HTML. However, prior knowledge of any one programming knowledge is an additional advantage. After learning the core PHP, you can the become proficient in any PHP web framework suitable for the development of applications, such as WordPress, Laravel etc.

Is PHP Free to Use? 

As PHP is open-source, it is free to use. You can also freely distribute the applications built with PHP. The PHP license under which the PHP scripting language is released, implies that, The PHP code can be redistributed in source or binary form. It also means its use and its many libraries and frameworks can be used for both commercial and private use.

What are the Applications of PHP? 

PHP is a server-side scripting language, optimized especially for building dynamic web applications. Developers use PHP to develop applications like content management systems, blogging applications, E-commerce applications, REST APIs etc. A number of PHP frameworks have been developed that are suitable for building applications of a specific type. For example, WordPress is used for building business websites and blogs. Similarly, Laravel is used in E-commerce platforms, Social networking apps, and CRM systems.

How Do I Install PHP? 

To run a PHP application, you need a server, a database server, and a PHP parser software. The most preferred combination is an Apache server, MySQL database, and a PHP module. While one can install all these components individually and configure them, the easiest way is to install pre-compiled binaries bundled together. Examples are XAMPP, WAMP and LAMP.

XAMPP is a cross-platform and open-source web server stack package developed by Apache Friends. It consists of the Apache HTTP Server, MariaDB database (an open-source fork of MySQL), and interpreters for PHP and Perl. The XAMPP software can be downloaded from <https://www.apachefriends.org/download.html>.

What Tools and Technologies Work Well with PHP?

PHP is a server-side scripting language, that is optimized for building dynamic web applications. One or more blocks of PHP script can be embedded inside HTML code. PHP works seamlessly with HTML and JavaScript to manage the frontend tasks of a web application. Although you can use any database, PHP is most commonly used along with a MySQL database as a backend of a web application. PHP developers also use technologies such as CSS, Ajax, Bootstrap etc. for the development of web applications.

Can PHP Be Used for Both Frontend and Backend Development?

The frontend of a typical web application deals with the design aspect. HTML, JavaScript and CSS technologies are mainly used as the frontend tools. PHP on the other hand is a server-side programming language. It is used to prepare algorithms for handling the processing logic, interacting with the databases, and handling the security aspects. Hence, it can be said that PHP is primarily used for backend development.

Are There Security Concerns with PHP?

PHP, like any other server-side technology is likely to be affected by security threats such as SQL injection, cross-site attacks and cross-site forgery. As a PHP developer, it is important to take all the necessary precautions.

What Are the Latest Features and Updates in PHP?

PHP language has been constantly evolving. In its latest version – PHP 8, a lot of new features have been provided.

The JIT (Just in Time) compiler is one of the most important features that has enhanced the efficiency of PHP.

The OPcache feature also improves PHP performance by storing precompiled script bytecode in shared memory.

PHP 8 has also introduced new features such as named arguments to function, Union types and more.

How Long Will it Take to Master PHP?

The amount of time it takes to learn PHP varies from person to person. To learn PHP Basics it may take 1-2 months. To get Intermediate Skills, and additional period of 2-3 months may be needed to master the OOP concepts, and PHP frameworks, and building more complex projects. Learning PHP is an ongoing process, where you can add proficiency in enhancing security, performance, and keeping up with PHP trends.

What Resources Do I Need to Learn PHP?

The official documentation of PHP (<https://www.php.net/docs.php>) provides the detailed coverage of PHP's keywords, built-in functions and other features along with useful examples. The PHP tutorial from TutorialsPoint (<https://www.tutorialspoint.com/php/index.htm>) is an extremely useful resources for beginners who want to learn PHP. TutorialsPoint also provides video-based tutorials and certifications to master PHP.