**PHP** is a general-purpose [scripting language](http://en.wikipedia.org/wiki/Scripting_language) originally designed for [web development](http://en.wikipedia.org/wiki/Web_development) to produce [dynamic web pages](http://en.wikipedia.org/wiki/Dynamic_web_page). For this purpose, PHP code is embedded into the [HTML](http://en.wikipedia.org/wiki/HTML) source document and interpreted by a [web server](http://en.wikipedia.org/wiki/Web_server) with a PHP processor module, which generates the [web page](http://en.wikipedia.org/wiki/Web_page) document. It also has evolved to include a [command-line interface](http://en.wikipedia.org/wiki/Command-line_interface) capability and can be used in [standalone](http://en.wikipedia.org/wiki/Standalone_software) [graphical applications](http://en.wikipedia.org/wiki/Graphical_user_interface).[[2]](http://en.wikipedia.org/wiki/PHP#cite_note-1) PHP can be deployed on most web servers and as a standalone interpreter, on almost every [operating system](http://en.wikipedia.org/wiki/Operating_system) and [platform](http://en.wikipedia.org/wiki/Platform_%28computing%29) free of charge.[[3]](http://en.wikipedia.org/wiki/PHP#cite_note-foundations-2) PHP is installed on more than 20 million websites and 1 million [web servers](http://en.wikipedia.org/wiki/Web_server).[[4]](http://en.wikipedia.org/wiki/PHP#cite_note-3)

PHP was originally created by [Rasmus Lerdorf](http://en.wikipedia.org/wiki/Rasmus_Lerdorf) in 1995. The main implementation of PHP is now produced by The PHP Group and serves as the [*de facto* standard](http://en.wikipedia.org/wiki/De_facto_standard) for PHP as there is no [formal specification](http://en.wikipedia.org/wiki/Formal_specification).[[5]](http://en.wikipedia.org/wiki/PHP#cite_note-about_PHP-4) PHP is [free software](http://en.wikipedia.org/wiki/Free_software) released under the [PHP License](http://en.wikipedia.org/wiki/PHP_License); it is incompatible with the [GNU General Public License](http://en.wikipedia.org/wiki/GNU_General_Public_License) (GPL) due to restrictions on the usage of the term *PHP*.[[6]](http://en.wikipedia.org/wiki/PHP#cite_note-5)

While PHP originally stood for "Personal Home Page", it is now said to stand for "PHP: Hypertext Preprocessor", a [recursive acronym](http://en.wikipedia.org/wiki/Recursive_acronym).

PHP manages freeing all resources. Users does not required to free file handle resource, database resources, memory, etc, unless programmer need to free resource during script execution.   
(All resources are released after script execution)   
  
PHP4 also have reference count feature. For example, memory for variables is shared when it assigned to other variable. If contents has been changed, PHP4 allocate new memory for it.   
  
For example, programmer does not have to use pass by reference for large parameters for better performance with PHP4.   
  
It would be a nice section for new PHP users, if there is "Resource Handling" section or like. Explanation about reference count feature in PHP4 would be very helpful to write better PHP4 scripts also.

## Brief History of PHP

PHP began life as a simple little cgi wrapper written in Perl. The name of this first package was Personal Home Page Tools, which later became Personal Home Page Construction Kit.

Old name is Professional Home Pages (PHP) and new name is PHP Hypertext Pre-Processor.

A tool was written to easily embed SQL queries into web pages. It was basically another CGI wrapper that parsed SQL queries and made it easy to create forms and tables based on these queries. This tool was named FI (Form Interpreter).

PHP/FI version 2.0 is a complete rewrite of these two packages combined into a single program. It evolved to a simple programming language embedded inside HTML files. PHP eliminates the need for numerous small Perl cgi programs by allowing you to place simple scripts directly in your HTML files. This speeds up the overall performance of your web pages since the overhead of forking Perl several times has been eliminated. It also makes it easier to manage large web sites by placing all components of a web page in a single html file. By including support for various databases, it also makes it trivial to develop database enabled web pages. Many people find the embedded nature much easier to deal with than trying to create separate HTML and CGI files.

Now PHP/FI is renamed as PHP.

**Major Features of PHP**

* Standard CGI, FastCGI and Apache module support - As a standard CGI program, PHP can be installed on any UNIX machine running any UNIX web server. With support for the new FastCGI standard, PHP can take advantage of the speed improvements gained through this mechanism. As an Apache module, PHP becomes an extremely powerful and **lightning fast** alternative to CGI programmimg.
* Access Logging - With the access logging capabilities of PHP, users can maintain their own hit counting and logging. It does not use the system's central access log files in any way, and it provides real-time access monitoring. The Log Viewer Script provides a quick summary of the accesses to a set of pages owned by an individual user. In addition to that, the package can be configured to generate a footer on every page which shows access information. See the bottom of this page for an example of this.
* Access Control - A built-in web-based configuration screen handles access control configuration. It is possible to create rules for all or some web pages owned by a certain person which place various restrictions on who can view these pages and how they will be viewed. Pages can be password protected, completely restricted, logging disabled and more based on the client's domain, browser, e-mail address or even the referring document.
* PostgresSQL Support - Postgres is an advanced free RDBMS. PHP supports embedding PostgreSQL "SQL queries" directly in .html files.
* RFC-1867 File Upload Support - File Upload is a new feature in Netscape 2.0. It lets users upload files to a web server. PHP provides the actual Mime decoding to make this work and also provides the additional framework to do something useful with the uploaded file once it has been received.
* HTTP-based authentication control - PHP can be used to create customized HTTP-based authentication mechanisms for the Apache web server.
* Variables, Arrays, Associative Arrays - PHP supports typed variables, arrays and even Perl-like associative arrays. These can all be passed from one web page to another using either GET or POST method forms.
* Conditionals, While Loops - PHP supports a full-featured C-like scripting language. You can have if/then/elseif/else/endif conditions as well as while loops and switch/case statements to guide the logical flow of how the html page should be displayed.
* Extended Regular Expressions - Regular expressions are heavily used for pattern matching, pattern substitutions and general string manipulation. PHP supports all common regular expression operations.
* Raw HTTP Header Control - The ability to have web pages send customized raw HTTP headers based on some condition is essential for high-level web site design. A frequent use is to send a Location: URL header to redirect the calling client to some other URL. It can also be used to turn off cacheing or manipulate the last update header of pages.
* On-the-fly GIF image creation - PHP has support for Thomas Boutell's GD image library which makes it possible to generate GIF images on the fly.
* ISP "Safe Mode" support - PHP supports an unique "Safe Mode" which makes it safe to have multiple users run PHP scripts on the same server.
* Many more new features are being added in newer releases of PHP. Visit the main web site at <http://www.php.net>
* It's Free! - One final essential feature. The package is completely free. It is licensed under the GNU/GPL which allows you to use the software for any purpose, commercial or otherwise.