

PHP – An Introduction

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Agenda

1. Brief History of PHP

2. Getting started

3. Examples

Brief History of PHP

PHP (PHP: Hypertext Preprocessor) was created by Rasmus Lerdorf in 1994. It was initially developed for HTTP usage logging and server-side form generation in Unix.

PHP 2 (1995) transformed the language into a Server-side embedded scripting language. Added database support, file uploads, variables, arrays, recursive functions, conditionals, iteration, regular expressions, etc.

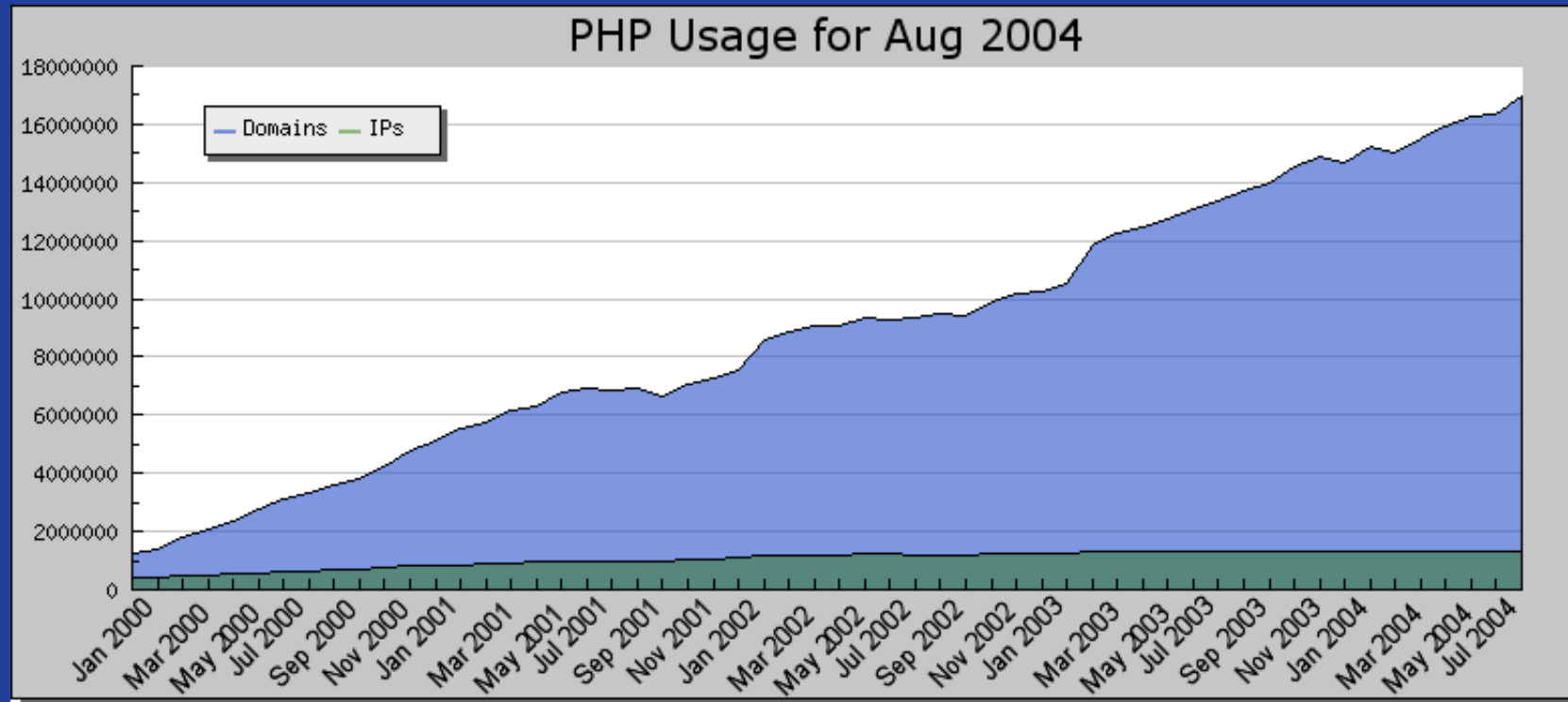
PHP 3 (1998) added support for ODBC data sources, multiple platform support, email protocols (SNMP,IMAP), and new parser written by Zeev Suraski and Andi Gutmans .

PHP 4 (2000) became an independent component of the web server for added efficiency. The parser was renamed the Zend Engine. Many security features were added.

PHP 5 (2004) adds Zend Engine II with object oriented programming, robust XML support using the libxml2 library, SOAP extension for interoperability with Web Services, SQLite has been bundled with PHP

Brief History of PHP

As of August 2004, PHP is used on 16,946,328 Domains, 1,348,793 IP Addresses <http://www.php.net/usage.php> This is roughly 32% of all domains on the web.



Why is PHP used?

1. Easy to Use

Code is embedded into HTML. The PHP code is enclosed in special start and end tags that allow you to jump into and out of "PHP mode".

```
<html>
  <head>
    <title>Example</title>
  </head>
  <body>

    <?php
    echo "Hi, I'm a PHP script!";
    ?>

  </body>
</html>
```

Why is PHP used?

2. Cross Platform

Runs on almost any Web server on several operating systems.

One of the strongest features is the wide range of supported databases

Web Servers: Apache, Microsoft IIS, Caudium, Netscape Enterprise Server

Operating Systems: UNIX (HP-UX, OpenBSD, Solaris, Linux), Mac OSX, Windows NT/98/2000/XP/2003

Supported Databases: Adabas D, dBase, Empress, FilePro (read-only), Hyperwave, IBM DB2, Informix, Ingres, InterBase, FrontBase, mSQL, Direct MS-SQL, MySQL, ODBC, Oracle (OCI7 and OCI8), Ovrimos, PostgreSQL, SQLite, Solid, Sybase, Velocis, Unix dbm

Why is PHP used?

3. Cost Benefits

PHP is free. Open source code means that the entire PHP community will contribute towards bug fixes. There are several add-on technologies (libraries) for PHP that are also free.

	PHP
Software	Free
Platform	Free (Linux)
Development Tools	Free PHP Coder, jEdit

Getting Started

1. How to escape from HTML and enter PHP mode

- PHP parses a file by looking for one of the special tags that tells it to start interpreting the text as PHP code. The parser then executes all of the code it finds until it runs into a PHP closing tag.



Starting tag	Ending tag	Notes
<?php	?>	Preferred method as it allows the use of PHP with XHTML
<?	?>	Not recommended. Easier to type, but has to be enabled and may conflict with XML
<script language="php">	?>	Always available, best if used when FrontPage is the HTML editor
<%	%>	Not recommended. ASP tags support was added in 3.0.4

Getting Started

2. Simple HTML Page with PHP

- The following is a basic example to output text using PHP.

```
<html><head>
<title>My First PHP Page</title>
</head>
<body>
<?php
echo "Hello World!";
?>
</body></html>
```

Copy the code onto your web server and save it as “test.php”. You should see “Hello World!” displayed.

Notice that the semicolon is used at the end of each line of PHP code to signify a line break. Like HTML, PHP ignores whitespace between lines of code. (An HTML equivalent is
)

Getting Started

3. Using conditional statements

- Conditional statements are very useful for displaying specific content to the user. The following example shows how to display content according to the day of the week.

```
<?php
$today_dayofweek = date("w");
if ($today_dayofweek == 4){
    echo "Today is Thursday!";
}
else{
    echo "Today is not Thursday.";
}
?>
```

Getting Started

3. Using conditional statements

The if statement checks the value of `$today_dayofweek` (which is the numerical day of the week, 0=Sunday... 6=Saturday)

- If it is equal to 4 (the numeric representation of Thurs.) it will display everything within the first { } bracket after the "if()".
- If it is not equal to 4, it will display everything in the second { } bracket after the "else".

```
<?php
$today_dayofweek = date("w");
if ($today_dayofweek == 4){
    echo "Today is Thursday!";
}
else{
    echo "Today is not Thursday.";
}
?>
```

Getting Started

3. Using conditional statements

If we run the script on a Thursday, we should see:

“Today is Thursday”.

On days other than Thursday, we will see:

“Today is not Thursday.”

```
<?php
$today_dayofweek = date("w");
if ($today_dayofweek == 4){
    echo "Today is Thursday!";
}
else{
    echo "Today is not Thursday.";
}
?>
```

Examples

- PHP is a great way to implement templates on your website.
- How to implement a simple page counter

Examples

```
<html><head>  
<title>UCR Webmaster Support Group</title>  
<link rel="stylesheet" type="text/css" href="mycssfile.css">  
</head>  
<body>  
<table width=80% height=30>  
<tr><td>  
    <div align=center> Page Title </div>  
</td></tr></table>
```

Examples

```
<table width=80% height=30>
<tr><td>
    <div align=center> UC Riverside Department<BR>
    <a href=mailto:someuser@ucr.edu>someuser@ucr.edu</a>
  </div>
</td></tr></table>
</body>
</html>
```

Examples

```
<?php
    // header
    include("header.php");
?>
```

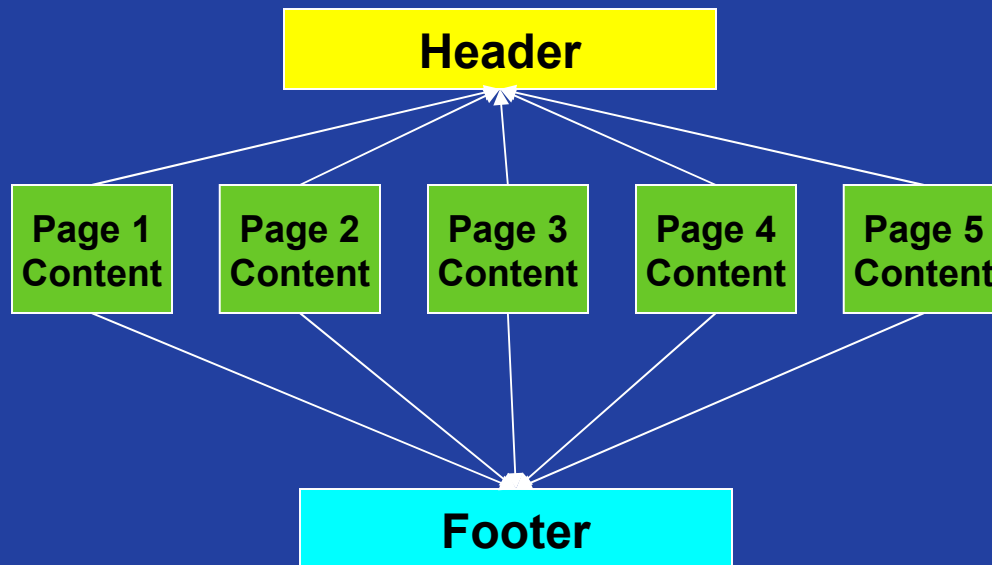
Insert content here!

```
<?php
    // footer
    include("footer.php");
?>
```


Examples

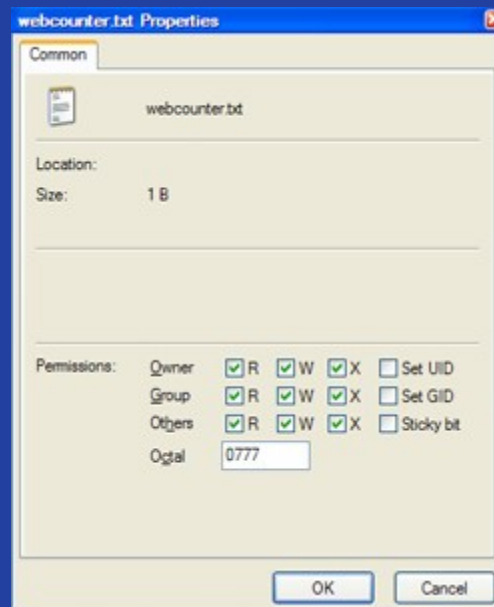
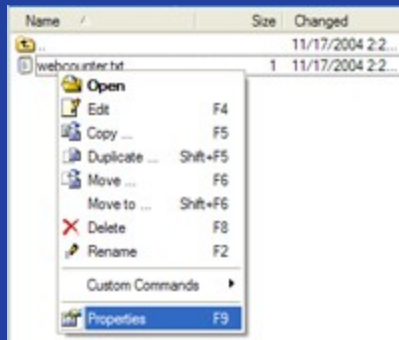
Benefits:

- Any changes to header or footer only require editing of a single file. This reduces the amount of work necessary for site maintenance and redesign.
- Helps separate the content and design for easier maintenance



Examples

- **Step 1: Simple Page Counter**
- Download the counter file **webcounter.txt** onto your machine
- Upload the webcounter.txt file onto your web server (via FTP, WinSCP, etc)
- Change the file permissions of the webcounter.txt file to 777 to allow the counter file to be updated.



Examples

- **Step 2: Simple Page Counter**
- Copy this code into a page where you want a counter.

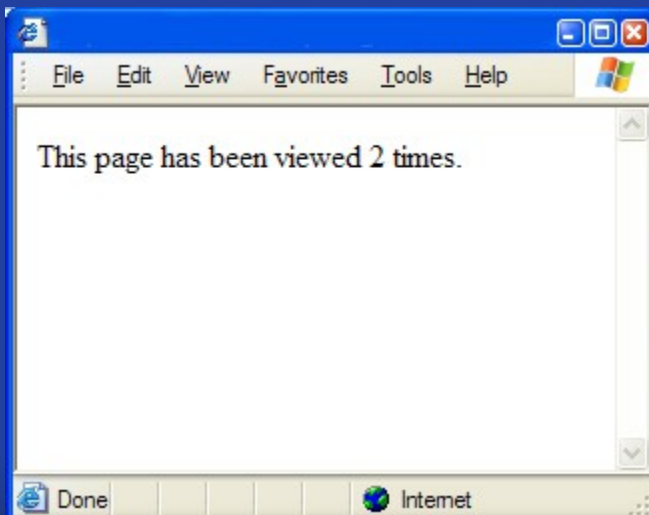
```
<?php
$COUNTER_FILE = "webcounter.txt";
if (file_exists($COUNTER_FILE)) {
    $fp = fopen("$COUNTER_FILE", "r+");
    flock($fp, 1);
    $hits = fgets($fp, 4096);
    $hits += 1;
    fseek($fp,0);
    fputs($fp, $hits);
    flock($fp, 3);
    fclose($fp);
}
?>
```

Examples

- **Step 3: Simple Page Counter**
- Next, output the counter value using PHP.
Copy this line after the main block of code.

This page has been viewed `<?php echo"$hits"; ?>` times.

- That's it! The result should look something similar to:



Examples

- Step 3: Simple Page Counter
- You can change the text around the `<?php echo"$hits"; ?>` tags to your liking.

```
<?php echo"$hits"; ?> visitors.
```

This example shows

1. How to escape from HTML and enter PHP mode
2. How to output variables onto the screen using PHP

Examples

2. How to output variables using PHP

- **Echo** is the common method in outputting data. Since it is a language construct, echo doesn't require parenthesis like print().
- Output Text Usage:
`<?php echo "Hello World"; ?>` // prints out Hello World
- Output the value of a PHP variable:
`<?php echo "$hits"; ?>` // prints out the number of hits
- Echo has a shortcut syntax, but it only works with the "short open tag" configuration enabled on the server. `<?= $hits ?>`

Examples

3. Other uses with echo()

- Automatically generate the year on your pages. This will print out ©2004 UC Riverside.
`©<?php echo date("Y"); ?> UC Riverside`
- You will need to escape any quotation marks with a backslash.
`<?php echo "I said \"She sells sea shells\" "; ?>`

Additional Resources

- PHP Manual <http://docs.php.net/>
- PHP Tutorial <http://academ.hvcc.edu/~kantopet/php/index.php>
- PHP Coder <http://www.phpide.de/>
- JEdit <http://www.jedit.org/>
- PHP's creator offers his thoughts on the PHP phenomenon, what has shaped and motivated the language, and where the PHP movement is heading
http://www.oracle.com/technology/pub/articles/php_experts/rasmus_php.html
- Hotscripts – A large number of PHP scripts can be found at: http://hotscripts.com/PHP/Scripts_and_Programs/index.html

Additional Information

Some of the new functions added in version 5:

- **Arrays:**
 - **array_combine()** - Creates an array by using one array for keys and another for its values
 - **array_walk_recursive()** - Apply a user function recursively to every member of an array
- **Date and Time Related:**
 - **idate()** - Format a local time/date as integer
 - **date_sunset()** - Time of sunset for a given day and location
 - **date_sunrise()** - Time of sunrise for a given day and location
 - **time_nanosleep()** - Delay for a number of seconds and nano seconds
- **Strings:**
 - **str_split()** - Convert a string to an array
 - **strpbrk()** - Search a string for any of a set of characters
 - **substr_compare()** - Binary safe optionally case insensitive comparison of two strings from an offset, up to length characters
- **Other:**
 - **php_check_syntax()** - Check the syntax of the specified file
 - **php_strip_whitespace()** - Return source with stripped comments and whitespace