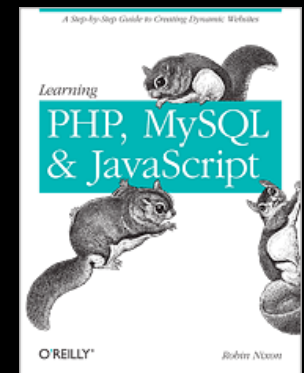


PHP Functions and Objects

Chapter 5

Dr. Charles Severance

To be used in association with the book:
PHP, MySQL, and JavaScript by Robin Nixon



open.michigan

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Why Functions?

- PHP has lots of built-in functions that we use all the time
- We write our own functions when our code reaches a certain level of complexity

To function or not to function...

- Organize your code into “paragraphs” - capture a complete thought and “name it”
- Don’t repeat yourself - make it work once and then reuse it
- If something gets too long or complex, break up logical chunks and put those chunks in functions
- Make a library of common stuff that you do over and over - perhaps share this with your friends...

Built-In Functions...

- Much of the power of PHP comes from its built-in functions

```
echo strrev(" .dlrow olleH");  
echo str_repeat("Hip ", 2);  
echo strtoupper("hooray!");  
echo "\n";
```

Hello world. Hip Hip HOORAY!

PHP Documentation - Google

The image shows a browser window with a Google search for "php string replace function". The search results page is open, displaying the PHP Manual page for the `str_replace` function. The browser's address bar shows the URL `http://php.net/manual/en/function.str-replace.php`. The page content includes the PHP logo, navigation links, and a sidebar with a search box and a list of categories. The main content area shows the function signature and description for `str_replace`.

php string replace function - Google Search

http://www.google.com/search?client=safari&rls=en&q=php+string+replace+function&ie=UTF-8

php string replace functi

http://localhost/si572/php-05/f... PHP: str_replace - Manual

http://php.net/manual/en/function.str-replace.php

php string replace functi

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php

PHP Manual

Function Reference

Text Processing

Strings

String Functions

- addslashes
- addslashes
- bin2hex
- chop
- chr
- chunk_split
- convert_cyr_string
- convert_uuencode
- convert_uuencode

PHP: str_replace - Manual

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search for In the function list

«str_repeat str_rot13»

view this page in Brazilian Portuguese [edit] Last updated: Fri, 16 Sep 2011

str_replace

(PHP 4, PHP 5)

str_replace — Replace all occurrences of the search string with the replacement string

Description [Report a bug](#)

```
mixed str_replace ( mixed $search , mixed $replace , mixed $subject [, int &$count ] )
```

This function returns a string or an array with all occurrences of *search* in *subject* replaced with the given *replace* value.

One Heck of a Function.

- PHP is a very configurable system and has lots of capabilities that can be plugged in.
- The `phpinfo()` function prints out the internal configuration capabilities of your particular PHP installation

```
<?php  
    phpinfo();  
?>
```

phpinfo()
 http://localhost/si572/php-05/info.php

PHP Version 5.3.1

System
Build
Config
Comm
PHP Version
Directive
allow_call_time_pass_referer
allow_url_fopen
allow_url_include
always_populate_raw_post_data
arg_separator.input
arg_separator.output
asp_tags
auto_append_file
auto_globals_jit
auto_prepend_file
browscap
default_charset
default_mimetype
define_syslog_variables

phpinfo()
 http://localhost/si572/php-05/info.php

Calendar support enabled

phpinfo()
 http://localhost/si572/php-05/info.php

json

json support	enabled
json version	1.2.1

ldap

LDAP Support	enabled
RCS Version	\$Id: ldap.c 287897 2009-08-30 15:33:59Z illia \$
Total Links	0/unlimited
API Version	3001
Vendor Name	OpenLDAP
Vendor Version	20343

Directive	Local Value	Master Value
ldap.max_links	Unlimited	Unlimited

libxml

libXML support	active
----------------	--------

Defining Your Own Functions

- We use the function keyword to define a **function**, we **name the function** and take **optional argument variables**. The body of the function is in a block of code `{ }`

```
function greet() {  
    print "Hello\n";  
}
```

```
greet();  
greet();  
greet();
```

```
Hello  
Hello  
Hello
```

Return Values

- Often a function will take its arguments, do some computation and **return** a value to be used as the value of the function call in the calling expression. The **return** keyword is used for this.

```
function greeting() {  
    return "Hello";  
}
```

```
Hello Glenn  
Hello Sally
```

```
print greeting() . " Glenn\n";  
print greeting() . " Sally\n";
```

Arguments

- Functions can choose to accept optional **arguments**. Within the function definition the variable names are effectively "**aliases**" to the **values passed in** when the function is called.

```
function howdy($lang) {  
    if ( $lang == 'es' ) return "Hola";  
    if ( $lang == 'fr' ) return "Bonjour";  
    return "Hello";  
}
```

```
Hola Glenn  
Bonjour Sally
```

```
print howdy('es') . " Glenn\n";  
print howdy('fr') . " Sally\n";
```

Choosing Function Names

- Much like variable names - but do not start with a dollar sign
 - Start with a letter or underscore - consist of letters, numbers, and underscores (_)
- Avoid built in function names

Call By Value

- The argument variable within the function is an "alias" to the actual variable
- But even further, the alias is to a *copy* of the actual variable in the function call

```
function double($alias) {  
    $alias = $alias * 2;  
    return $alias;  
}
```

```
$val = 10;  
$dval = double($val);  
echo "Value = $val Doubled = $dval\n";
```

Value = 10 Doubled = 20

Call By Reference

- Sometimes we want a function to change one of its arguments - so we indicate that an argument is "by reference" using (&)

```
function triple(&$alias) {  
    $alias = $alias * 3;  
}
```

```
$val = 10;  
triple($val);  
echo "Triple = $val\n";
```

Triple = 30

Variable Scope

- In general, variable names used inside of function code, do not mix with the variables outside of the function. They are walled-off from the rest of the code. This is done because you want to avoid "unexpected" side effects if two programmers use the same variable name in different parts of the code.
- We call this "name spacing" the variables. The function variables are in one "name space" whilst the main variables are in another "name space"
- Like little padded cells of names - like silos to keep things separate

Normal Scope (isolated)

```
function tryzap() {  
    $val = 100;  
}
```

TryZap = 10

```
$val = 10;  
tryzap();  
echo "TryZap = $val\n";
```

Global Scope (common)

```
function dozap() {  
    global $val;  
    $val = 100;  
}
```

DoZap = 100

```
$val = 10;  
dozap();  
echo "DoZap = $val\n";
```

Use this wisely, young Jedi...

Programming in Multiple Files

Multiple Files

- When your programs get large enough, you may want to break them into multiple files to allow some common bits to be reused in many different files.

SI572 - PHP, MySQL - Database Applications on the Web


http://www.si572.com/book.php

Database Applications (SI572)

Book [Install](#) [Instructor](#)

The book for this course is:

Learning PHP, MySQL, and JavaScript
Author: Robin Nixon.
ISBN 978-0-596-15713-5
<http://oreilly.com/catalog/9780596157142>
<http://www.amazon.com/Learning-MySQL-JavaScript-Step-Step/dp/0596157134>



SI572 - PHP, MySQL - Database Applications on the Web

http://www.si572.com/install.php

Database Applications (SI572)

[Book](#) [Install](#) [Instructor](#)

Setting up your PHP/MySQL Development Environment

In this page, you will install a programmer text editor, install a bundled all-in-one PHP/MySQL application, and explore that application briefly.

We have separate pages for each of the commonly used Operating Systems:

- [Setting up the PHP/MySQL Environment in Microsoft Windows](#)
- [Setting up the PHP/MySQL Environment on a Macintosh](#)

You will need [QuickTime](#) (or iTunes) installed on your computer to view any video materials or screencasts. You should probably download the high quality copies of these files or screencasts to your computer and view/play them locally. They are rather large files and you will want to move back and forth as well as start and stop the podcasts so you can perform the steps as indicated.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
    "DTD/xhtml11-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en"
lang="en">
<head>
<?php include("header.php"); ?>
</head>
<body>
<?php include("nav.php"); ?>
<div id="main">
<iframe
height="1800" width="100%" frameborder="0" marginwidth="0"
marginheight="0" scrolling="auto"
src="book.htm">
</iframe>
</div>
<?php include("footer.php"); ?>
</body>
</html>
```

book.php

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
    "DTD/xhtml11-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en"
lang="en">
<head>
<?php include("header.php"); ?>
</head>
<body>
<?php include("nav.php"); ?>
<div id="main">
<iframe
height="4600" width="100%" frameborder="0" marginwidth="0"
marginheight="0" scrolling="auto"
src="software.php">
</iframe>
</div>
<?php include("footer.php"); ?>
</body>
</html>
```

install.php

Including files in PHP

- `include "header.php";` - Pull the file in here
- `include_once "header.php";` - Pull the file in here unless it has already been pulled in before
- `require "header.php";` - Pull in the file here and die if it is missing
- `require_once "header.php";` - You can guess what this means...
- These can look like functions - `require_once("header.php");`

Coping with Missing Bits

- Sometimes depending on the version or configuration of a particular PHP instance, some functions may be missing. We can check that.

```
if (function_exists("array_combine"))
{
    echo "Function exists";
}
else
{
    echo "Function does not exist";
}
```

PHP Objects

- Later...

Summary

- Built-in functions
- Making new functions
- Arguments - pass by value and pass by reference
- Including and requiring files
- Checking to see if functions are present...