

PHP basic syntax

<?php *statements*; ?> PHP block
 <?= *expression* ?> Expression block

Example:
 <?php
 print "hello, world!";
 ?>

PHP types

int 42
float 3.14159
boolean true
string "hello" | 'goodbye'
gettype(*val*) "gettype(3.14)" -> "float"
is_*type*(*val*) "is_int(3.14)" -> false
casting (int) 3.14159 -> 3

PHP arithmetic

+ addition
 - subtraction, negation
 * multiplication
 / division (as real)
 % modulus

NB: 3 / 2 = "1.5", not "1"

PHP variables

\$name = *expression*;
 = assign
 +=, *=, modify and assign
 ., etc.
 ++, -- increment, decrement
 & copy/pass reference (e.g., \$ref = &\$var_name)

PHP math functions

abs(*n*)
 absolute value
ceil(*n*), floor(*n*), round(*n*)
 round up/down/nearest int

PHP math functions (cont)

cos(*n*), sin(*n*), tan(*n*)**
 cosine, sine, tangent (in radians)

log(*n*), log10(*n*)
 logs

min(*n1*, *n2*, *n3*...), max(*array*)
 min or max of set or array

pow(*base*, *exp*)
 exponent

rand(*n*), rand(*min*, *max*)
 random integer 0...*n* or *min*...*max*

sqrt(*n*)
 square root

PHP string handling

Assign:
 \$word = "hello";

Get characters:
 \$first_char = \$word[0];

Get length:
 \$len = strlen(\$word);

Concat:
 \$full_name = \$first . " " . \$last (NOT "+")

Convert:
 \$var = 1 + "2 Live Crew" (equals 3); \$var = 1 . 2 (equals "12")

Interpreted strings:
 "Today is \$user_name's {age}th birthday"

Convert case:
 \$var = strtoupper(*string*); (also strtolower)

Replace string:
 \$var = str_replace(*target*, *new*, *source*);

Escape HTML:
 \$var = htmlspecialchars(*string*);

Trim:
 \$var = trim(*string*); (also ltrim, rtrim)

PHP boolean logic

==, != "truthy" equality
 ===, !== exact equality
 >, <, >=, <= greater than, etc.
 &&, ||, ! logical AND, OR, NOT
 Falsey values: 0, 0.0, "", "0", NULL, empty array, unset variables.
 Truthy values: all else

PHP loops

```
if (test1) { ...
} elseif (test2) { ...
} else { ...
}
for ($i = 0; $i < val; $i++) { ... }
while (test) { ... }
```

PHP print statement

print "text" Print with substitutions
print 'text' Print literal
 \n \t \' \" \ Escape characters

Example:
 print "hello \$name"

PHP functions

Declaring functions
 function myfunc(\$param1, \$param2, ...)
 {... return \$val; }

Calling functions
 \$result = myfunc(\$x1, \$x2);

Importing global variables
 global \$my_var

PHP include files

include("filename"); imports file
 Also: require(), include_once(), require_once()

PHP arrays

Create new, empty array:

```
$name = array();
```

Create new, non-empty array:

```
$name = array(value0, value1, ...
valueN);
```

Set index:

```
$array[number/string] = value;
```

Get at index:

```
$val = $array[num/string];
```

Append to array:

```
array_push($array, value);
```

Explode (convert string to array):

```
$array = explode(delimiter, string);
```

Implode (convert array to string):

```
$string = implode(delimiter, array);
```

Iterate (for-each loop):

```
foreach ($array as $element) {state-
ments;}
```

Get array size:

```
$val = count($array);
```

Sort array:

```
sort($array);
```

Unpack array:

```
list($var1, $var2, $var3) = $array;
```

Check if index exists:

```
$boolean = isset($array[index])
```

PHP file I/O

file_get_contents(filename)

Returns file as string

file_put_contents(filename, text)

Saves text to file, erasing any prior file

file(filename [, FILE_IGNORE_NEW_LI- NES])

Returns file as array of strings (+/- "\n")

file_exists, is_readable, is_writable, etc.

Returns info about file, directory or disk

PHP file I/O (cont)

copy, rename, etc.

Modifies file or directory

scandir(directoryname)

Array of files in dir (including "." and "..")

glob(wildcard)

Array of files matching wildcard

```
// Read file as array (without "\n"), then save
```

```
$text = file_get_contents($filename);
```

```
$lines = explode("\n", $text);
```

```
$text = implode("\n", $lines);
```

```
file_put_contents($filename, $text);
```

```
// Get all files in directory (with "."/"..")
```

```
$files = scandir($folder);
```

```
// Get all files in "data" (without "."/"..")
```

```
$files = glob("data/*");
```

```
// Get all text files
```

```
$files = glob("*.txt");
```

