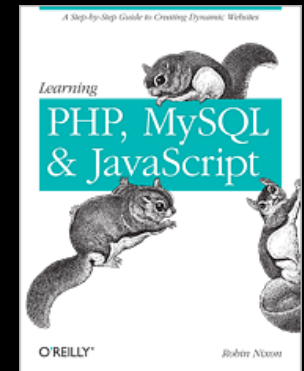


Practical PHP

Chapter 7

Dr. Charles Severance

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



open.michigan

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Miscellaneous Useful Stuff

- String formatting
- Date Functions
- File Handling

String Formatting

- Most languages inspired by C have a feature similar to C's `printf()` function that gives a high level of control over formatted output when variables are converted to strings.

```
$x = 1.0 / 3.0;  
echo "x = $x\n";  
printf ("x = %5.2f\n", $x);
```

```
x = 0.333333333333333  
x = 0.33
```

<http://php.net/manual/en/function.printf.php>

```
$x = 1.0 / 3.0;
echo "x = $x\n";
printf ("x = %5.2f\n", $x);
printf ("x = %08.4f\n", $x);
$y = 120;
$z = 1;
$a = 1000;
printf ("%8d\n", $y);
printf ("%8d\n", $z);
printf ("%8d\n", $a);
```

```
x = 0.3333333333333333
x = 0.33
x = 000.3333
      120
           1
      1000
```

<http://php.net/manual/en/function.printf.php>

```
$x = 1.0 / 3.0;
echo "x = $x\n";
printf ("x = %5.2f\n", $x);
printf ("x = %08.4f\n", $x);
$y = 120;
$z = 1;
$a = 1000;
printf ("%8d\n", $y);
printf ("%8d\n", $z);
printf ("%8d\n", $a);
```

x = 0.3333333333333333

x = 0.33

x = 000.3333

120

1

1000

```
printf ("x = %5.2f\n", $x);
```

x = 0.33

<http://php.net/manual/en/function.printf.php>

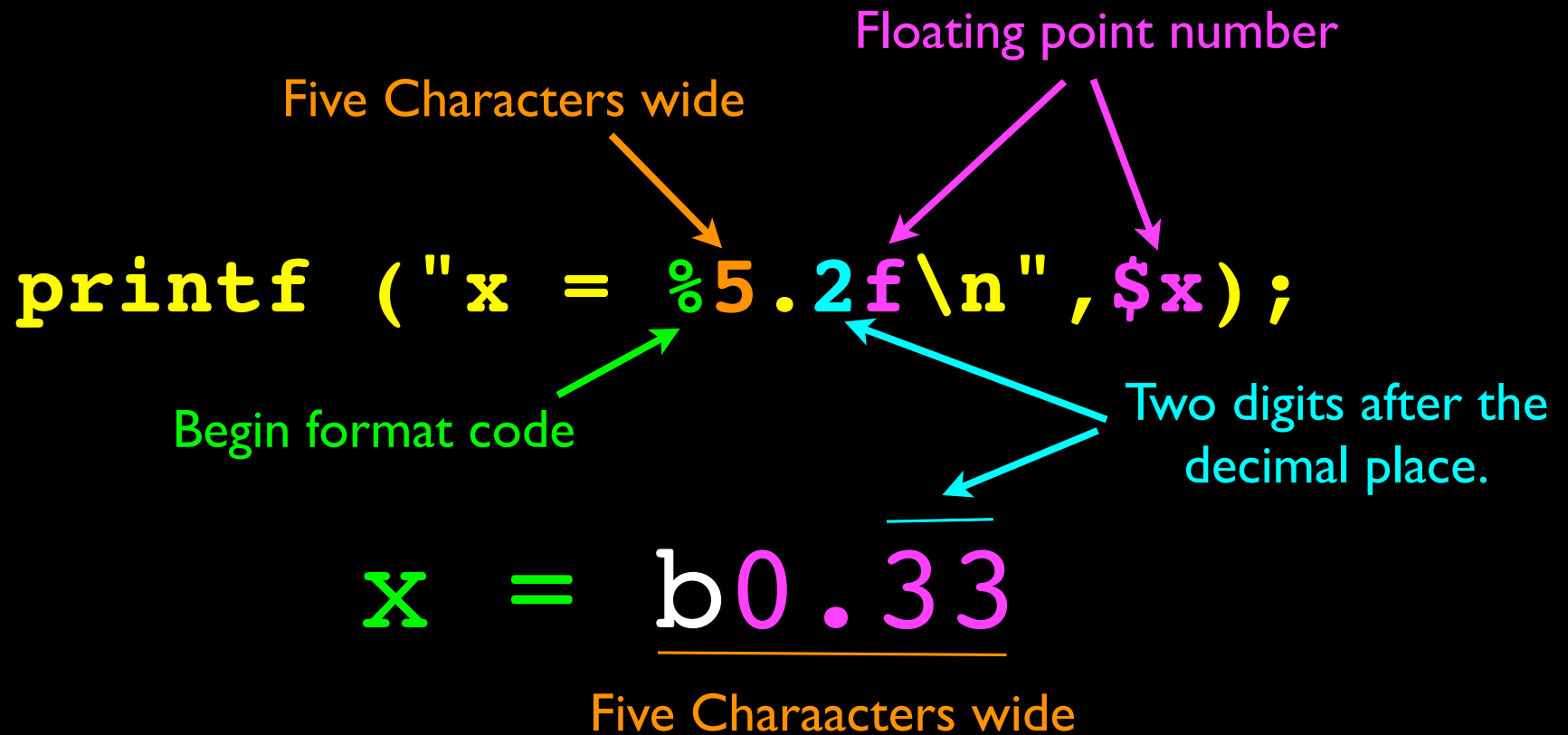


Table 7-1. The printf conversion specifiers

Specifier	Conversion action on argument arg	Example (for an arg of 123)
%	Display a % character (no arg is required)	%
b	Display arg as a binary integer	1111011
c	Display ASCII character for the arg	{
d	Display arg as a signed decimal integer	123
e	Display arg using scientific notation	1.23000e+2
f	Display arg as floating point	123.000000
o	Display arg as an octal integer	173
s	Display arg as a string	123
u	Display arg as an unsigned decimal	123
x	Display arg in lowercase hexadecimal	7b
X	Display arg in uppercase hexadecimal	7B

Multiple Format Codes

- The string can have multiple **format codes** and needs **one argument** after the **format string** for each of the codes

```
printf("My name is %s. I'm %d years old, which is %X in hexadecimal\n",  
      'Simon', 33, 33);
```

My name is Simon. I'm 33 years old, which is 21 in hexadecimal

Formatted Print to a String

- Often we want to format a string printf() style but instead, have the formatted result in a variable to put in a database field or send across a networks, etc.

```
$hexstring = sprintf("%X%X%X", 65, 127, 245);  
echo "Hex = " . $hexstring . "\n";
```

```
Hex = 417FF5
```

Date and Time

Date and Time

- Time is an integer number of seconds since January 1, 1970
- Can do relative computations by adding a number of seconds
- There might be a problem around 2038.....
- The `date()` function is used to produce various string-formatted representations of the date

http://en.wikipedia.org/wiki/Year_2038_problem

```
echo "Time = " . time() . "\n";
$nextWeek = time() + (7 * 24 * 60 * 60);
                // 7 days; 24 hours; 60 mins; 60secs
echo 'Now:      ' . date('Y-m-d') . "\n";
echo 'Next Week: ' . date('Y-m-d', $nextWeek) . "\n";
```

```
Time = 1316400842
Now:      2011-09-19
Next Week: 2011-09-26
```

<http://php.net/manual/en/function.time.php>

Format	Description	Returned value
Day specifiers		
d	Day of month, 2 digits, with leading zeros	01 to 31
D	Day of the week, three letters	Mon to Sun
j	Day of the month, no leading zeros	1 to 31
l	Day of week, full names	Sunday to Saturday
N	Day of week, numeric, Monday to Sunday	1 to 7
S	Suffix for day of month (useful with specifier j)	st, nd, rd, or th
w	Day of week, numeric, Sunday to Saturday	0 to 6
z	Day of year	0 to 365
Week specifier		
W	Week number of year	1 to 52
Month specifiers		
F	Month name	January to December
m	Month number with leading zeros	01 to 12
M	Month name, three letters	Jan to Dec
n	Month number, no leading zeros	1 to 12
t	Number of days in given month	28, 29, 30 or 31

Year specifiers		
L	Leap year	1 = Yes, 0 = No
Y	Year, 4 digits	0000 to 9999
y	Year, 2 digits	00 to 99
Time specifiers		
a	Before or after midday, lowercase	am or pm
A	Before or after midday, uppercase	AM or PM
g	Hour of day, 12-hour format, no leading zeros	1 to 12
G	Hour of day, 24-hour format, no leading zeros	1 to 24
h	Hour of day, 12-hour format, with leading zeros	01 to 12
H	Hour of day, 24-hour format, with leading zeros	01 to 24
i	Minutes, with leading zeros	00 to 59
s	Seconds, with leading zeros	00 to 59

<http://lpmj.net/>

Date Formats

- Different Web protocols need different date formats
- ISO8601 is a popular format because it is simple and in UTC / GMT

```
echo "ISO 8601 = " . gmDate("Y-m-d\TH:i:s\Z") . "\n";
```

```
ISO 8601 = 2011-09-19T11:47:14Z
```

<http://php.net/manual/en/class.datetime.php>

Reading and Writing Files

Checking for Existence

```
if (file_exists("names.txt")) echo "names.txt exists\n";
```

```
names.txt exists
```

Reading all the lines in a file..

```
$fh = fopen("names.txt", "r");
while(true)
{
    $line = fgets($fh);
    if($line == null)break;
    echo $line;
}
fclose($fh);
```

```
# First, last, email, age
Granny,Smith,gsmith@umich.edu,29
Mariela,Bischoff,mb@umich.edu,29
Harry,Spitz,hs@umich.edu,29
Roni Callaghan,rc@umich.edu,29
Latanya,Hosmer,lh@umich.edu,29
Tyson,Bortz,tb@umich.edu,29
Charity,Sato,cs@umich.edu,29
Jaymie,Valencia,jv@umich.edu,29
Una,Mcalister,um@umich.edu,29
Adella,Gries,ag@umich.edu,29
Cathleen,Mclaughlin,cm@umich.edu,29
```

Assignment

Assignment

- Read a text file - skip lines starting with #
- Produce an HTML table
- Color even / odd lines differently
 - <http://www.si572.com/assn/assn02/names.php>
 - <http://www.si572.com/assn/assn02/name-dumper.php>
 - <http://www.si572.com/assn/assn02/names.txt>

Data File

```
# First, last, email, age
Granny,Smith,gsmith@umich.edu,29
Mariela,Bischoff,mb@umich.edu,29
Harry,Spitz,hs@umich.edu,29
Roni Callaghan,rc@umich.edu,29
Latanya,Hosmer,lh@umich.edu,29
Tyson,Bortz,tb@umich.edu,29
Charity,Sato,cs@umich.edu,29
Jaymie,Valencia,jv@umich.edu,29
Una,Mcalister,um@umich.edu,29
Adella,Gries,ag@umich.edu,29
Cathleen,Mclaughlin,cm@umich.edu,29
```

Name Table

http://www.si572.com/assn/assn02/names.php

List of Names

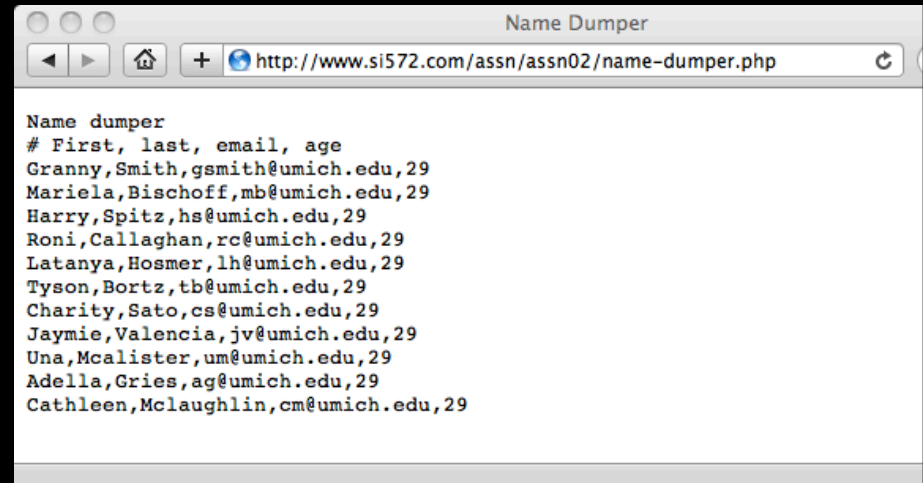
First	Last	Email	Age
Granny	Smith	gsmith@umich.edu	29
Mariela	Bischoff	mb@umich.edu	29
Harry	Spitz	hs@umich.edu	29
Roni	Callaghan	rc@umich.edu	29
Latanya	Hosmer	lh@umich.edu	29
Tyson	Bortz	tb@umich.edu	29
Charity	Sato	cs@umich.edu	29
Jaymie	Valencia	jv@umich.edu	29
Una	Mcalister	um@umich.edu	29
Adella	Gries	ag@umich.edu	29
Cathleen	Mclaughlin	cm@umich.edu	29

```

<table>
  <tr>
    <th>First</th>
    <th>Last</th>
    <th>Email</th>
    <th>Age</th>
  </tr>
  <tr class="odd">
    <td>Granny</td>
    <td>Smith</td>
    <td>gsmith@umich.edu</td>
    <td>29</td>
  </tr>
  <tr class="even">
    <td>Mariela</td>
    <td>Bischoff</td>
    <td>mb@umich.edu</td>
    <td>29</td>
  </tr>
  ...

```

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
  <title>Name Dumper</title>
</head>
<body>
<pre>
Name dumper
<?php
$fh = fopen("names.txt", "r");
while(true)
{
  $line = fgets($fh);
  if($line == null)break;
  echo $line;
}
fclose($fh);
?>
</pre>
```



Name Dumper

http://www.si572.com/assn/assn02/name-dumper.php

```
Name dumper
# First, last, email, age
Granny,Smith,gsmith@umich.edu,29
Mariela,Bischoff,mb@umich.edu,29
Harry,Spitz,hs@umich.edu,29
Roni,Callaghan,rc@umich.edu,29
Latanya,Hosmer,lh@umich.edu,29
Tyson,Bortz,tb@umich.edu,29
Charity,Sato,cs@umich.edu,29
Jaymie,Valencia,jv@umich.edu,29
Una,Mcalister,um@umich.edu,29
Adella,Gries,ag@umich.edu,29
Cathleen,Mclaughlin,cm@umich.edu,29
```

Summary

- Formatting
- Dates
- Files...