An Intro to PHP

by Nolan Walker

Who am I?

Nolan Walker, PMP

- project manager
- web application developer
- coding since 1999
- ASP (VBScript) - > PHP

My Business

advantcomp
CONSULTING

Web Software Development

- custom PHP programming
- web apps: jQuery/AJAX interfaces

Website Development

- custom WordPress websites
- themes, plugins etc.

Why PHP?

Server-side programming language of the internet.

“PHP is used by 81.7% of all the websites whose server-side programming language we know.”
w3techs.com

CMS’s - all PHP

- Drupal
- WordPress
- Joomla

Model View Controller (MVC) PHP frameworks:

- CakePHP*
- CodeIgniter
- Symfony
- Zend

Developer = Programmer

- to be a web developer, you need to know server-side programming
- regardless framework/CMS, need to know how to change or create functionality

Strong scripting foundation = portable skills

- other languages, JavaScript
- MVC frameworks -> Ruby on Rails etc.

Other essential skills (not covered today)

- SQL
- JavaScript

Today

PHP Overview

- basic PHP functionality, with code examples
- follow along with a copy in your editor
- feel free to change the code test what happens

Exercises

- 3 small ones (~15-20 minutes each)
- 1 more complicated one: multiplication table (~30-40 minutes)

As time permits

- Q & A
- Exercise 4 using jQuery AJAX

Setup

What you need

- editor, preferably with line numbers
- server access: execute code (local, remote, no CMS)

Download Examples

http://qcollege.advantcomp.com/download.php

Best Practises vs. Style

Functions can appear to do the same thing

- echo vs print, example1.php

echo - can output one or more strings
print - can only output one string, and returns always 1
shorthand - not all PHP configurations support

PHP code can look very different

- if statement, shorthand, example2.php
- I will be showing longhand, easier to follow

Comments

- single line //stuff
- single line #stuff
- multi-line /* stuff */
- example3.php

Variables

- container to hold data
- case sensitive
- must start with letter or underscore, not a number
- example4.php

Data Types

Strings

- text inside of quotes (double or single)

Integers

- numbers, no decimal places
- positive or negative

Floating Point Numbers

- number with a decimal place

Boolean

- true or false

Data Types

Arrays

- storage for multiple data types (more to come)

Objects

- complex data types that stores data and information
- object-orientated programming
- contains methods and properties

NULL

- a variable with no data

example5.php

String Functions

There are lots and lots of string functions: http://www.php.net/manual/en/ref.strings.php

Let’s pick 3:

- strlen - Get the length of string.
- strpos - Find the position of the first occurrence of a substring in a string.
- substr - Return part of a string.

example6.php

Operators

Arithmetic Operators

- +   -   *   /   %

Assignment Operators

- x = y   x += y   x -= y   x *= y   x /= y   x %= y

String Operators

- . (Concatenation)   .= (Concatenation assignment)

Increment / Decrement Operators

- $x++ $x--

Operators

Comparison Operators

- ==   ===   !=   <>   !==   >   <   >=   <=

Logical Operators

- and   or   xor   && || !

Conditional Logic

- if
- if/else
- if/elseif/else
- switch

example7.php

Exercise 1

1. create a new file called exercise1.php
2. create a couple of comments, your name and the date created.
3. create a string variable, containing your email address
4. echo everything after the @, the domain.

15 minutes

For example:
nwalker@advantcomp.com would be advantcomp.com.

Loops

- for loop
- while loop

example8.php

Arrays

- core, fundamental, can be difficult to understand and visualize
- anytime you’re interacting with a database, arrays are involved
- transferable concepts: JavaScript/jQuery/AJAX

example9.php

- Simple Array
- Associative Array
- foreach loop
- Explode/Implode

*not covered

- Multi-dimensional Arrays

Exercise 2

1. create a new file called exercise1.php
2. loop from 1 to 100, every 5 items echo the value.

15 minutes

Hints

- modulus operator (%)
- 25 % 5 equals 0
- 50 % 5 equals 0

Functions

- built-in and your own
- reusable actions
- only executed when called, just not when the page loads
- scope of variables
- can return a single data type, or return nothing

example10.php

Exercise 3

1. create a new file called exercise3.php
2. create a function that takes in two variables
3. multiply them by each other
4. return the result
5. echo the result

bonus: if you have time, use the is_numeric function to return 0 is either variable is not a number

15 minutes

Form Data

- forms are the most common method to interact with users
- $_GET - querystring variables
- $_POST - form variables
- $_REQUEST - either
- recommended to use method='post', keep clean URLS

example11.php

Exercise 4

1. create a new file called exercise4.php
2. create a form to post two variables, rows and columns
3. create a function that accepts those two variables
4. output a multiplication table, with the number of rows and columns posted

bonus: if you have time:

- validate using is_numeric
- don't let users submit more than 50 columns or rows, warn with JavaScript alert

30 minutes

Other stuff

Other core PHP concepts to become familiar with

- Session variables
- Cookies
- Email
- File handling/File upload
- Date function
- String functions (the rest)
- MySQL - connection types, SQL and PHP.

Q & A

- any questions?

Thanks!

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This lesson (examples/exercises/presentation):
https://github.com/nolanwalker/intro_php_feb_2014

Bonus - jQuery AJAX

jQuery: a cross-platform JavaScript library designed to simplify the client-side scripting

- include jquery in your file, get easy-to-use functions
- examples:

.show()   .hide()   addClass()   .val()   .click()   .html()

AJAX: Asynchronous JavaScript and XML

- let’s you exchange data with a server, and update parts of a web page without reloading the whole page.
- despite name, doesn’t need to be XML, most often JSON