

PHP for Site Modularity

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The Challenges And Rewards Of Teaching Web Design

By [Jeremy Girard](#)

January 9th, 2014 Community, Opinion Column, Web Design

24 Comments

Just over four years ago, I decided to take a part-time position teaching website design and front-end development at a local university, the [University of Rhode Island](#). My time in the classroom has been one of the most challenging as well as one of the most rewarding experiences in my career, and I believe that other Web professionals would greatly benefit from spending some time in an educational setting teaching others their craft.

In this article, we will look at some of the challenges to prepare for if you are considering taking on a teaching position. I will also present some of my personal experiences and insights, including the benefits and rewards I've enjoyed as a teacher, to help you consider such a move for your own career.


Challenges

Let's start by looking at some of those aforementioned challenges as well as the solutions I've used to meet them over the years.

NOT EVERYONE LEARNS THE SAME WAY

Where you teach, as well as the variety of students in your classroom, will have a dramatic impact on your overall experience. Over the years, students from all walks of life, age groups and experience levels have taken my course. The only constant is that **every one of them is completely different** — which poses quite a challenge when preparing materials and exercises for the class.

Ultimately, your job is to do what you feel would help the students understand the concepts best. Yet, no matter how well you prepare, the reality is that your materials will work great for some students and not so well for others. You will not be able to reach all students equally because everyone learns differently.



Big sites

The management of big websites presents a whole range of considerations that don't necessarily apply to small websites. Maybe you have lots of content that needs to be searchable by category, maybe you want to enable user-generated content or perhaps the page structure needs to be complex and you need an easy way to manage and update those pages.

When faced with such issues, most people will think about using a CMS (Content Management System) such as WordPress.

The power behind most CMSs is the PHP scripting language and in order to understand how a CMS works, we need to gain at least a basic understanding of PHP.

LAMP

Linux
Apache
MySQL
PHP

operating system
web server
database
scripting

What is PHP?

- PHP is a “server-side” scripting language specifically designed for producing dynamic web pages.
- PHP is the most widely used server-side web scripting language in the world.
- Many significant websites are developed using PHP (Facebook, Wikipedia, YouTube, Yahoo! etc.).
- PHP is an open source project, which means that PHP is free to use and this has been a major factor in its popularity.

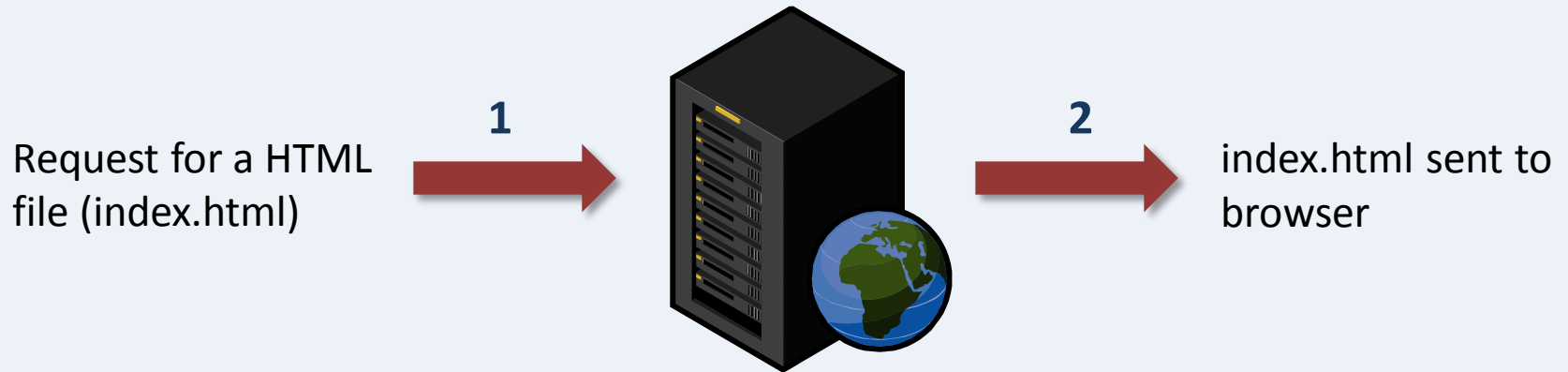
What does “PHP” stand for?

- PHP (version 1.0) was announced in 1995 by Rasmus Lerdorf.
- His original name for it was *Personal Home Page* Tools (PHP Tools) and it was written in the C programming language.
- Usage of PHP really took off after the release of version 3.0 in 1998.
- PHP version 7 is now in development (the PHP 6 development project has been abandoned) and most web servers currently run version 5.3 or 5.4.
- The original name has been changed and the scripting language is now called *PHP Hypertext Pre-processor*, a recursive acronym!

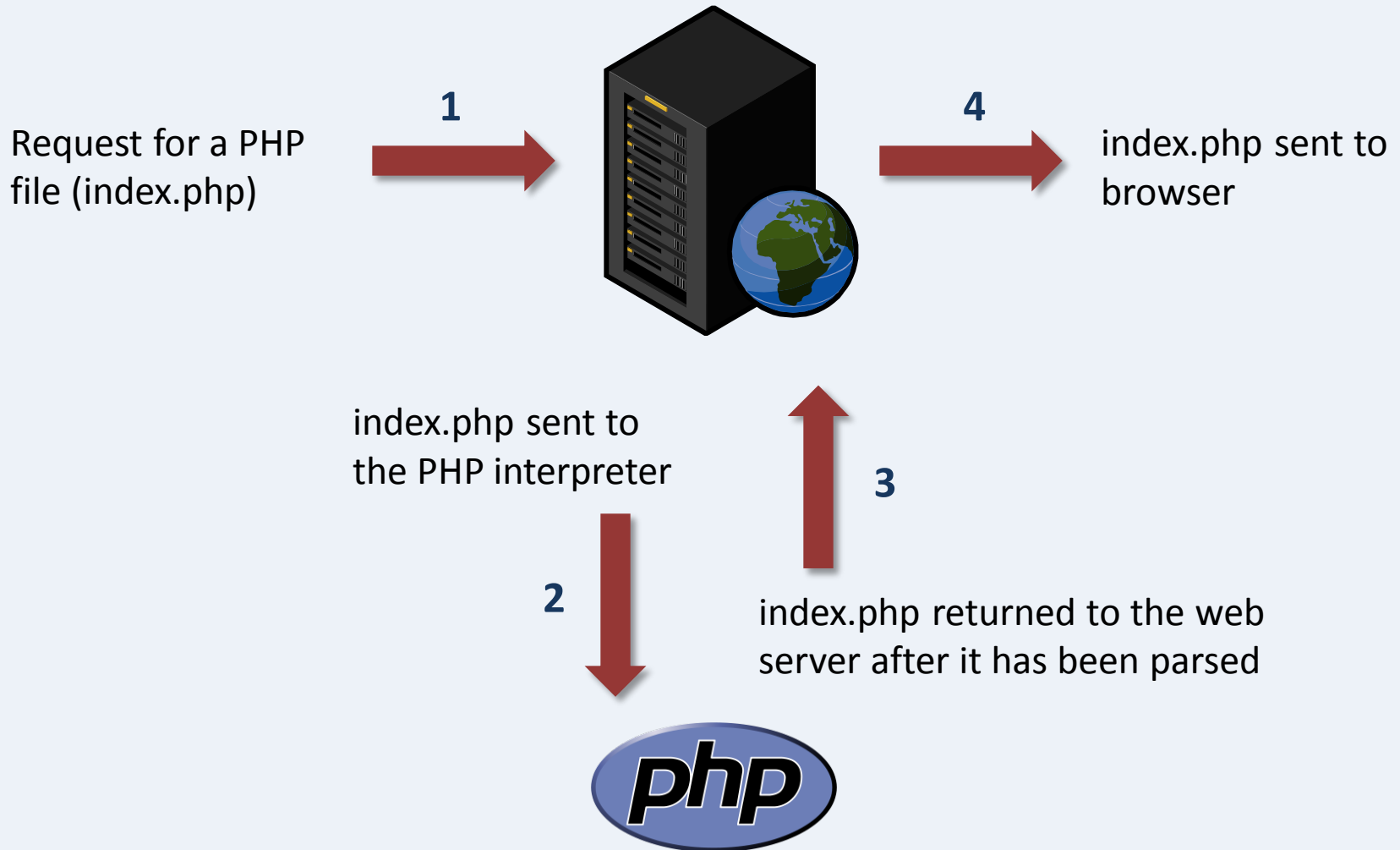
How does PHP work?

- PHP scripts are embedded within HTML markup.
- The file must be saved with a “.PHP” extension so that the server knows how to treat it.
- When a user requests a PHP page, the server passes the page to the PHP "parser", which runs the scripts and passes the compiled page back to the web server for delivery to the user.

The HTML server request



The PHP server request



How easy is PHP to learn?

- PHP is pretty easy to learn, it is logical and sequential.
- If you have done any programming at all, you'll pick it up very easily.
- If you've never done any programming, PHP is a good place to start.
- If JavaScript scares you, you'll find PHP makes you only slightly nervous.
- Here are a few examples...

What does PHP look like?

```
<html>
```

```
<head>
```

```
<title>PHP Test</title>
```

```
</head>
```

```
<body>
```

```
<?php echo "<p>Hello World</p>"; ?>
```

```
</body>
```

```
</html>
```

Before parsing

PHP scripts are always enclosed within special tags `<?php script ?>`

Each *statement* is terminated with a semi-colon ;

What does the user see?

```
<html>  
<head>  
<title>PHP Test</title>  
</head>  
<body>  
  
<p>Hello World</p>  
  
</body>  
</html>
```

After parsing

After *parsing*, the PHP script is replaced with the output. In this case, just an HTML paragraph.

Using variables for consistency

```
<?php $page_name = "PHP Test" ; ?>
<html>
<head>
<title><? echo $page_name; ?></title>
</head>

<h1><? echo $page_name; ?></ h1>

<body>
</body>
</html>
```

What the designer writes

Variables are just containers that hold bits of information.

Variable names in PHP always begin with a dollar sign \$

Using variables for consistency

```
<html>  
<head>  
<title>PHP Test</title>  
</head>
```

```
<h1>PHP Test</ h1>
```


```
<body>  
</body>  
</html>
```

What the user's browser sees

The `echo` function tells the parser to print (or echo) a string or the contents of a variable. In this case, the `$page_name` variable is replaced with its contents.

Making pages intelligent

```
<html>
<head>
<title>Today</title>
</head>
<body>
<?php
$today = date("l");
echo "<p>Today is $today</p>";
if ($today == "Saturday" OR $today == "Sunday"){
    echo "<p>Hooray! It's the weekend.</p>";
}else{
    echo "<p>Oh, it's just another work day.</p>";
}
?>
</body>
</html>
```



That's a lower-case "L"

This script finds out what day it is using the `date` function and then decides if it's a weekend. It then prints one message if it is a weekend and another if it's a weekday.

What the designer writes

If today is Thursday...

```
<html>
<head>
<title>Today</title>
</head>
<body>
<p>Today is Thursday</p>
<p>Oh, it's just another work day.</p>
</body>
</html>
```

Once the script has been parsed by the web server and passed to the browser, the html looks like this. The user is completely unaware of the process, all they see is the end result.

What the user's browser sees

PHP can do many things but its ability to build pages “on the fly” from component parts has to be the killer feature for web designers like us.

Site modularity

If you look at any well designed website, you should notice that each page contains a number of common elements.

The page on the left has 3 elements that are common to all pages in the same site, the masthead or branding, the sidebar and the footer.

Both the sidebar and the footer contain content that may need to be updated frequently. For example, site navigation will need to be updated if new pages are added to the site.

It can be difficult to keep all navigation links co-ordinated on a complex site because any one change needs to be made to all pages in the site, and there may be hundreds of pages.

MA Web Design & Content Planning

Study web design in London at the University of Greenwich

THE MA WEB DESIGN & CONTENT PLANNING PROGRAMME takes graduates from many disciplines and provides them with the hands-on skills necessary to plan, design, build and promote an effective website in relation to the needs of a business, profession, government office or organisation. The programme is also suitable for those who are considering a future in freelance web design. Applicants should have an interest in design and a working familiarity with the software employed in a modern office environment. See [Our students](#) for more information.

There are many web design courses in London but we are the only institution currently offering a post-graduate MA in this fast-evolving subject.

Learning web design

The design of excellent websites presents a notable intellectual challenge and on graduating from the programme, students will have the skills to design, publish and manage a corporate intranet or a public website. In addition, students will learn how to promote and generate revenue from public websites. The objective is to provide a balanced education in the three aspects of web design: technical, functional and aesthetic. See [Our philosophy](#) for more information.

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Need to know more?

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Site Navigation


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- Programme details
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- Our philosophy
- Design principles
- Our students
- Frequent questions
- Web design bookshelf
- Contact

Our Favourite Websites

- A List Apart
- Digital Web Magazine
- Smashing Magazine
- 456 Berkeley Street
- Think Vitamin
- Added Bytes
- i love typography
- Sitepoint
- zeldman.com

University of Greenwich

- UoG homepage
- School of Architecture & Construction
- Avery Hill Campus
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MA Web Design & Content Planning (full-time and part-time modes) now recruiting for September 2010.
[Find out more...](#)

Redesign this site

Select one of the colour options below to change the way this site looks. How does this work?



Frequently asked questions

- Will we learn how to use Dreamweaver?
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[More FAQs...](#)

Student opinion

Most students tell us that the programme has exceeded their expectations. See [Our students](#).

Latest forum topics

- ASP/ASP Redesign
- New 5 for 1 offer at Sit...
- SEO for Universal Search
- Smashing Magazine on the...
- WordPress
- WordPress & Hobbies
- Careers
- 53 CSS-based techniques
- Could this campaign see...
- Should the BBC dump half

[More forum topics...](#)

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Common elements

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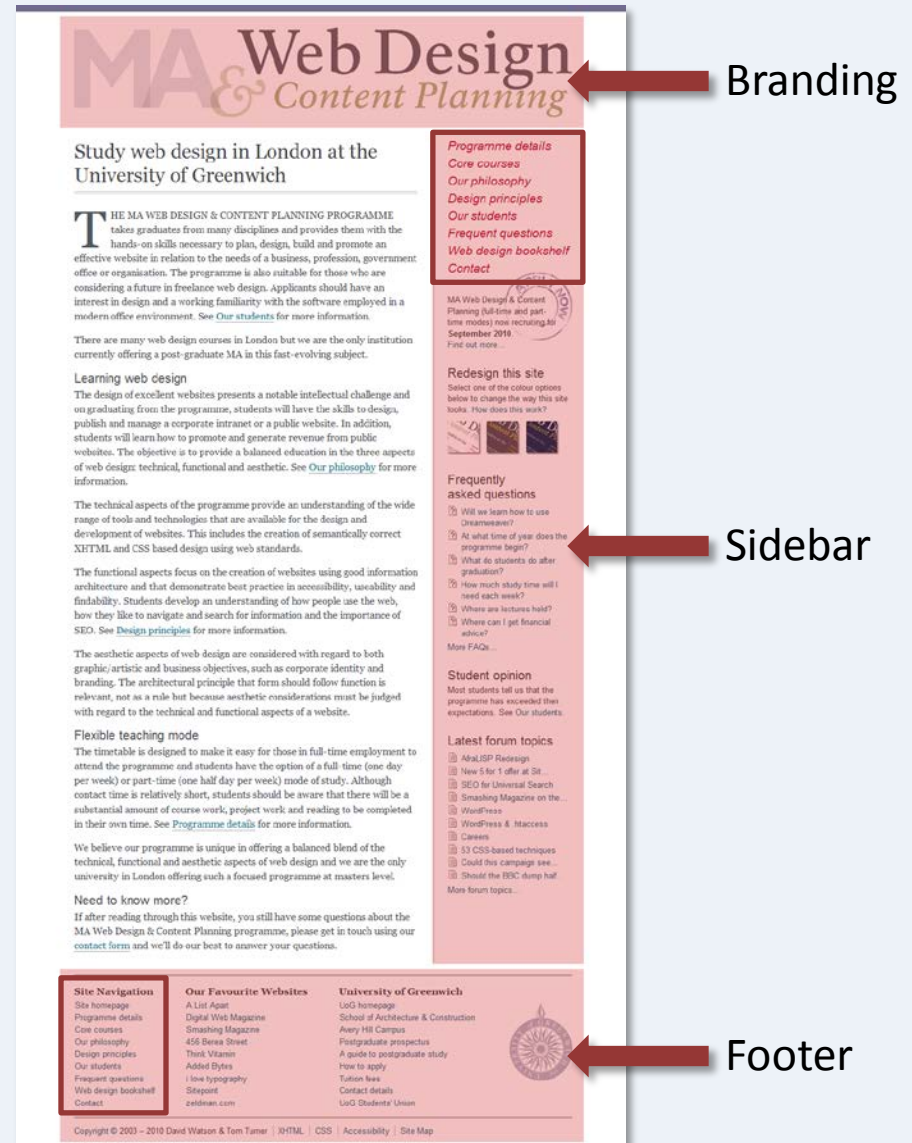
Branding

Sidebar

Footer

Site Modularity

Wouldn't it be great if we could update the navigation links on our site by editing a single file – just like we can change the style of our site by editing a single CSS file? With PHP we can do just that. All we need to do is to identify any common or repeating elements in our site design and put the markup for that element in a separate file. We then use PHP to bring all the different parts together to make up the whole page. The different component files are referred to as *server-side includes*.



Page schematic

For example, a code schematic for the page on the right might look something like this:

```
<html>
```

```
[HEAD SECTION]
```

```
<body>
```

```
[INCLUDE BRANDING HERE]
```

```
<div class="content">
```

```
[CONTENT GOES HERE]
```

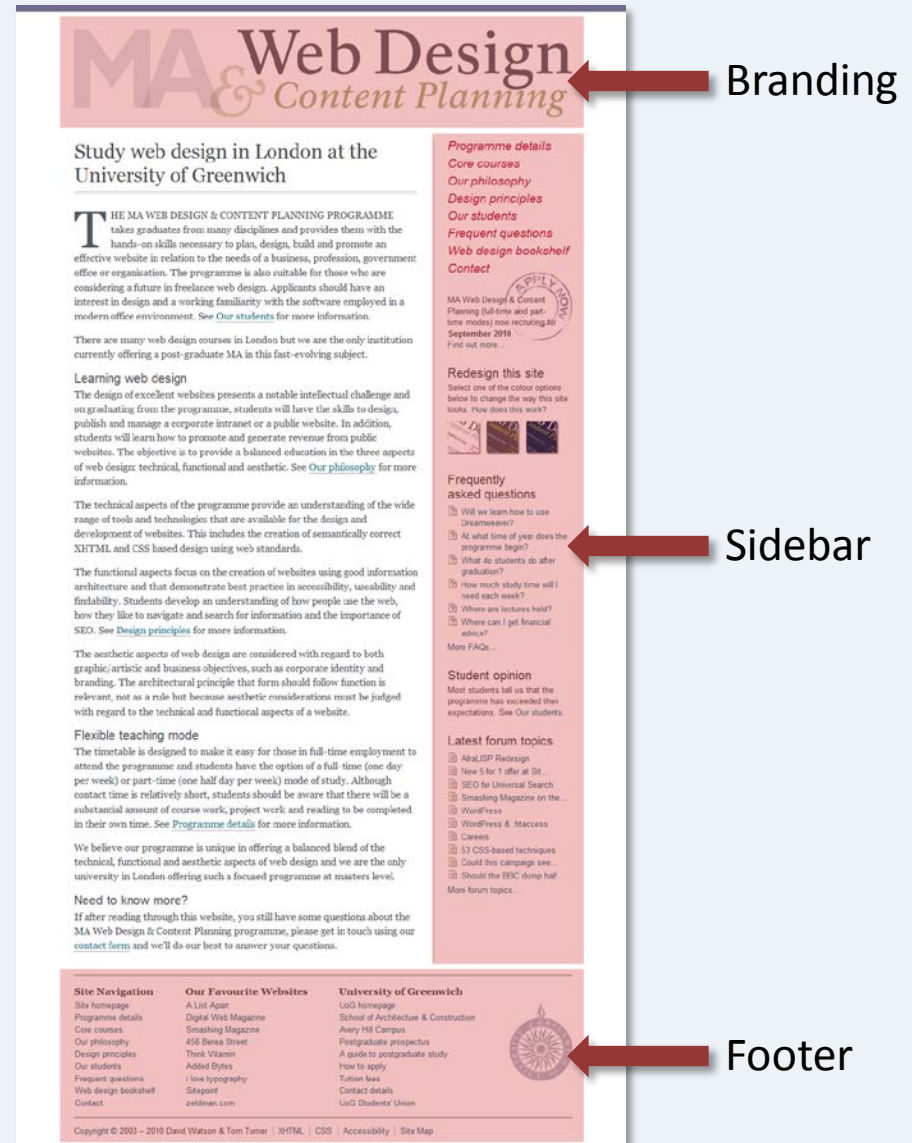
```
</div>
```

```
[INCLUDE SIDEBAR HERE]
```

```
[INCLUDE FOOTER HERE]
```

```
</body>
```

```
</html>
```



Includes

In reality, those include statements might look something like this:

```
<html>
[HEAD SECTION]
<body>
<?php include('branding.php');?>
<div class="content">
[CONTENT GOES HERE]
</div>
<?php include('sidebar.php');?>
<?php include('footer.php');?>
</body>
</html>
```

In each case, the server replaces the include statement with the contents of the file indicated.

[The include function](#)

The screenshot shows a website for 'MA Web Design & Content Planning' at the University of Greenwich. The page layout includes a main content area and a sidebar. Annotations with red arrows point to specific parts of the page:

- Branding:** Points to the 'MA Web Design & Content Planning' header.
- Sidebar:** Points to the right-hand column containing sections like 'Programme details', 'Redesign this site', 'Frequently asked questions', 'Student opinion', and 'Latest forum topics'.
- Footer:** Points to the bottom section containing 'Site Navigation', 'Our Favourite Websites', and 'University of Greenwich' information.

The website content includes a title 'Study web design in London at the University of Greenwich', an introductory paragraph about the programme, and several sections detailing the curriculum, learning objectives, and contact information. The footer contains copyright information: 'Copyright © 2003 - 2010 David Watson & Tom Tamer | XHTML | CSS | Accessibility | Site Map'.

Component files

The three files...

branding.php

sidebar.php

footer.php

...are known as *server-side includes* because they are added to the main page by the server before passing the completed page to the user's browser for display.

In reality, the page on the right is built from 4 files, a parent file (index.php) and the 3 includes.

The file extension for includes can be anything you like. You will often see...

branding.inc (not recommended)

...Or...

branding.inc.php

The screenshot shows a website for the MA Web Design & Content Planning programme at the University of Greenwich. The page is divided into several sections:

- Header:** MA Web Design & Content Planning
- Main Content:**
 - Study web design in London at the University of Greenwich**
 - THE MA WEB DESIGN & CONTENT PLANNING PROGRAMME** takes graduates from many disciplines and provides them with the hands-on skills necessary to plan, design, build and promote an effective website in relation to the needs of a business, profession, government office or organisation. The programme is also suitable for those who are considering a future in freelance web design. Applicants should have an interest in design and a working familiarity with the software employed in a modern office environment. See [Our students](#) for more information.
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- Right Sidebar:**
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 - ☐ Where can I get financial advice?[More FAQs...](#)
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 - ☐ Cawen
 - ☐ 53 CSS-based techniques
 - ☐ Could this campaign see...
 - ☐ Should the BBC dump half[More forum topics...](#)
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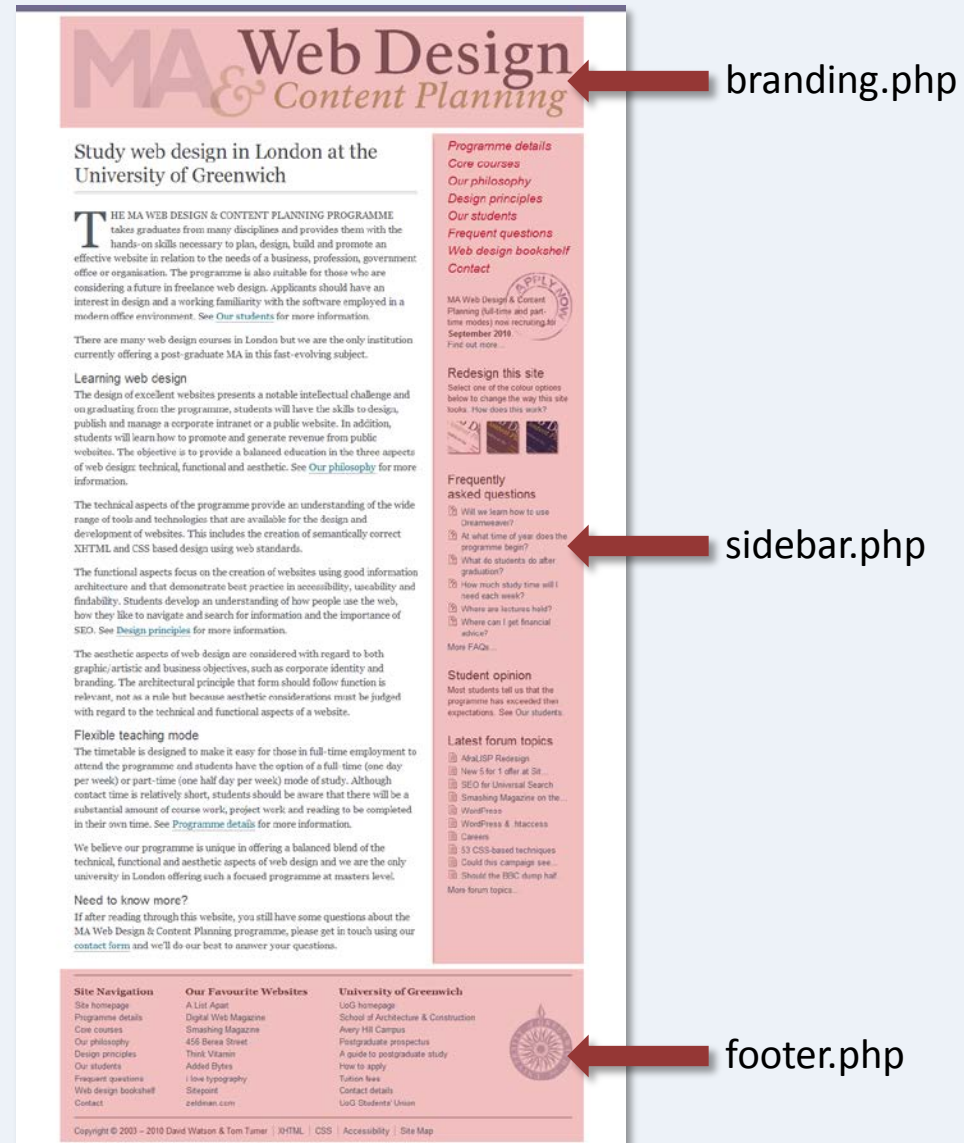
Include file naming

Most commonly, includes are just given a ".php" extension and then stored in a folder called "includes". As with other files that make up your site, it's important to give includes a logical name, usually this will describe what they are or what they do. In most cases, SEO is not a consideration because include files alone are not navigable. In fact, most designers will disallow indexing of the includes folder using the robots.txt file:

User-agent: *

Disallow: /includes/

Keep your includes away from prying eyes.



Server-side include paths

A relative path:

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

The problem with using relative paths for includes is that they change depending on where in the site the parent file is located.

An absolute path:

```
<? include('/home/mydomain/public_html/includes/footer.php'); ?>
```

PHP can see above the document root so, unlike HTML, PHP absolute paths begin at the topmost server level and not at the document root. Notice that the name of the domain is included in an absolute path.

A “portable” absolute path:

```
<? include($_SERVER['DOCUMENT_ROOT'] . '/includes/footer.php'); ?>
```

In order to make absolute paths “portable” (they work on different domains or if the domain changes), use the `$_SERVER['DOCUMENT_ROOT']` *superglobal* variable as in the example above.

Server-side include paths

The `$_SERVER['DOCUMENT_ROOT']` superglobal variable contains the path from the server root to the document root. This will be something like `"/home/mydomain/public_html"`. The period `"."` means append the text that follows, so the result is the full path from the server root to the specified file.

```
<? include (($_SERVER['DOCUMENT_ROOT'] . '/includes/footer.php')); ?>
```

You may sometimes see the `require` function being used in place of `include`:

```
<? require (($_SERVER['DOCUMENT_ROOT'] . '/includes/footer.php')); ?>
```

The `include` and `require` functions are very similar. The difference is that `require` will stop a script if the file is not found and `include` will continue – or attempt to continue.

An example of a page with includes

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>PHP Example</title>
<link href="/style/style.css" rel="stylesheet" media="screen" >
</head>

<body>
<div id="wrapper">
<?
include($_SERVER['DOCUMENT_ROOT'].'/includes/header.php');
include($_SERVER['DOCUMENT_ROOT'].'/includes/navigation.php');
?>

<div id="content">

<!-- Content Begin -->

<h1>PHP Example</h1>
<p>Some body text... </p>

<!-- Content End -->

</div>
<? include($_SERVER['DOCUMENT_ROOT'].'/includes/footer.php'); ?>
</div>
</body>
</html>
```

In this file, all the common site design elements (header, navigation and footer) are added as server-side includes using the PHP `include` function.

If you only ever learn to do one thing with PHP, learn to use server-side includes; it will revolutionise the way you build websites and you'll never regret it.

Managing repeated content

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>PHP Example</title>
<link href="/style/style.css" rel="stylesheet" media="screen" >
</head>

<body>
<div id="wrapper">
<?
include($_SERVER['DOCUMENT_ROOT'].'/includes/header.php');
include($_SERVER['DOCUMENT_ROOT'].'/includes/navigation.php');
?>

<div id="content">

<!-- Content Begin -->

<h1>PHP Example</h1>
<p>Some body text... </p>

<!-- Content End -->

</div>
<? include($_SERVER['DOCUMENT_ROOT'].'/includes/footer.php'); ?>
</div>
</body>
</html>
```

In this file, the text "PHP Example" used for the <title> and <h1> elements is the same and there could be other instances of the same text on this page. Managing content like this when consistency is important can be difficult.

Variables in PHP

Assigning a value to a variable

```
$this_page = "PHP Example";
```

Printing a variable

```
echo $this_page;
```

The output

PHP Example

Using variables for consistency

```
<?php $this_page = "PHP Example"; ?>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title> <? echo $this_page; ?> </title>
<link href="/style/style.css" rel="stylesheet" media="screen" >
</head>

<body>
<div id="wrapper">
<?
include($_SERVER['DOCUMENT_ROOT'].'/includes/header.php');
include($_SERVER['DOCUMENT_ROOT'].'/includes/navigation.php');
?>

<div id="content">

<!-- Content Begin -->

<h1> <? echo $this_page; ?> </h1>
<p>Some body text... </p>

<!-- Content End -->

</div>
<? include($_SERVER['DOCUMENT_ROOT'].'/includes/footer.php'); ?>
</div>
</body>
</html>
```

In this file, the repeated text elements are all managed using a PHP variable. The text is assigned to a variable at the top of the file and the echo function is used to print the value of the variable, whenever that text is required.

In this example, we've created a variable called `$this_page`. All variable names in PHP begin with the dollar sign “\$”.

The string value “PHP Example” is assigned to the variable.

Note that PHP statements can be placed anywhere in the file – they don't have to be inside the `<html>` element.

Keeping things up to date

There's no need to interrupt your New Year's Eve party in order to update the copyright notice on your website; just let PHP do it for you.

```
<footer>
```

```
    <p>Copyright David Watson <? date("Y"); ?></p>
```

```
</footer>
```

This footer will always display a copyright notice with the current year.

Do bear in mind that the PHP `date` function uses server time and not local time. If local time is important, consider using JavaScript instead.

[The date function](#)

A little bit of PHP goes a very long way – it makes the management of larger sites very much easier than HTML alone; and there's plenty more it can do, like smart navigation...

The included navigation

```
<ul id="navigation">  
<li><a href="php-example.php">PHP Example</a></li>  
<li><a href="another-link.php">Another Link</a></li>  
<li>...  
    ...</li>  
</ul>
```

This included markup will display the same navigation links on every page – great for ease of site management because if we want to add another link, we just add it to this include and it will display across the entire site.

However, what if we want the navigation to indicate which page we're on? We don't want a live link to the PHP Example page if we're already on that page. PHP to the rescue...

The included file is just another PHP file that contains a fragment of HTML.

Adding some intelligence

...We can get PHP to decide which page we're on and then add a link or not.

In our example page, we assigned the page title to a variable like this:

```
$this_page = "PHP Example";
```

We can use this information to add some intelligence to our navigation:

```
<ul id="navigation">
<?php
if ($this_page == "PHP Example") {
    echo "<li>PHP Example</li>";
}else{
    echo "<li><a href=\"php-example.php\">PHP Example</a></li>";
}
?>
<li><a href="another-link.php">Another Link</a></li>
<li>...
    ...</li>
</ul>
```

We're using an if else conditional statement to make a decision based on the value of a variable.

[The if control structure](#)

Site-wide intelligent navigation

```
<ul id="navigation">
<?php

if ($this_page=="PHP Example"){
    echo "<li>PHP Example</li>";
}else{
    echo "<li><a href=\"php-example.php\">PHP Example</a></li>";
}
if ($this_page=="Another Page"){
    echo "<li>Another Link</li>";
}else{
    echo "<li><a href=\"another-page.php\">Another Link</a></li>";
}
if ($this_page=="A Third Page"){
    echo "<li>A Third Link</li>";
}else{
    echo "<li><a href=\"a-third-page.php\">A Third Link</a></li>";
}
?>
</ul>
```

We can add the same conditional logic to all our links.

You may have noticed that PHP can be used to do many of the same things that JavaScript can do. However, using PHP is a more robust strategy because it doesn't rely on the client.

Random image display

```
<?php
```

```
$random_image = rand(1, 3);  
switch ($random_image) {  
    case "1":  
        $image = "image-01.jpg";  
        break;  
    case "2":  
        $image = "image-02.jpg";  
        break;  
    case "3":  
        $image = "image-03.jpg";  
}
```

```
?>
```

```
<img href="<? echo $image; ?>" width="25 height="25" alt="" />
```

This script decides which one of 3 images will be used and assigns the name to the `$image` variable. That variable is then used in the html `` tag to display it.

[The rand function](#)

Random image with alt text

```
<?php
```

```
$random_image = rand(1, 3);  
switch ($random_image) {  
    case "1":  
        $image = "image-01.jpg";  
        $alt = "A Blackbird";  
        break;  
    case "2":  
        $image = "image-02.jpg";  
        $alt = "A Blue Tit";  
        break;  
    case "3":  
        $image = "image-03.jpg";  
        $alt = "A Robin";
```

```
}
```

```
?>
```

In this script, we've added more intelligence by using a second variable to store the alt text. If our images are different sizes, we could also add variables for height and width.

No need to worry about mixing PHP in with our HTML because the browser receives only pure HTML once the file has been parsed by the server.

```
<img href="<? echo $image; ?>" width="25 height="25" alt="<? echo $alt; ?>" />
```

[The switch control structure](#)

Day of the week image

```
<?php
```

```
$today = date("l");
```

```
switch ($today) {
```

```
    case "Monday":
```

```
        $image = "image-01.jpg";
```

```
        $alt = "A Blackbird";
```

```
        break;
```

```
    case "Tuesday":
```

```
        $image = "image-02.jpg";
```

```
        $alt = "A Blue Tit";
```

```
        break;
```

```
    case "Wednesday":
```

```
        $image = "image-03.jpg";
```

```
        $alt = "A Robin";
```

```
    ...and so on for each day of the week...
```

```
}
```

```
?>
```

In this variation on the previous script, we can display a different image depending on the day of the week.

Now think about this...

We could use the same logic to add inserts and not just images, so the entire page could change depending on the day of the week or month of the year or...

```
<img href="<? echo $image; ?>" width="25 height="25" alt="<? echo $alt; ?>" />
```

Here are just a couple of
really useful things you
should know before you
start using PHP...

Using quotes

We can print text in PHP using the `echo` function like this:

```
echo "David likes PHP";
```

We can also print HTML using the same function:

```
echo "<p>David likes PHP</p>";
```

But a problem arises when the text or HTML we are printing includes quotes:

```
echo "<p class=\"content\">David likes PHP</p>";
```

This will cause an error because echo thinks the string ends after the second double quote. There are 2 ways around the problem:

Escape the double quotes:

```
echo "<p class=\"content\">David likes PHP</p>";
```

Or use single quotes:

```
echo '<p class="content">David likes PHP</p>';
```

Both the above options give the same result:

```
<p class="content">David likes PHP</p>
```

This is really important and is the cause of much anguish for the PHP beginner.

...and another thing about quotes

Variables in double quotes are evaluated but variables in single quotes are not.

So the following function:

```
$my_name = "David";  
echo "$my_name likes PHP"; # double quotes
```

Returns the following text:

David likes PHP

While this function:

```
$my_name = "David";  
echo '$my_name likes PHP'; # single quotes
```

Returns this text:

\$my_name likes PHP

[Single quotes vs Double quotes in PHP](#)

Comments in PHP scripts

```
<?php
```

```
# assign the name of the day to a variable
```

```
$today = date(l);
```

```
# check the value of the variable against a number of options
```

```
switch ($today) {
```

```
    # if today is Monday, assign the image and alt variables
```

```
    case "Monday":
```

```
        $image = "image-01.jpg";
```

```
        $alt = "A Blackbird";
```

```
        break;
```

```
    # if today is Tuesday, assign the image and alt variables
```

```
    case "Tuesday":
```

```
        $image = "image-02.jpg";
```

```
        $alt = "A Blue Tit";
```

```
        break;
```

It's always a good idea to add comments to your scripts so that you can see what it's doing – or what it's supposed to do. Single line comments begin with the hash symbol (#).

More comments

```
<?php
```

```
// assign the name of the day to a variable
```

```
$today = date(l);
```

```
/* use a switch to check the value of the variable against  
a number of options, one for each day of the week */
```

```
switch ($today) {
```

```
    // if today is Monday
```

```
    case "Monday":
```

```
        $image = "image-01.jpg";
```

```
        $alt = "A Blackbird";
```

```
        break;
```

```
    // if today is Tuesday
```

```
    case "Tuesday":
```

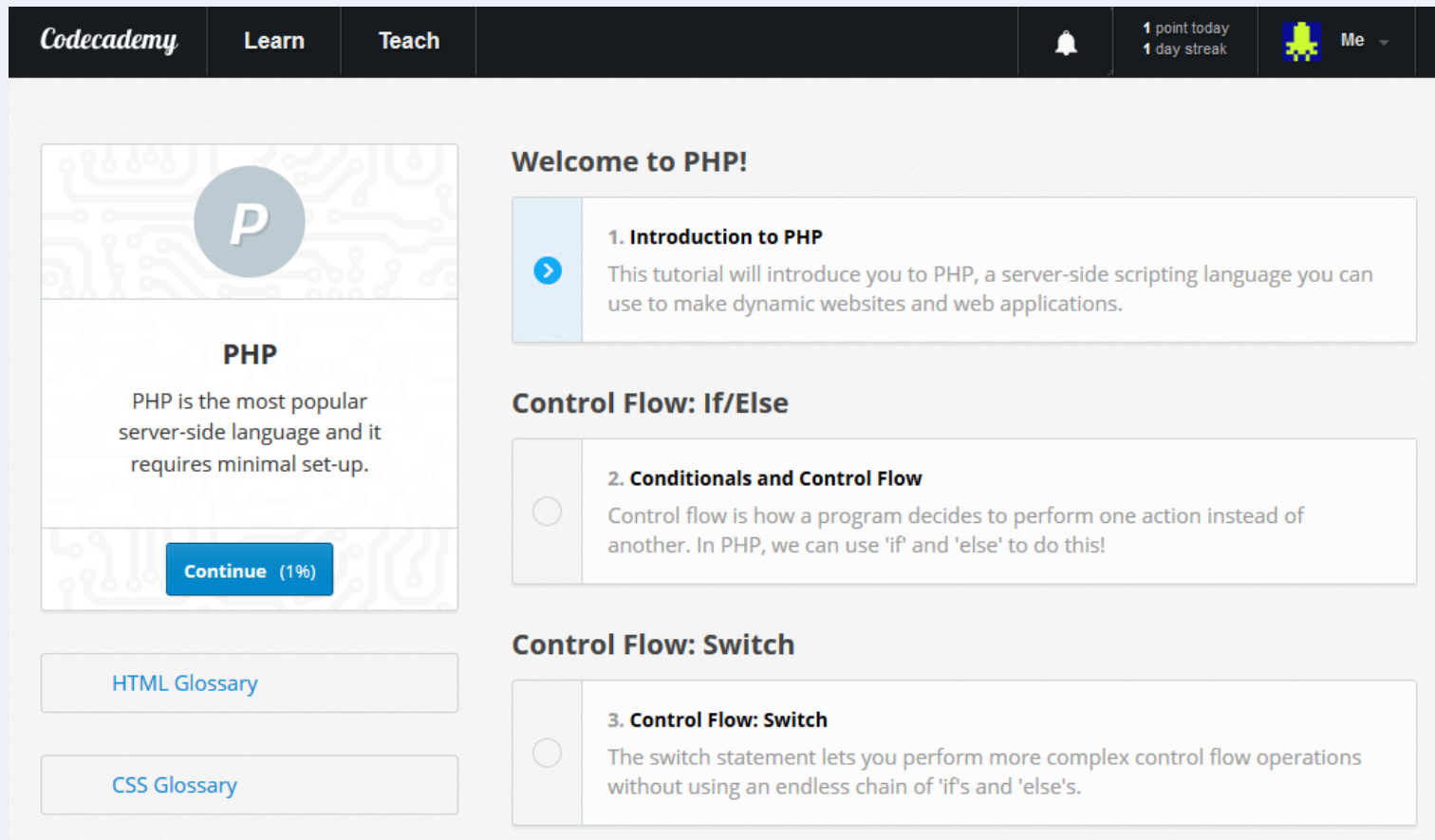
```
        $image = "image-02.jpg";
```

```
        $alt = "A Blue Tit";
```

```
        break;
```

PHP is extraordinarily well endowed when it comes to commenting. In addition to the hash symbol (`#`), single line comments can be made with a double-slash (`//`). Multi-line comments use the same syntax as CSS; start with `/*` and end with `*/`.

Learning PHP



The screenshot shows the Codecademy website's PHP tutorial page. The top navigation bar includes the Codecademy logo, 'Learn' and 'Teach' tabs, a notification bell, a streak counter showing '1 point today' and '1 day streak', and a user profile icon labeled 'Me'. The main content area is divided into two columns. The left column features a large 'P' in a circle, the title 'PHP', a description 'PHP is the most popular server-side language and it requires minimal set-up.', a 'Continue (1%)' button, and links to 'HTML Glossary' and 'CSS Glossary'. The right column contains a 'Welcome to PHP!' section with a blue arrow icon and text about the tutorial's purpose. Below this are two sections for 'Control Flow: If/Else' and 'Control Flow: Switch', each with a radio button icon and descriptive text. The 'Control Flow: Switch' section is the third item in a list, indicated by a '3.'.

Codecademy Learn Teach

1 point today
1 day streak

Me

PHP

PHP is the most popular server-side language and it requires minimal set-up.

Continue (1%)

[HTML Glossary](#)

[CSS Glossary](#)

Welcome to PHP!

1. Introduction to PHP

This tutorial will introduce you to PHP, a server-side scripting language you can use to make dynamic websites and web applications.

Control Flow: If/Else

2. Conditionals and Control Flow

Control flow is how a program decides to perform one action instead of another. In PHP, we can use 'if' and 'else' to do this!

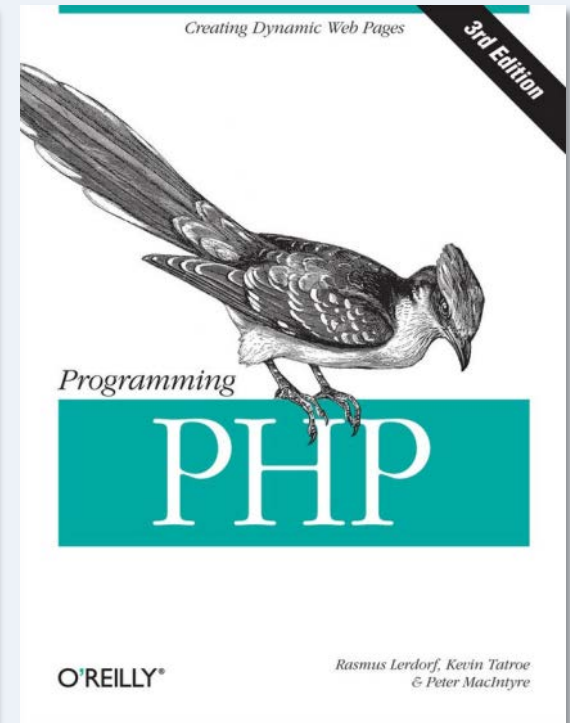
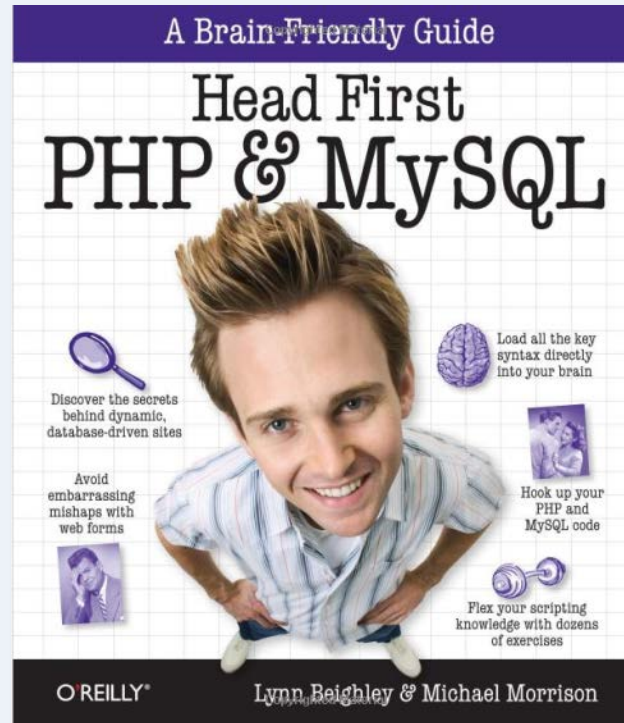
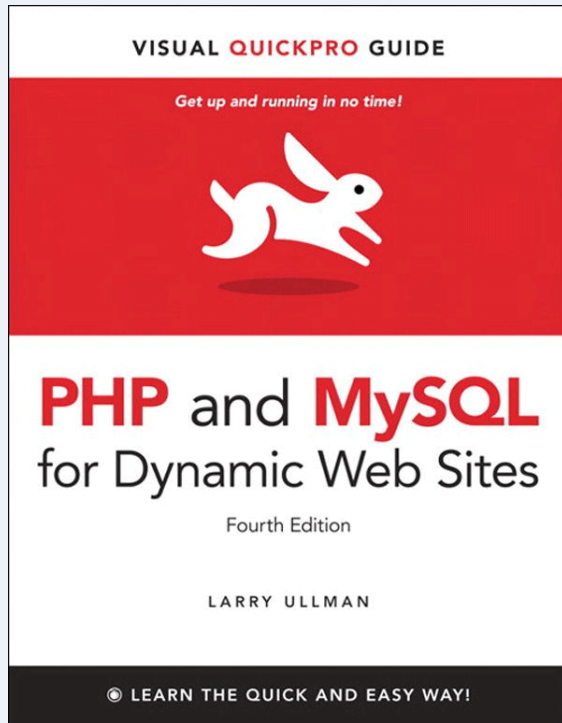
Control Flow: Switch

3. Control Flow: Switch

The switch statement lets you perform more complex control flow operations without using an endless chain of 'if's and 'else's'.

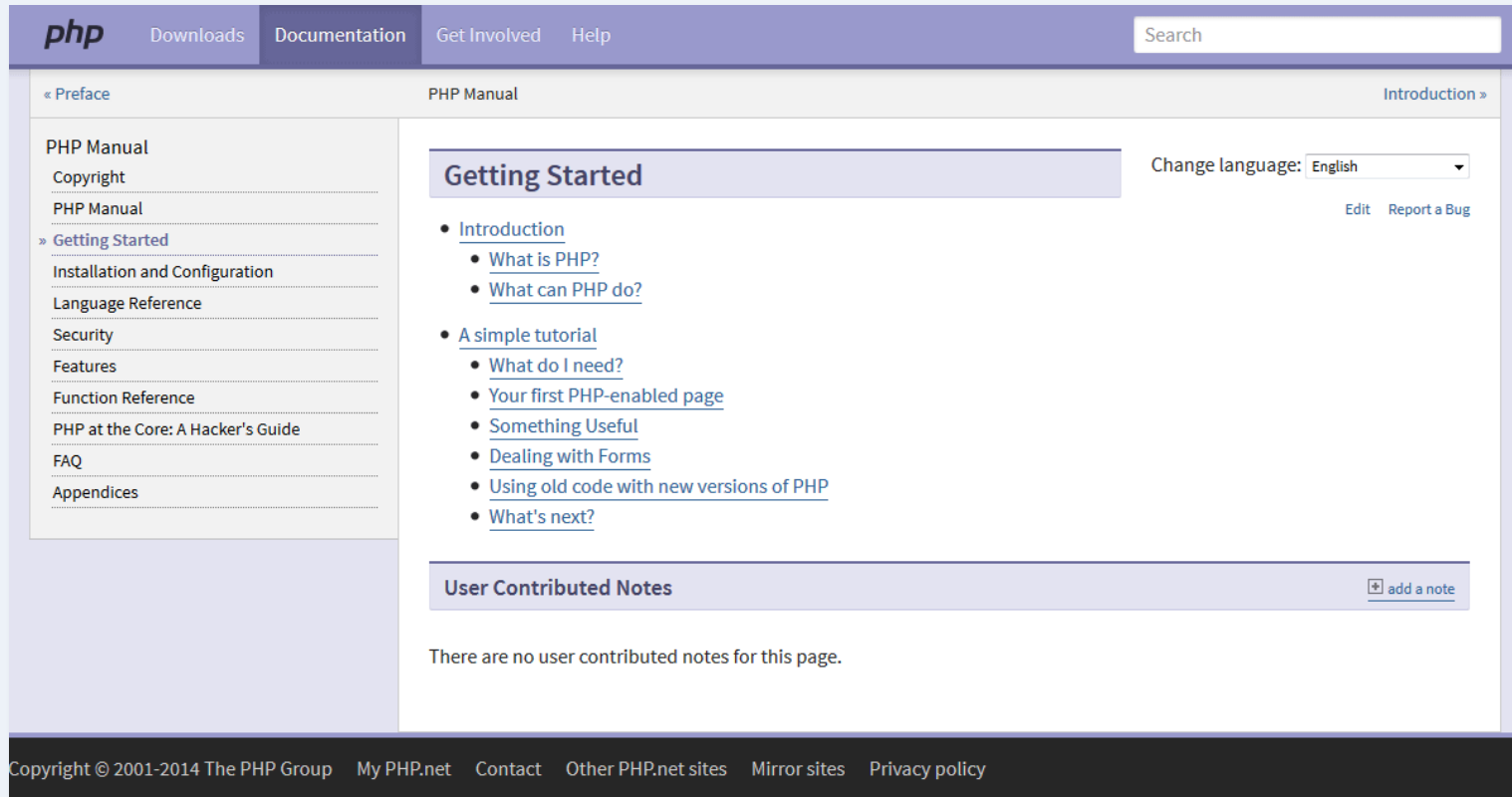
There are lots of online tutorials available for PHP, including some useful YouTube videos but the [Codecademy Introduction to PHP](#) is a particularly good place to begin..

Recommended books



The Larry Ullman book is designed for web designers who want to build dynamic websites and as such is a good match for us. Some will find the Head First book a little easier to get into if you're new to programming and the O'Reilly book gives a more structured approach for those who want to become more expert with PHP. All are available from the library.

The PHP Manual



There are many online references for PHP but the PHP Manual is the one definitive reference, written by the makers of PHP; it includes a useful [Getting Started](#) section.

```
<?php echo "$end" ?>
```