



Professional Diploma in Commercial Web Design

Lesson 1

PHP

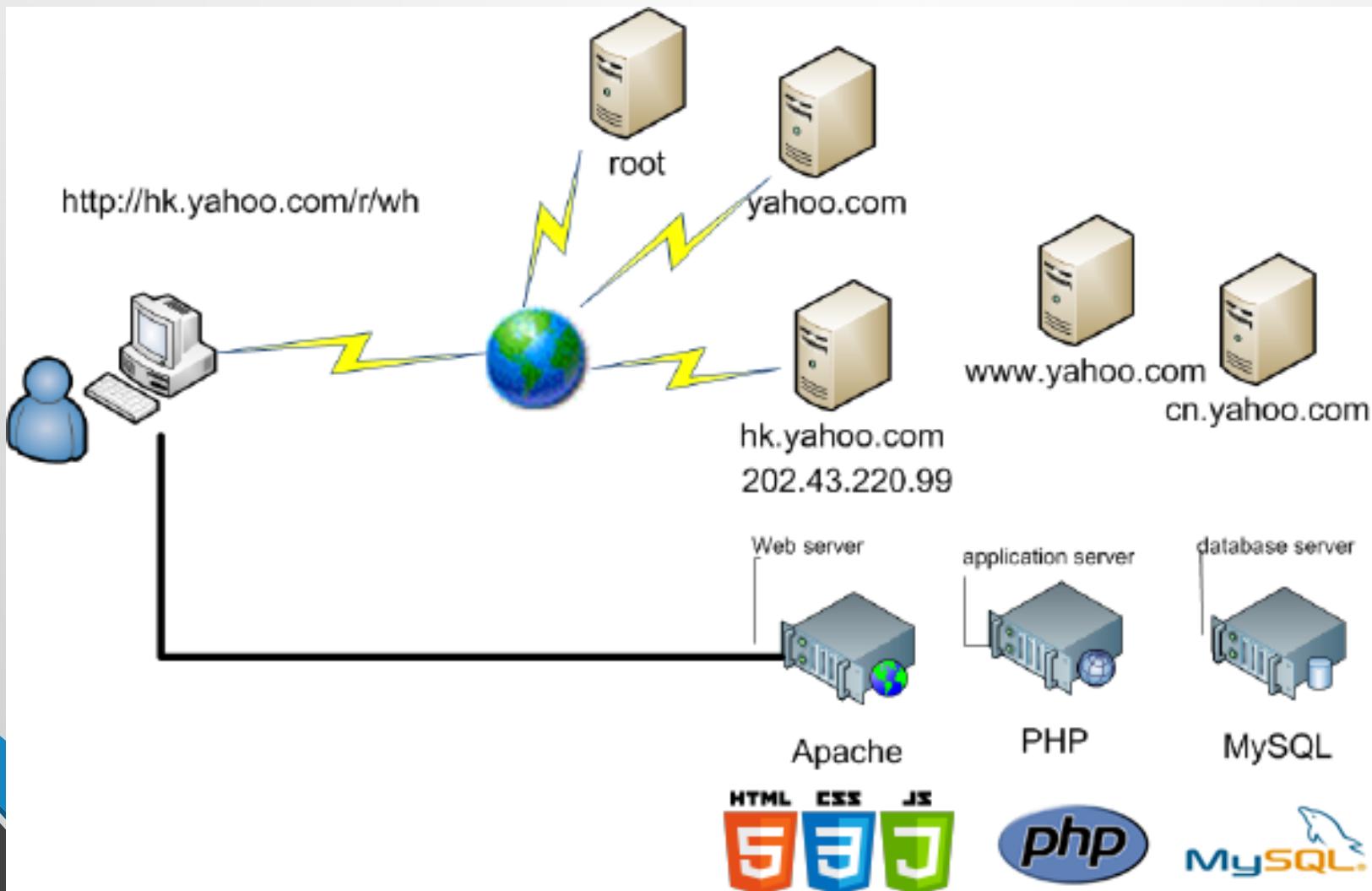
By Raymond Tsang in Fevaworks

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Overview

- What is PHP
- History
- Who is using PHP
- Platform
- What is PHP for
- Why do we use PHP
- Strengths

LAMP



1XX Informational	
100	Continue
101	Switching Protocols
102	Processing

2XX Success	
200	OK
201	Created
202	Accepted
203	Non-authoritative Information
204	No Content
205	Reset Content
206	Partial Content
207	Multi-Status
208	Already Reported
226	IM Used

3XX Redirection	
300	Multiple Choices
301	Moved Permanently
302	Found
303	See Other
304	Not Modified
305	Use Proxy

4XX Client Error Continued	
409	Conflict
410	Gone
411	Length Required
412	Precondition Failed
413	Payload Too Large
414	Request-URI Too Long
415	Unsupported Media Type
416	Requested Range Not Satisfiable
417	Expectation Failed
418	I'm a teapot
421	Misdirected Request
422	Unprocessable Entity
423	Locked
424	Failed Dependency
426	Upgrade Required
428	Precondition Required
429	Too Many Requests
431	Request Header Fields Too Large
444	Connection Closed Without Response
451	Unavailable For Legal Reasons
499	Client Closed Request

5XX Server Error	

3XX Redirectional

300	Multiple Choices
301	Moved Permanently
302	Found
303	See Other
304	Not Modified
305	Use Proxy
307	Temporary Redirect
308	Permanent Redirect

4XX Client Error

400	Bad Request
401	Unauthorized
402	Payment Required
403	Forbidden
404	Not Found
405	Method Not Allowed
406	Not Acceptable
407	Proxy Authentication Required
408	Request Timeout

428 Precondition Required

429	Too Many Requests
431	Request Header Fields Too Large
444	Connection Closed Without Response
451	Unavailable For Legal Reasons
499	Client Closed Request

5XX Server Error

500	Internal Server Error
501	Not Implemented
502	Bad Gateway
503	Service Unavailable
504	Gateway Timeout
505	HTTP Version Not Supported
506	Variant Also Negotiates
507	Insufficient Storage
508	Loop Detected
510	Not Extended
511	Network Authentication Required
599	Network Connect Timeout Error

H T T P S T A T U S C O D E S

When a browser requests a service from a web server, an error may occur.

This is a list of HTTP status messages that might be returned.

What is PHP



What is PHP

- Widely-used general-purpose scripting language that is especially suited for Web development and can be embedded into HTML.
- A server side scripting language designed for creating dynamic web pages
- Written in C
- Open Source and Freeware
- Official Name: PHP: Hypertext Preprocessor
- Stand for Personal Home Page

History

- Conceived in 1994 by Rasmus Lerdorf for simple set of Perl scripts for tracking accesses to his online resume
- Personal Home Page / Forms Interpreter 2.0 in 1997
- PHP Hypertext Preprocessor 3.0 in 1998
- Rewrite the core engine for PHP 4.0
- PHP 5.6 then 7.0. No PHP 6.0
- Newest version is PHP 7.x now
- <http://php.net/manual/en/history.php.php>

What's new in PHP5

- Real Object-oriented programming (OO)
- Exceptions – procedures that happen when something goes wrong with unexpected error.
- Try/Catch/Throw
- Namespace
- Improved MySQL Extension

What's new in PHP6

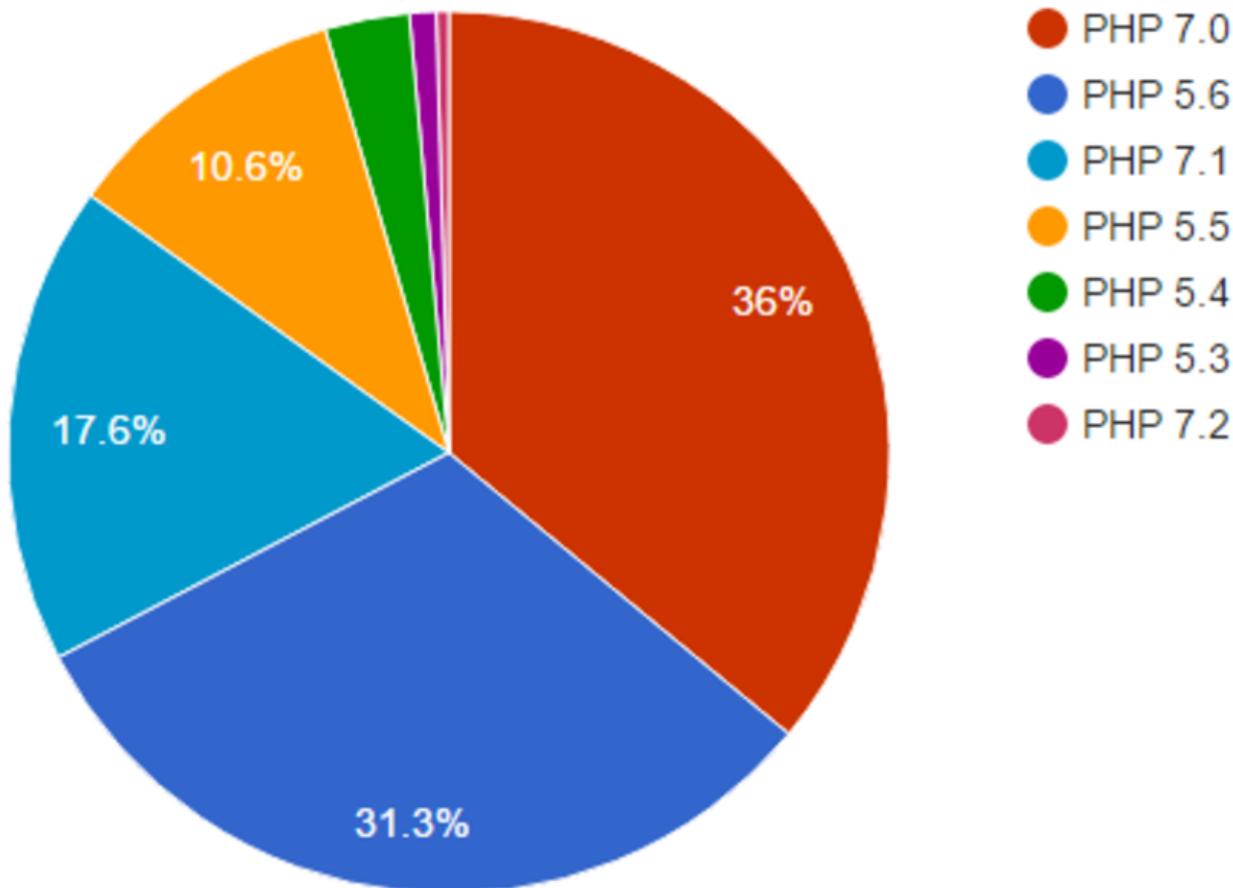
- Planned to support unicode in code
- The project closed down because of the bad performance.

What's new in PHP7

- Up to 100% faster without rewrite PHP
- Constructors with name same as class
- Change in password_hash() function
- Calling static methods
- <https://codingsec.net/2016/05/php-cheatsheet-upgrade-php7-5/>

PHP usage statistics

PHP Versions Grouped 2017-05



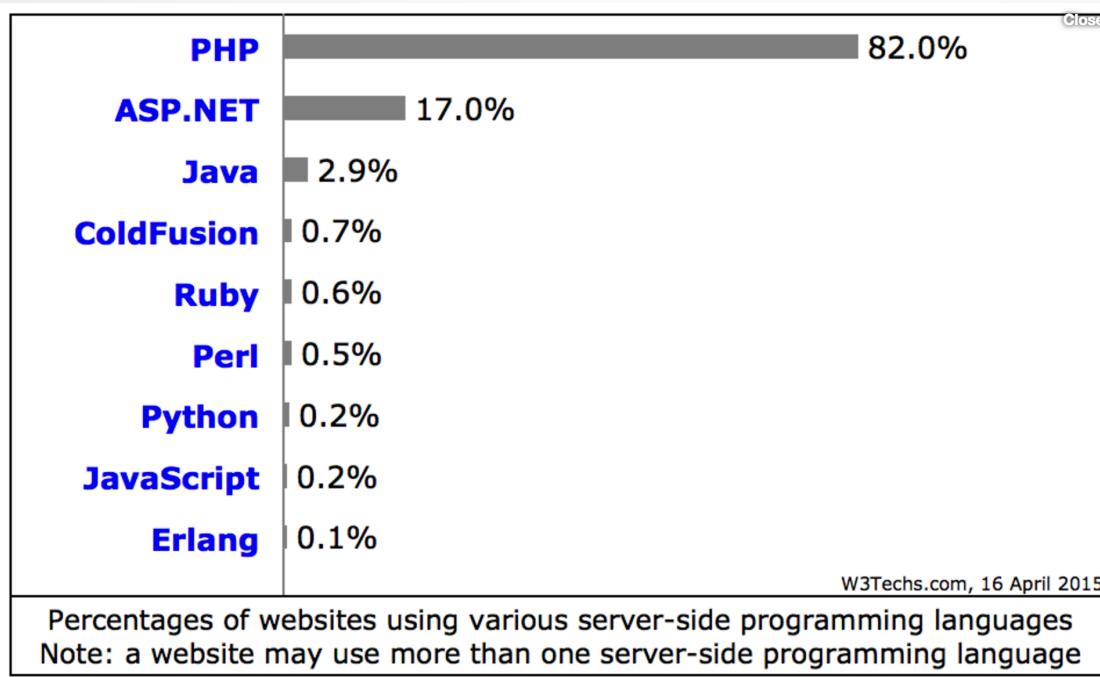
Who is using PHP

- Yahoo! – 3.5 billion/day
- Flickr, Facebook, Friendster, Second life, iStockPhoto, Tumblr, Mailchimp, SourceForge, Alibaba, Baidu, Hong Kong Art Festival
- Magento, WordPress, Joomla, Drupal, Discus



PHP usage statistics

- <https://w3techs.com/>
- <https://wappalyzer.com/applications/php>
- <http://www.php.net/usage.php>
- <https://www.google.com.hk/trends/explore#q=php>
- <http://trends.builtwith.com/framework/PHP>



Who is using Zend



Scales
using the
Zend Performance
Suite



Develop & Scales
with
Zend



Develops
using the
Zend Studio

Onvista.

Scales
using the
Zend Performance
Suite



Develops
using the
Zend Studio



Develops
using the
Zend Studio

Lucent Technologies
Bell Labs Innovations



Protects
using the
Zend Encoder



Develops
using the
Zend Studio



Protects
using the
Zend Encoder

McGraw-Hill

Develops
using the
Zend Studio



Scales
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Zend Performance
Suite

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Zend's premier web
development partner
scales with Zend
Performance Suite

AVAYA

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Zend Studio

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Scales
using the
Zend Performance
Suite

Platform

- Compatible for Linux, Mac OS X and Windows
- Android
- Best work with Apache, Ngnix
- Also work on IIS



Using PHP for

- User authentication and personalization
- Shopping carts
- Content management systems
- Web-based email
- Mailing list managers
- Web forums
- Document generation

Why do we use PHP

- Similar to html
- Script – no need to compile
- Using programming syntax

Strengths

- High performance
- Interfaces to many different database systems
- Built-in libraries for many common web tasks
- Many free out-of-the-box system ready to use
- Low cost 
- Ease of learning and use
- Portability

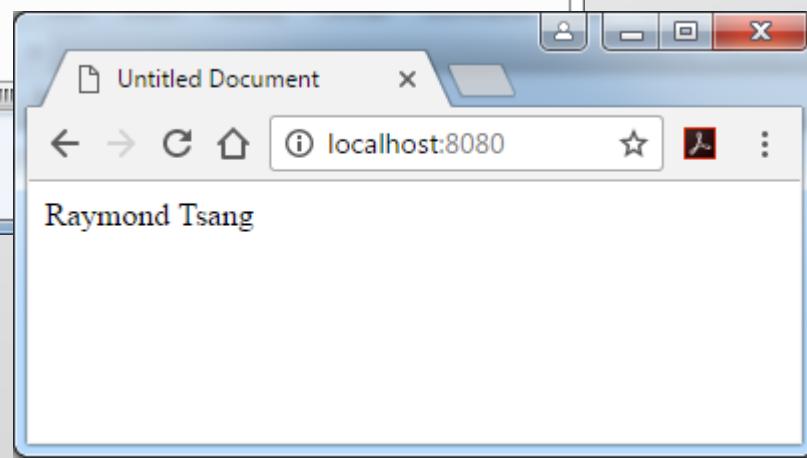
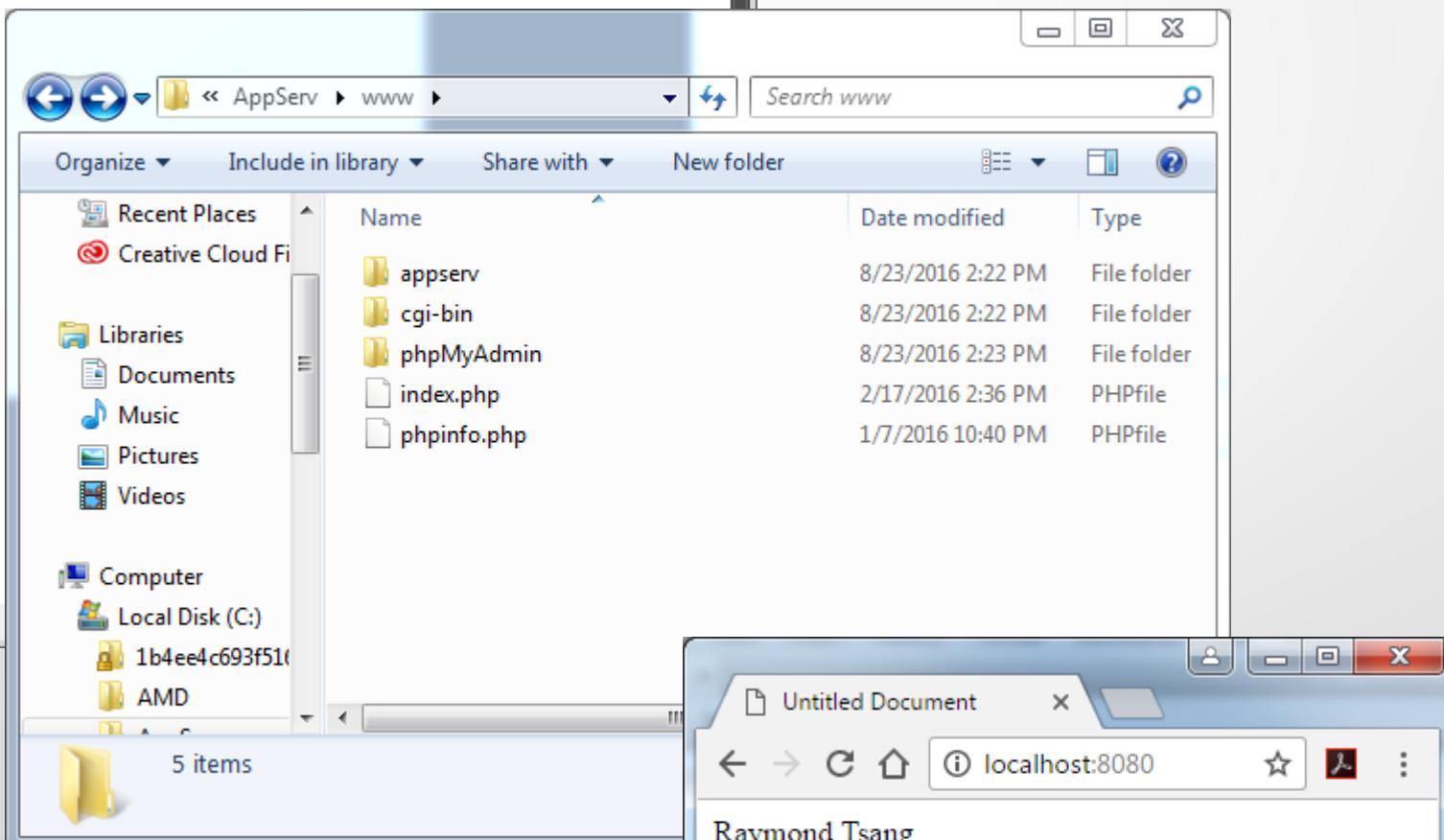
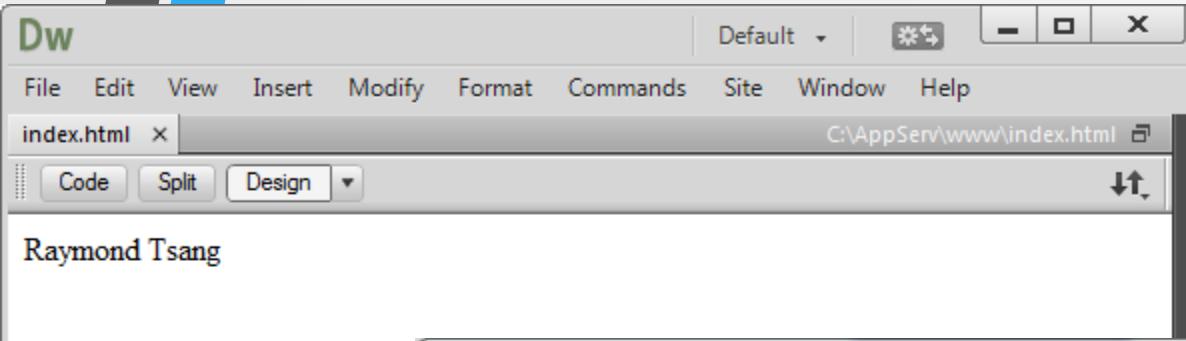


Overview

- How to upload
- `phpinfo();`
- `echo`
- Function
- Variables
- Operands
- pre- & post-increment

First html

- Open Dreamweaver -> New Document -> HTML
- Type your name
- Save it to C:\AppServ\www
- Save as index.html
- <http://localhost:8080/index.html>



First PHP page

- Dreamweaver -> File -> new -> Dynamic page -> PHP

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

phpinfo();

- Outputs information about PHP's configuration
- Commonly used to check configuration settings
- Usually used for testing the PHP engine on the web server

PHP style

- <?php info(); ?> - short style
- <?php info(); ?> - XML style
- <script Language='php'> info(); </script> - script style
- <% info(); %> - ASP style

Statements

- Tell the PHP interpreter what to do
- Ends with a semicolon; 
- Without a semicolon, you will see an error page indicating the line with an error



;



```
8 ▼ <body>
...
9 ▼ <?php
10      //cookie1.php
11      setcookie("username","username", time() +36000)
12      echo $_COOKIE["username"];
13
14 ?>
15
```

White space

- White space include new line, spaces, tabs
- Browsers ignore white spaces in both html and PHP
- Encourage to use white space for readability – usually one statement per line

Comments

- Notes for reading the code
- Usually used to explain the purpose of the script, when it was last modified
- `/* Author:Ray */` - multiline comment
- `// Author:Ray` - single line comment (programming style)
- `# Author:Ray` - single line comment (shell style)

Echo

- Outputs all parameters
- echo "Hello, this is my first php page";
- echo.php

Print

- Similar to echo, it also outputs all parameters.
- Print returns a value of 1 and has precedence so that it can be used in the middle of a longer expression. However, the need for this is rare, and the fact that it returns a value makes it ever so slightly slower than echo. So we use echo.
- Using with <<<, it prints all html
- print.php

html in PHP

- Nothing to change for the html code
- Encapsulate PHP code before and after html code
- `echo "Hello
";`

Classwork

- Open a new php file and save as "birthday.php"
- Echo your name in PHP
- Browse <http://localhost:8080/birthday.php>

Install PHP + MySQL

- Download XAMPP from <http://www.xampp.org>
- Install to c:\(Windows) or /Application/(MAC)
- Open XAMPP Control Panel, start Apache, MySQL
- Test Apache <http://localhost>
- Test PHP. Save your php files under c:\xampp\htdocs\ (Windows)
/Application/XAMPP/htdocs/ (MAC)
- Test your web page: <http://localhost/filename.php>



Download XAMPP

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XAMPP Apache + MariaDB + PHP + Perl

What is XAMPP?

XAMPP is the most popular PHP development environment

XAMPP is a completely free, easy to install Apache distribution containing MariaDB, PHP, and Perl. The XAMPP open source package has been set up to be incredibly easy to install and to

Download



Download
Click here for other versions

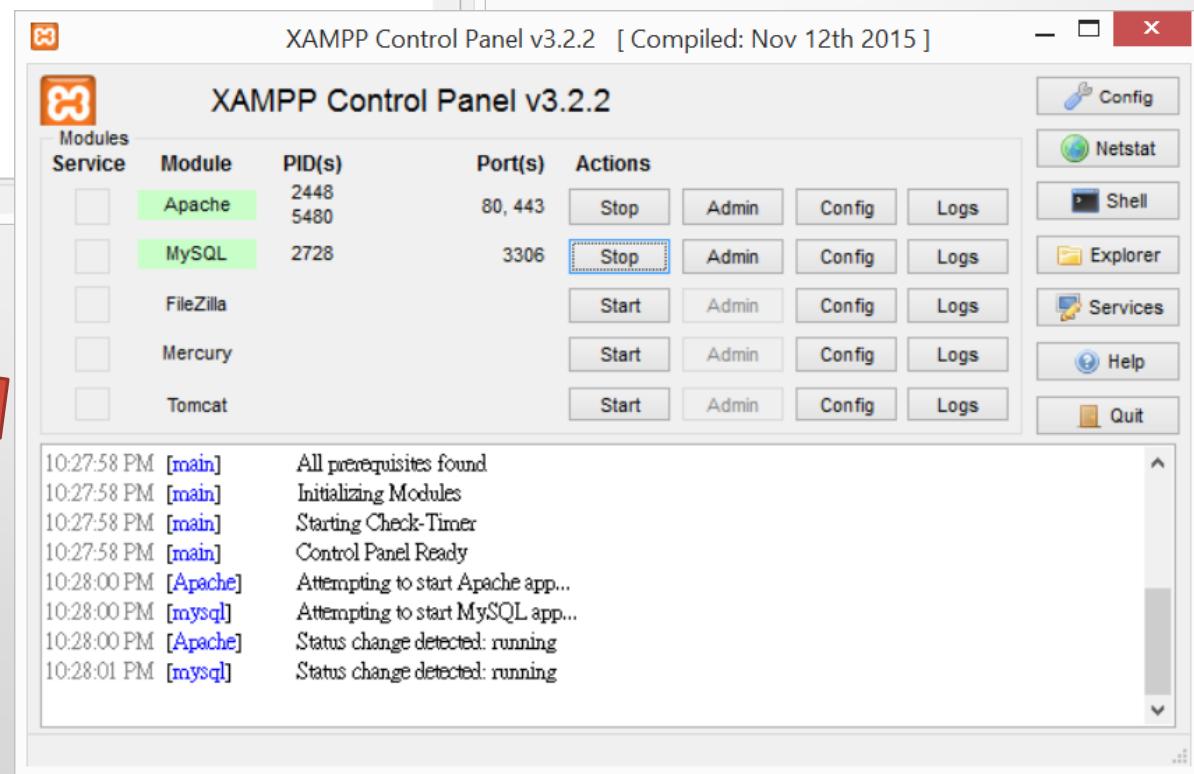
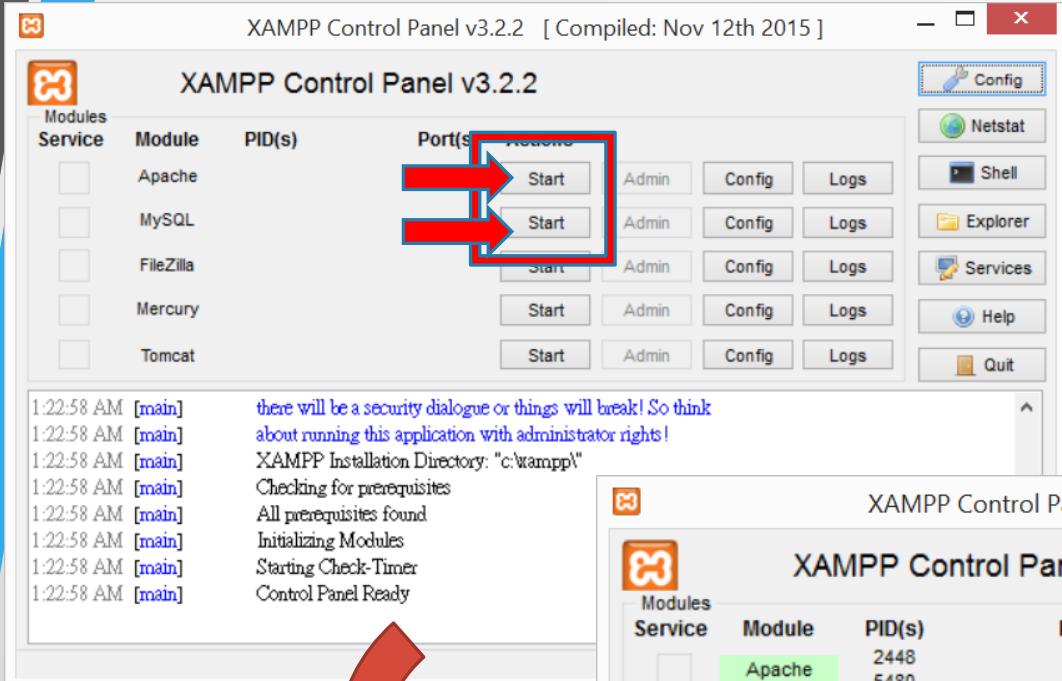
XAMPP for Windows
v5.6.30 (PHP 5.6.30)

XAMPP for Linux
v5.6.30 (PHP 5.6.30)

XAMPP for OS X
v5.6.30 (PHP 5.6.30)



Interested in XAMPP Docker Container?



Functions

- echo date("H:i, jS F");
- echo date("l dS \of F Y h:i:s A");
- Case sensitive
- date.php
- gmdate('H:i:s', time()+8*3600);
- date_default_timezone_set('Asia/Hong_Kong');
- <http://hk2.php.net/manual/en/function.date.php>

Classwork

- Open birthday.php
- Echo your birthday as **YYYYMMDD** format.
- EG. (31-Dec-2000) echo "20001231";
- Echo today date as YYYYMMDD format
- EG. echo date("xxx");

Functions

- Find an integer of a decimal number
 - echo round(3.4);
 - echo round(3.5);
 - echo floor(3.4);
 - echo floor(3.5);
 - roundFloor.php
-
- Q: How to find the next integer value?



Variable I

- Each variable start with a dollar sign (\$)
- PHP is case sensitive \$car<>\$Car
- Hello.php



Variable II

- "\ is used for special command or character
- "\n " is next line in email, same as
 in html
- "\r " = carriage return
- "\t " = tab
- "\\$ " is printing the \$ sign
- "\\ " is printing the \ sign
- "\? " = ?

Variable III

- Examples of valid variables names are: \$total, \$_cell1, \$length_of_string
- Examples of invalid variables names are: \$1_total, \$2_length, \$!total
- \$oneTwoThreeFour
- \$thisIsVariable

Variable Types

- Integer – whole number, "1"
- Double – real number, "1.00"
- Character – "A", "B" .. "z"
- String – strings of characters, "Hello"
- Boolean – true or false, 1 or 0
- Array – multiple data types items, "\$car[1]", array.php
- Object – instances of classes, "\$car->tire=good"

Classwork

- Open birthday.php
- Store your name in variable **\$name**
- Store your birth year in **\$birthday**
- Store today date in **\$today**
- Echo the value in the variables so people can see your name and date of birth in the web page.

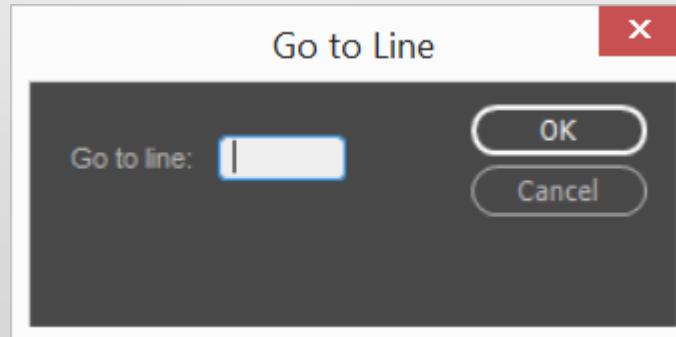
Operands I

- +, -, *, /, %
- \$a=7; \$b=3;
- \$sum=\$a+\$b;
- \$difference=\$a-\$b;
- \$product=\$a*\$b;
- \$quotient=\$a/\$b;
- \$mod=\$a%\$b;
- operand.php

Errors



- Errors will be shown in the page with line number
- Ctrl+G to go the line



Debug

- Ctrl+backspace - Delete a word on the left
- Ctrl+Delete - Delete a word on the right

Exercise

- Find out your age
- Age = this year – your birth year
- Use date function to find out this year in the format (yyyy). EG. 2017
- Calculate your age.
- Display your age.

$$\begin{array}{r} 2017 \\ -2000 \\ \hline 17 \end{array}$$

More Exercise

- Open birthday.php
- Find your age by `$age=$today-$birthday`
- How to remove the last four digit?
- How to cut off the decimal places?

$$\begin{array}{r} 20170131 \\ -20001231 \\ \hline 168900 \end{array}$$

Best hosting server

- <http://www.zaturday.com>

Sites (eng)

- <http://www.php.net>
- <http://www.phpbuilder.com>
- <http://www.phpfreaks.com/>
- <http://phpnuke.org>
- <http://www.phpbuddy.com>
- <http://www.php-security.org/>

Sites (eng) 2

- <http://www.devshed.com>
- <http://px.sklar.com/>
- <http://www.phpgroupware.org>
- <http://www.phpclasses.org>

Sites (eng) 3

- <https://github.com/ziadoz/awesome-php>
- <http://www.phptherightway.com/>
- <https://packagist.org/>

Sites (中文)

- <http://www.phpini.com/>
- <http://www.csie.sju.edu.tw/cm/course/phpteach.htm>
- <http://www.twhappy.com/index.php?action=blog&category=6>

Download Server

- <http://www.apache.org/>
- <http://www.php.net>
- <http://www.mysql.com/>
- <http://www.phpmyadmin.com>
- <http://www.appservnetwork.com/>
- <http://www.apachefriends.org>
- <http://www.xampp.org>

Facebook

<http://www.facebook.com/groups/teachonetofish/>

<http://www.facebook.com/teachonetofish/>

QUESTIONS