



# Professional Diploma in Commercial Web Design

Lesson 1

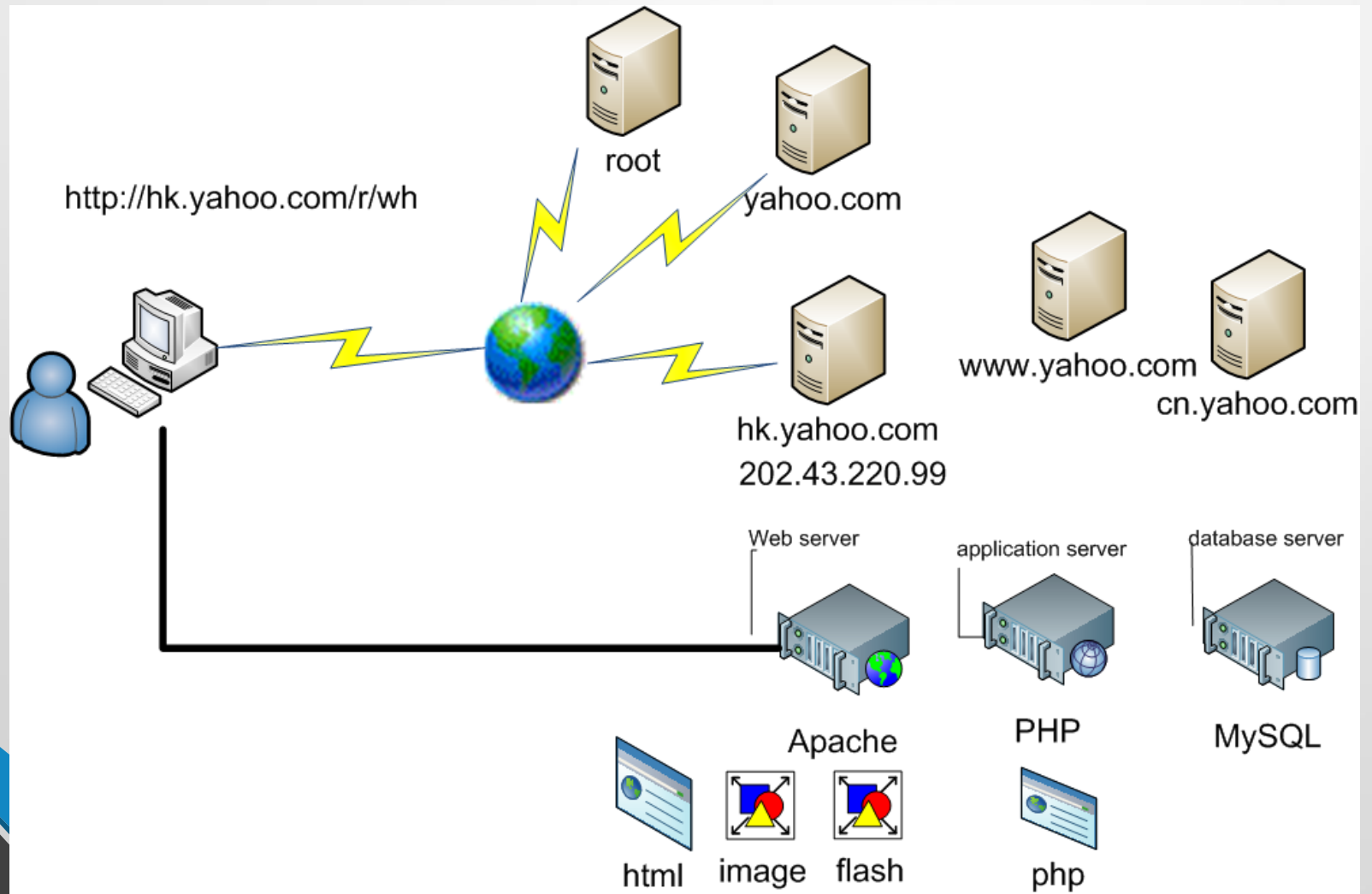
PHP

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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

|            |                     |
|------------|---------------------|
| <b>100</b> | Continue            |
| <b>101</b> | Switching Protocols |
| <b>102</b> | Processing          |

### 2XX Success

|            |                               |
|------------|-------------------------------|
| <b>200</b> | OK                            |
| <b>201</b> | Created                       |
| <b>202</b> | Accepted                      |
| <b>203</b> | Non-authoritative Information |
| <b>204</b> | No Content                    |
| <b>205</b> | Reset Content                 |
| <b>206</b> | Partial Content               |
| <b>207</b> | Multi-Status                  |
| <b>208</b> | Already Reported              |
| <b>226</b> | IM Used                       |

### 3XX Redirectional

|            |                   |
|------------|-------------------|
| <b>300</b> | Multiple Choices  |
| <b>301</b> | Moved Permanently |
| <b>302</b> | Found             |
| <b>303</b> | See Other         |
| <b>304</b> | Not Modified      |
| <b>305</b> | Use Proxy         |

### 4XX Client Error Continued

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

### 5XX Server Error

### 3XX Redirectional

|            |                    |
|------------|--------------------|
| <b>300</b> | Multiple Choices   |
| <b>301</b> | Moved Permanently  |
| <b>302</b> | Found              |
| <b>303</b> | See Other          |
| <b>304</b> | Not Modified       |
| <b>305</b> | Use Proxy          |
| <b>307</b> | Temporary Redirect |
| <b>308</b> | Permanent Redirect |

### 4XX Client Error

|            |                               |
|------------|-------------------------------|
| <b>400</b> | Bad Request                   |
| <b>401</b> | Unauthorized                  |
| <b>402</b> | Payment Required              |
| <b>403</b> | Forbidden                     |
| <b>404</b> | Not Found                     |
| <b>405</b> | Method Not Allowed            |
| <b>406</b> | Not Acceptable                |
| <b>407</b> | Proxy Authentication Required |
| <b>408</b> | 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

## HTTP STATUS CODES

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



|   |          |       |
|---|----------|-------|
|    | 紐元 NZD   | 22.85 |
|    | 泰幣 THB   | 0.959 |
|    | 菲國比索 PHP | 8.888 |
|  | 印尼幣 IDR  | 8.888 |
|  | 歐元 EUR   | 46.19 |

# 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



# 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

- 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/>

# Who is using PHP

- Yahoo! – 3.5 billion/day
- Flickr, Facebook, Friendster, Second life, Hong Kong Art Festival
- Magento, WordPress, Joomla, Drupal, Discus
- [www.php.net/usage.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



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



Scales using the  
**Zend Performance Suite**



Scales using the  
**Zend Performance Suite**



Develops using the  
**Zend Studio**



Develop & Scales with  
**Zend**



Protects using the  
**Zend Encoder**



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**Zend Performance Suite**



Develops using the  
**Zend Studio**



Develop, Protect & Scales with  
**Zend**

# 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

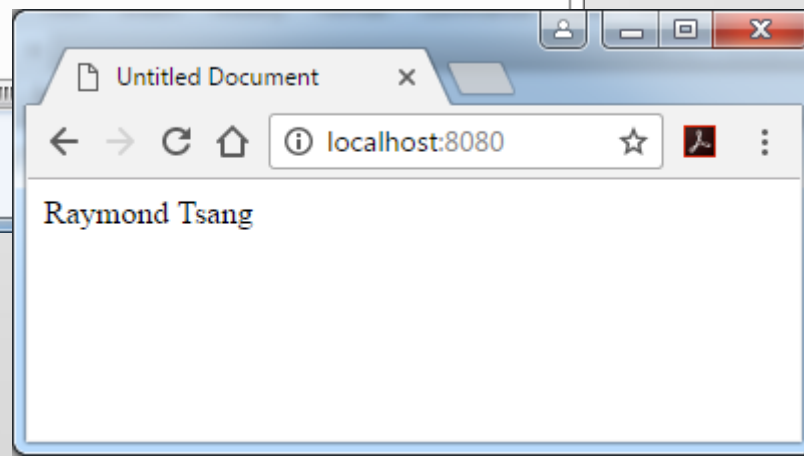
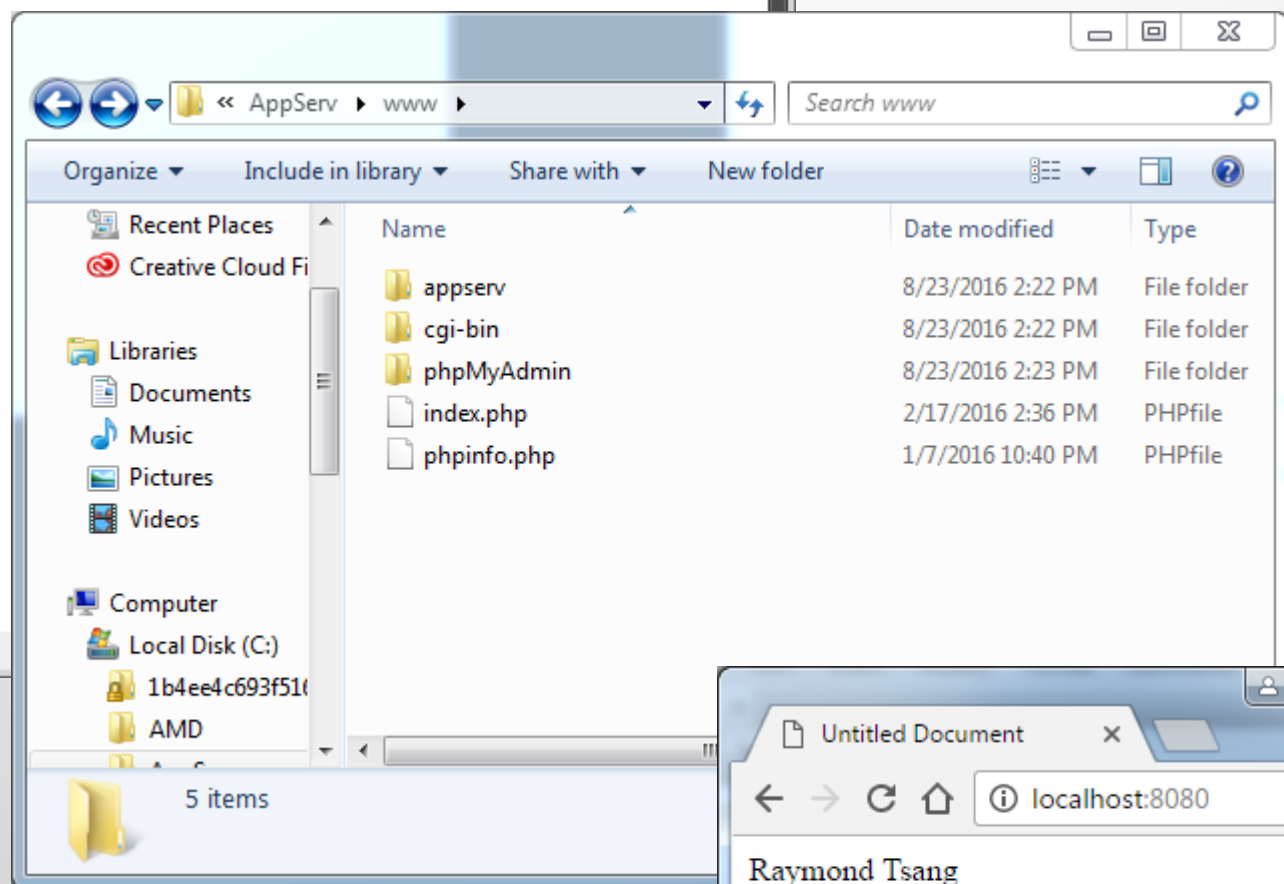
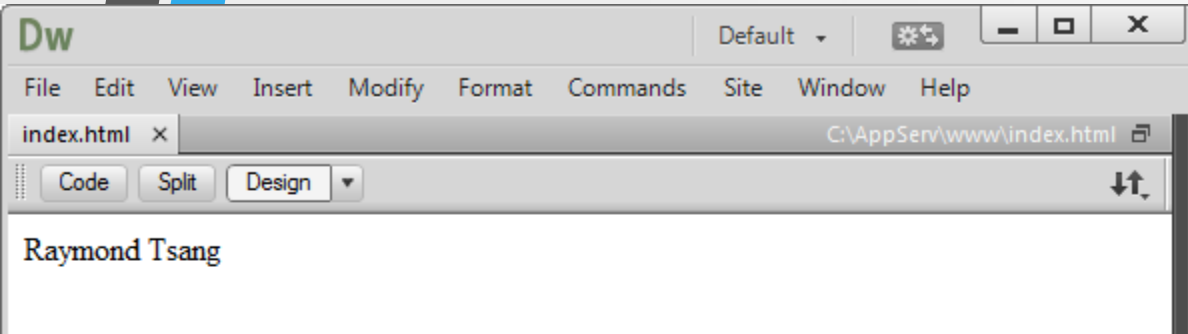
- High performance
- Interfaces to many different database systems
- Built-in libraries for many common web tasks
- Many free out-of-the-box system ready to use
- Low cost
- Ease of learning and use
- Portability

# 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

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



# 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<br />"`;

# 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>

# Functions

- `echo date("H:i, jS F");`
- `echo date("l dS \of FY 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-Jan-1990) echo "19900911";
- 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 <br> 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[l]", 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.

# 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/>

# 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

- [www.facebook.com/groups/teachonetofish/](http://www.facebook.com/groups/teachonetofish/)
- [www.facebook.com/teachonetofish/](http://www.facebook.com/teachonetofish/)



# QUESTIONS