



# Professional Diploma in Commercial Web Design

Lesson 1

PHP

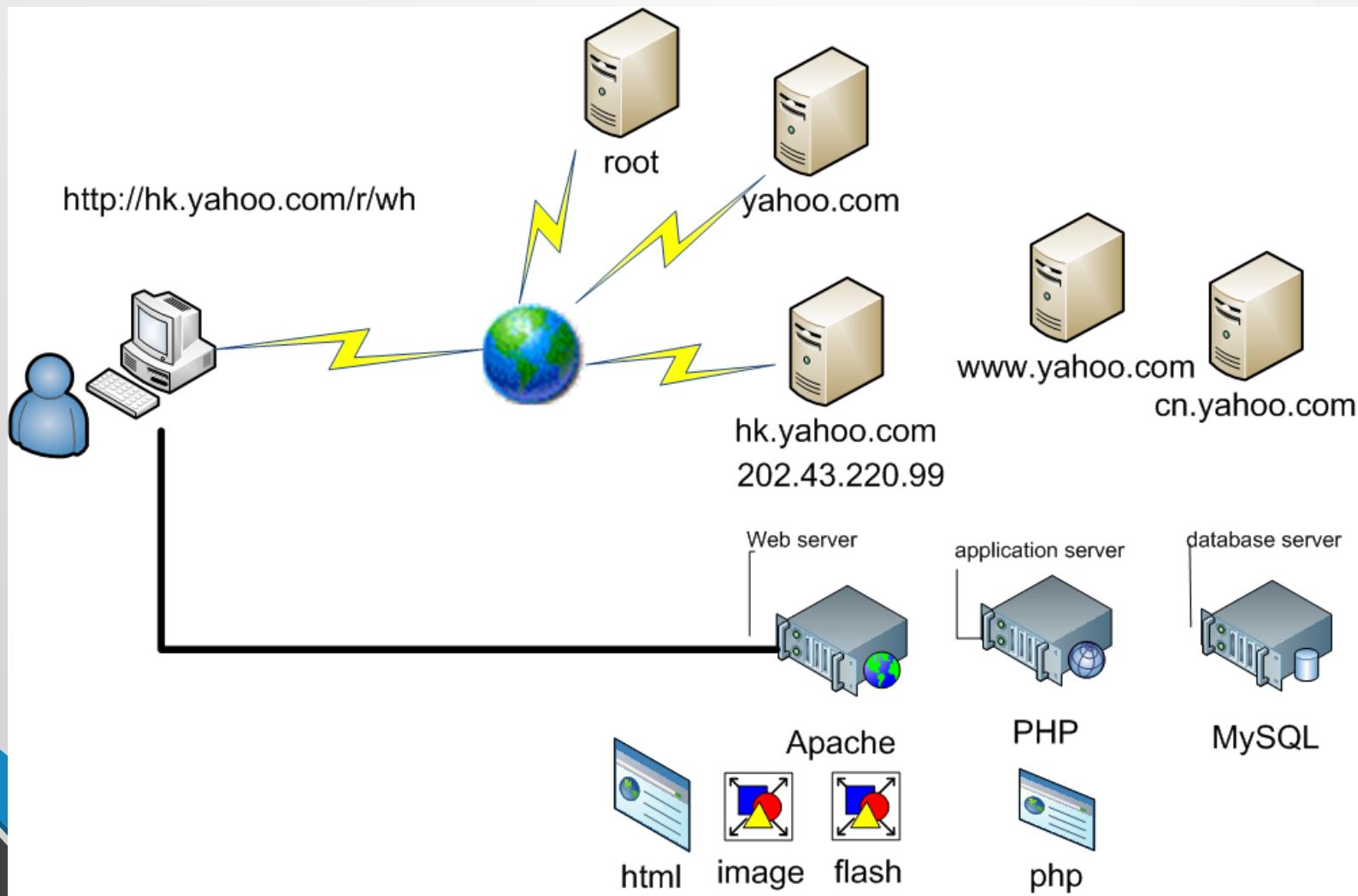
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# Overview

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

# LAMP



<b>1XX Informational</b>		<b>4XX Client Error Continued</b>	
<b>100</b>	Continue	<b>409</b>	Conflict
<b>101</b>	Switching Protocols	<b>410</b>	Gone
<b>102</b>	Processing	<b>411</b>	Length Required
<b>2XX Success</b>		<b>412</b> Precondition Failed	
<b>200</b>	OK	<b>413</b>	Payload Too Large
<b>201</b>	Created	<b>414</b>	Request-URI Too Long
<b>202</b>	Accepted	<b>415</b>	Unsupported Media Type
<b>203</b>	Non-authoritative Information	<b>416</b>	Requested Range Not Satisfiable
<b>204</b>	No Content	<b>417</b>	Expectation Failed
<b>205</b>	Reset Content	<b>418</b>	I'm a teapot
<b>206</b>	Partial Content	<b>421</b>	Misdirected Request
<b>207</b>	Multi-Status	<b>422</b>	Unprocessable Entity
<b>208</b>	Already Reported	<b>423</b>	Locked
<b>226</b>	IM Used	<b>424</b>	Failed Dependency
<b>3XX Redirection</b>		<b>426</b>	Upgrade Required
<b>300</b>	Multiple Choices	<b>428</b>	Precondition Required
<b>301</b>	Moved Permanently	<b>429</b>	Too Many Requests
<b>302</b>	Found	<b>431</b>	Request Header Fields Too Large
<b>303</b>	See Other	<b>444</b>	Connection Closed Without Response
<b>304</b>	Not Modified	<b>451</b>	Unavailable For Legal Reasons
<b>305</b>	Use Proxy	<b>499</b>	Client Closed Request
<b>5XX Server Error</b>			

### 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

<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

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

# 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

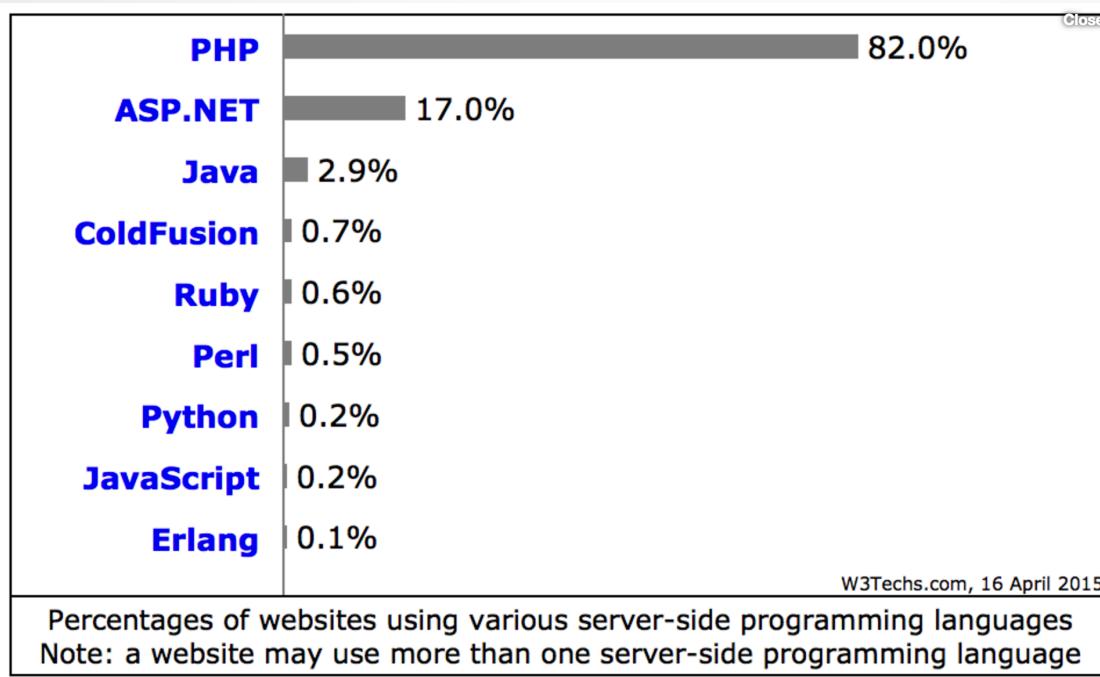
- Up to 100% faster without rewrite PHP
- Constructors with name same as class
- Change in password\_hash() function
- Calling static methods
- <https://codingsec.net/2016/05/php-cheatsheet-upgrade-php7-5/>

# Who is using PHP

- Yahoo! – 3.5 billion/day
- Flickr, Facebook, Friendster, Second life, 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

McGraw-Hill

Develops  
using the  
Zend Studio



Scales  
using the  
Zend Performance  
Suite

SIM CITY 4

Develops  
using the  
Zend Studio

T...Online

Develop, Protect  
& Scales  
with  
Zend



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

AVAYA

Develops  
using the  
Zend Studio

sueddeutsche.de

Scales  
using the  
Zend Performance  
Suite

SIEMENS

Develops  
using the  
Zend Studio



Protects  
using the  
Zend Encoder

# 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

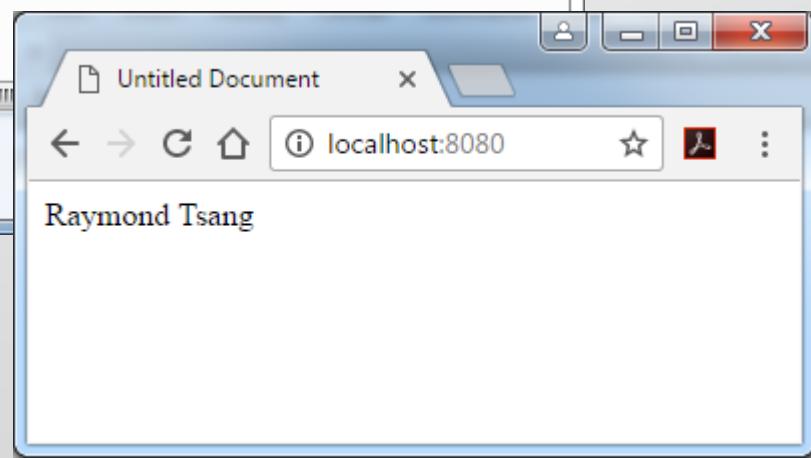
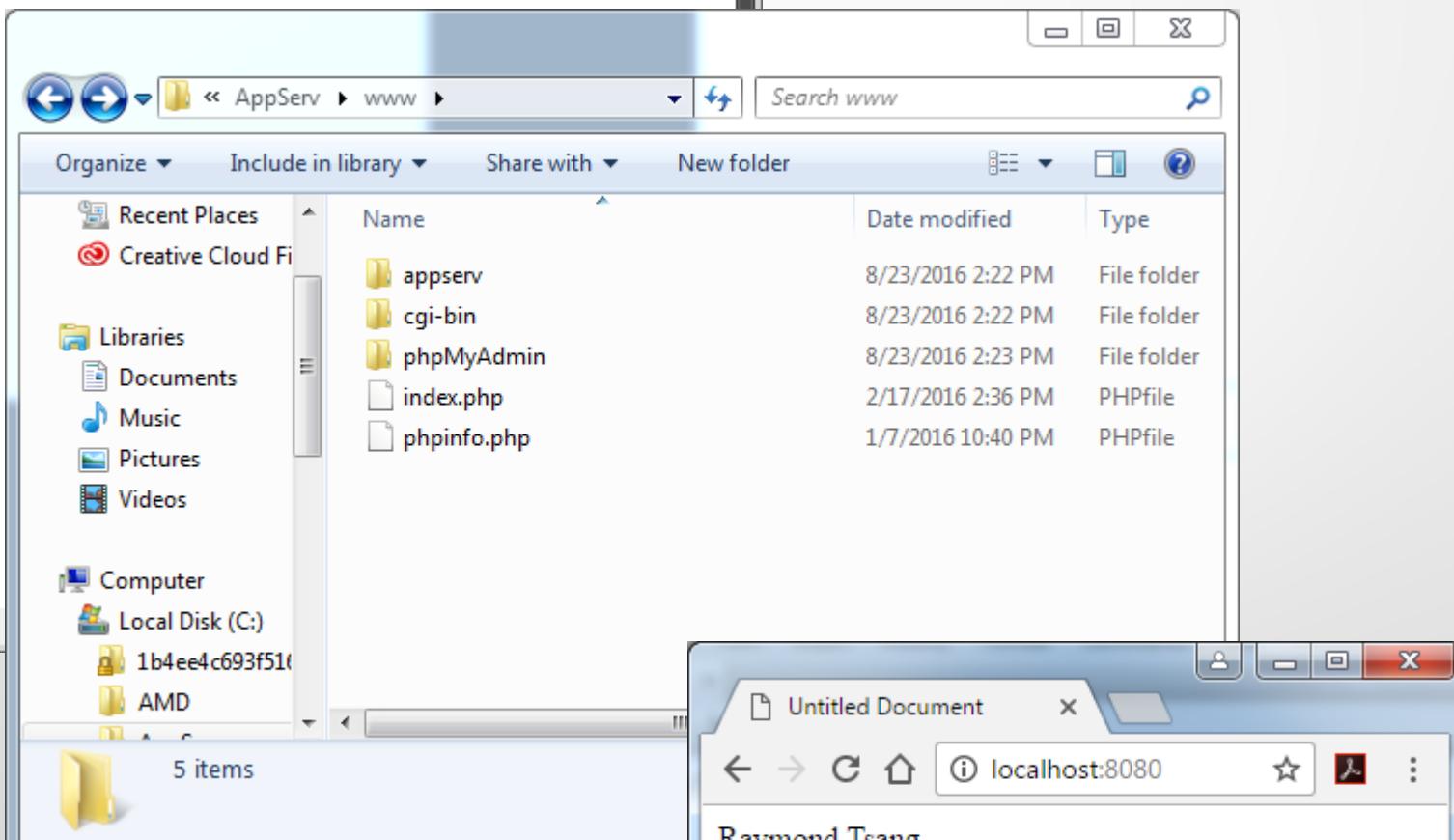
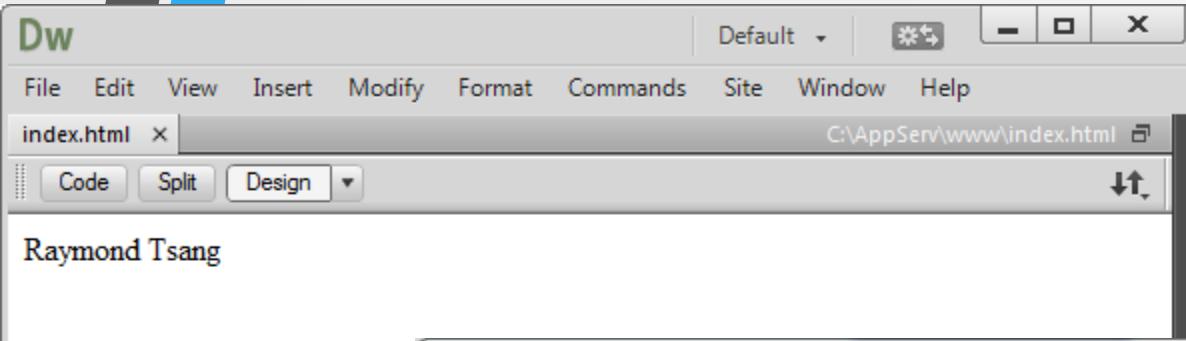
- High performance
- Interfaces to many different database systems
- Built-in libraries for many common web tasks
- Many free out-of-the-box system ready to use
- Low cost
- Ease of learning and use
- Portability

# 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

# 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 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-Jan-1990) echo "19900931";
- 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[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.

# 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

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

# QUESTIONS