

# PHP: Kick-off





# PHP: Kick-off

Mohammad Yaqub

mohammad.yaqub@it.ox.ac.uk



**iT Centre**  
**Learning**

**iT**  
services



# Your safety is important

- Where is the fire exit?
- Beware of hazards

Tripping over bags and coats

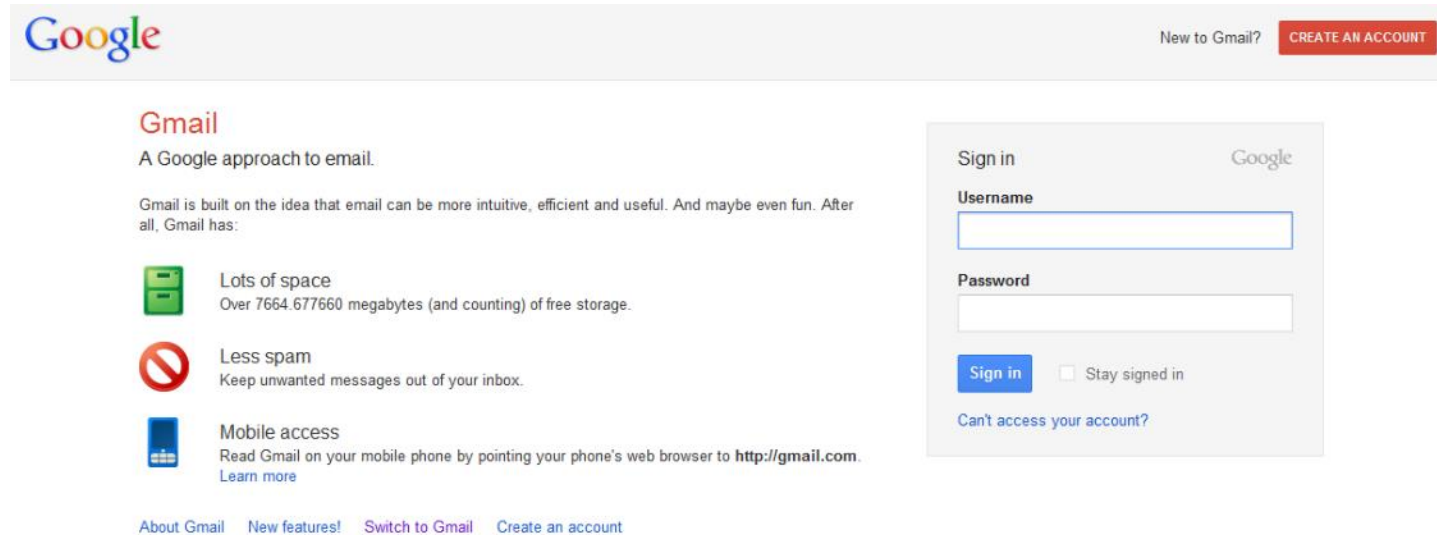
- Please tell us if anything does not work
- Let us know if you have any other concerns

# Your comfort is important

- The toilets are along the corridor just outside the teaching rooms
- The rest area is where you registered; it has vending machines and a water cooler
- The seats at the computers are adjustable
- You can adjust the monitors for height, tilt and brightness



# Prerequisites



- Programming concepts course
- HTML
- CSS
- Client-side scripts (e.g., JavaScript)
- Server-side scripts (e.g., PHP)

To see any web page HTML/CSS/JS code  
Right click and click View Source

# What are we going to do today?

- Exploring small example programs
- Based on principles in Programming Concepts course
- Working in pairs
- Discussion encouraged (feedback very desirable)
- We will use **Eclipse** as an editor
- We will use **XAMPP** as a webserver

# XAMPP & Eclipse

- Eclipse is a free editor which can be used to write HTML, CSS, JavaScript, PHP, etc. After Installation you need to download “PHP Development Tools” PDT as follows:
  - Open Eclipse and go to Help-> Install New Software
  - Change “Work with” All available sites
  - Type PDT in the filter
  - Choose PHP Development Tools from the Programming languages option
  - Click Next to continue and finish installation
- XAMPP is a free web server. It is a software package that allows the integration of PHP, MySQL and Perl into one distribution
- In Windows, XAMPP is usually installed at c:/xampp
- In Windows, website files are typically found in c:/xampp/htdocs
  - Copy the provided folder “PHPexercises” to c:/xampp/htdocs

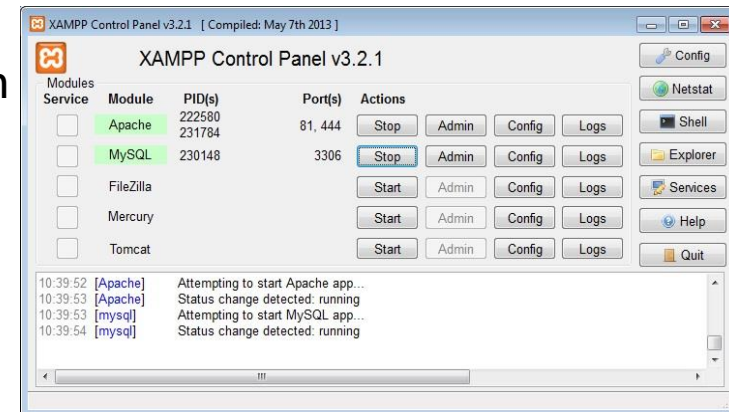
- To execute PHP files from local XAMPP installation

Open XAMPP control Panel  
Start the Apache service

- To run any PHP page

Open a browser (Chrome or Firefox) &

Type `localhost/PHPexercises/ex1.php`





# PHP topics

- Variables
- Statements
- Comments
- Expressions & Operators
- Strings
- Control Structures
  - IF Statement
  - WHILE Statement
  - FOR Statement
- Arrays
- Functions
- Sending data from one page to another

# Exercise1 - echo statement

```
<?php
// This is my first program
echo "Hello World!";
/*$x = 10;
*/
?>
```

1. Edit ex1.php. At line 16 you should find the above PHP code
2. Open ex1.php in the browser to execute the code
3. What happen if you delete //, /\*, or \*/
4. What do you think these commands (//, /\*, or \*/) are?
5. What does echo statement do?
6. Try to change the printed message
7. What is the purpose of quotation marks?
8. Change the double quotes to single quotes. Is this valid?
9. Single vs double marks?
10. What happens if you delete one or more quotations?
11. Insert a HTML tag inside the string in the echo statement. E.g., add <br> between two words. Is this valid?

# Exercise 2 - Variables, statements, operators and popup messages

```
<?php
$temperature = 22;
$fahr = $temperature * 9 / 5 + 32;
echo "Celsius temperature " . $temperature . " is equivalent to " . $fahr . " in Fahrenheit.";
?>
```

1. Edit ex2.php. At line 16, you should find the above code
2. What do you think the code does?
3. Execute the PHP page in the browser
4. Change the messages in the echo statement
5. Delete the semicolon in the first statement. Refresh the page. Is this valid?
6. What is the purpose of the dot in the echo?
7. What happen if you rename the variable temperature in the first line only?
8. Try to format the output by adding some HTML/CSS to the echo

# Exercise 3 - IF Statement

```
<?php
    $temperature = 22;
    $fahr = $temperature * 9 / 5 + 32;
    if ($fahr>80)
        echo 'Hot day';
    else
        echo 'Cool day';
?>
```

1. Edit ex3.php. Find the PHP code within the HTML code
2. What do you think the code does?
3. Open ex3.php in the browser
4. Change the code to print Hot day if temperature is greater than or equal 90
5. Change the code to print one of 3 states  
>80 for hot day, 65 - 80 for cool day and less than 65 for cold day
6. Why do you think we indented the commands inside the if statement?
7. [If time permits] Change the code to do the same task but only use one echo statement

# Exercise 4 - WHILE Statement

```
<?php
    $counter = 1;
    $str = "";
    while ($counter <= 10)
    {
        $str .= $counter . ",";
        $counter++;
    }
    echo "The numbers are " . $str;
?>
```

1. Edit ex4.php
2. What do you think the code does?
3. See the results of the code in the browser
4. Change the code to print the number from 4 to 38
5. What do you think will happen if we change `counter++` to `counter--`
6. Change the code to print the odd numbers only
7. How to get rid of the last unnecessary comma?
8. How can we print the numbers on different lines?
9. [If time permits] print the numbers in descending order

# 10 minutes break



**iT Centre**  
**Learning**

**iT**  
services



# Exercise 5 - Arrays & FOR Statement

```
<?php
    $names = array('Chris', 'Lucy', 'Sam', 'Tony');
    for ($i=0;$i<count($names);$i++)
        echo "The name is " . $names[$i] . "<br>";
?>
```

1. Edit ex5.php
2. Open ex5.html to see the results
3. What is an Array? How different is it from a variable?
4. What is `count()`?
5. What do you think the value of `count($names)` is?
6. Replace `count($names)` with number 2 and check results.
7. Replace it back to `count($names)`
8. Add more names to the array. Will the code print all names or the first 4 only? Why?
9. Change `i=0` to `i=1` at line 3. What does this do?
10. Why there are no curly braces `{ }` for the statement in the “`for`” loop?
11. [If time permits] Print the array elements in a reverse order

# Exercise 6 - Functions

```
function findMax($num1, $num2)
{
    if ($num1>$num2)
        return $num1;
    else
        return $num2;
}
$n1 = 10;
$n2 = 20;
echo "The maximum between $n1 and $n2 is " . findMax($n1, $n2);
```

1. Edit ex6.php
2. What is the name of the function? What does it do?
3. What are the function parameters (if any)?
4. Can you change the function name? If yes, try
5. Which line calls the function?
6. If you change > to < in line 3 what do you think the function will do?
7. [If time permits] Change the function to find the maximum of 3 numbers
8. [If time permits] Create a new function which finds the maximum number in an array of integer numbers



# • Exercise 7 - Sending data from one page to another

Page 1 (ex7.html)

```
<form action="ex7.php" method="get">
  First name:<input type="text" name="firstname" id="firstname">
  <br>
  Last name: <input type="text" name="lastname" id="lastname">
  <input type="submit" value="GO">
</form>
```

Page 2 (ex7.php)

```
<?php
$firstname = $_GET['firstname'];
$lastname = $_GET['lastname'];
echo 'Welcome to my website, ' . $firstname . ' ' . $lastname . '!';
?>
```

1. Edit both ex7.html and ex7.php and explore the code
2. Open ex7.html in the browser, fill the form and click the Go button
3. What do you think happened to the data you entered? Hint, look at the address bar.
4. What does “get” in the HTML and “\$\_GET” in the PHP mean?
5. Change “get” to “post” and “\$\_GET” to “\$\_POST” then repeat point 2. What happened?
6. What do you think the action of the form refers to in the HTML page?
7. Can you use two HTML pages to perform the same task? Two PHP pages? If yes, try
8. [If time permits] Change the code (both HTML and PHP) to add one or more form items

# Where to find some help

- Google is your friend
- developer.mozilla.org
- [www.w3schools.com/php/](http://www.w3schools.com/php/) → use the “Run example” option
- Use an editor, e.g., Aptana, Eclipse, bluefish, MS visual studio express
- [www.stackoverflow.com](http://www.stackoverflow.com)
- Exercises for home

<http://www.w3resource.com/php-exercises/>

- **LinkedIn Learning**

# LinkedIn Learning

- It is free
- Formerly known as Lynda.com
- It is in support of the IT Learning Centre activities
- ITLC will still offer a full range of classroom-based courses
- ITLC is happy to work with people around the University to help them use LinkedIn Learning effectively in their departments and colleges
- <https://help.it.ox.ac.uk/courses/molly>

Example course: PHP Essential Training

by Kevin Skoglund

# Other courses

- Programming for research

- Concepts
- JavaScript
- Perl
- Python
- C++
- Java
- MATLAB
- Introduction to MySQL
- MySQL: Advanced topics

- Dreamweaver

- An introduction
- Adding interactivity and multimedia to your web pages
- Dreamweaver: Managing your site and content
- Dreamweaver: Styling and layout using CSS

# Please respond to the feedback survey

[[mohammad.yaqub@it.ox.ac.uk](mailto:mohammad.yaqub@it.ox.ac.uk)]



**iT Centre**  
**Learning**

**iT**  
services

