#### Introduction

- For this topic we will be focussing on the following:
  - An Introduction tent Project Exam Help
    - Registering for a Server
    - Output <a href="https://powcoder.com">https://powcoder.com</a>
    - Using HTMLAwithin Pclat powcoder
    - Variables
    - Arithmetic
    - Selections
    - Iterations
    - Arrays
- We will now begin to focus on all of the above

#### An Introduction to PHP

- What is PHP?
  - PHP is also known as Hypertext Preprocessor
  - It is a scripting language that helps make web pages more interactive by allowing them to do more things than you can do with HTML
    - An example of a use of PHP is where you may have pages that are password protected a web page that does not include any scripts would not be able to be password protected
  - The structure of PHP is similar to other languages such as C, C++,
     C#, Perl and Java
  - It is open source software which means that it is free for everybody to install and use on their server
  - Wikipedia and Moodle use the PHP scripting language
- For more information visit:
  - http://en.wikipedia.org/wiki/PHP

# An Introduction to PHP - Output - Introduction

- We will be looking at a very simple example of PHP scripting to begin with
- This example will allow you to display a Welcome Message withing Web Pagect Exam Help
- I will show you hewsto powcoder.com
  - Create your Script
  - Save your ScripAdd WeChat powcoder ECOME
  - Upload your Script to your Server
  - Run the Script via a Browser
  - Fix the errors within the Script
- You will need to follow the above steps for every PHP script

# An Introduction to PHP — Output — Creating your Script



- To create a PHP Script you will need to use a Text Editor
- I am going to use Notepacttexam Help
  - http://portableapps.com/apps/development/notepadpp\_portable
- For our first PHP example create the following PHP Script: Add WeChat powcoder

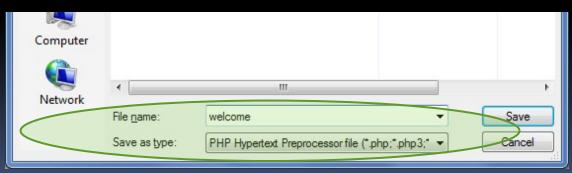
```
<?php
   echo "Welcome to the World of PHP!";
?>
```

# An Introduction to PHP — Output — Saving your Script

Now that you have written your PHP Script you will need to Save it — Click on the Save Icon:



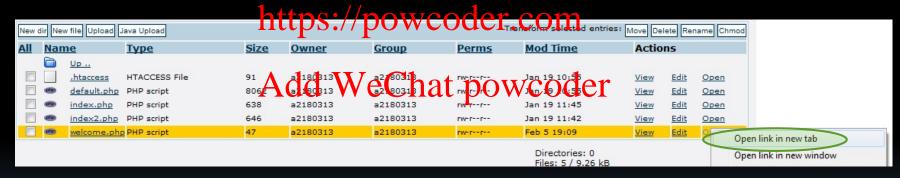
Save your PHP Script using welcome as your filename:



Make sure that you change Save as type to PHP Hypertext Preprocessor file!

# An Introduction to PHP — Output — Running your Script

- If your
- In order to Run it and see what it does you will need to Right Click on Open and then on Open link in new tab:



Welcome to the World of PHP!

You should then get the following screen which shows your PHP script running in your ☐ (2 unread)-wtaylor10875-> (3 ft) (3 lectoteclevel

# An Introduction to PHP — Output — Fixing Errors

You may or may not get an error like the following once you Run your Script:

Assignment Project Exam Help
Parse error: syntax error, unexpected Send in /home/a2180313/public\_html/welcome.php on line 4

https://powcoder.com

- If this does happen then you will need to take the following steps:
  - 1 Look at your .php file in your Text Editor (Notepad++ for example)
  - 2 Find and correct any mistakes you have made
  - 3 Save your .php file
  - 4 Upload your .php file to the Server/htdocs
  - 5 Run it in your Browser again to see if it is working correctly
  - $^{ullet}$  6 Repeat steps 1 to 5 if needed  $\odot$

- In the previous example (Output) you displayed a very basic Welcome Message using PHP
- It is also possible to use HTML Tags within your PHP Script
- For example https://powcoder.com
   https://powcode
- Change year walks are a plan file as that it matches the following section of the World of PHP!</hi>
- Save it using welcomeUsingHTML.php as your filename, upload it and te Welcome to the World of PHP!

- You can use any of the other HTML Tags within your PHP Script, for example:
  - Headings: <h2>, <h3>, <h4>, <h5> and <h6>
  - Text Formatting: <b>, <i> and <u>
  - Changing the tont: / tontsoder.com
  - Inserting Images: <images powcoder</li>
  - Inserting Links: <a href>
  - Plus others...
- If you want to see more HTML Tags and see how they can by used, then please visit here:
  - http://vzone.virgin.net/sizzling.jalfrezi/iniframe.htm

Using Headings:

This will give XQU: WeChat powcoder

# This is an example of Heading 1! This is an example of Heading 2! This is an example of Heading 3! This is an example of Heading 4! This is an example of Heading 5!

This is an example of Heading 6!

Using Text Formatting:

This will give you:

```
This is an example of some Bold text! WeChat powcoder

This is an example of some Italic text!

This is an example of some Underlined text!
```

Please Note:

The <br/>br /> Tag will move your text on to a new line and then display the text that follows the Tag

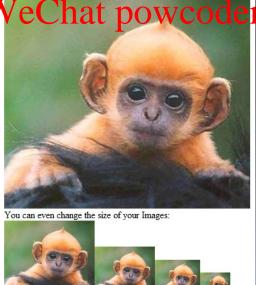
Changing the Font:

This will give <a href="https://powcoder.com">https://powcoder.com</a>

```
This is an example of some text in the Arial Font!
This is an example of some text in the Arial Font!
You can also change the Size as well as the Font Face!
```

Inserting Images:

This will give MeChat powcoder



Important Note:

You must make sure that you upload your image as well as your .php file!

Inserting Links:

```
F:\Work\BTEC Level 3\1112\WSS (27)\insertingLinks.php - Notepad++

File Edit Search View Encoding Language Settings Macro Run TextFX Plugins Window?

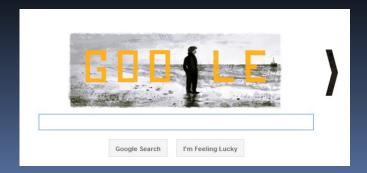
X

| Search View Encoding Language Settings Macro Run TextFX Plugins Window?

| Image: Ima
```

This will give <a href="https://www.wechat.powcoder">wdd:WeChat powcoder</a>

```
This is a <u>LINK</u> to Google!
This is a <u>LINK</u> to the Moodle page for Unit 27 - WSS!
```



Challenging Exercise:

Use a combination of Headings, Text Formatting, Changing the Font Inserting Images, and Inserting Links to create a PHP file called all About Me. phpthat contains details, an image and a link related to your Make sure that you Save it, Upload it and Run it in your Browser

#### An Introduction to PHP — Variables 1

- In order to store values in your PHP Script you will need to use variables
- In order to create a variable you need to use a \$ symbol followed by the same of the variable Help
  - For example: If you wanted to store someone's name you could create a variable called susername
- There are rules that you must following rder to create variables in PHP and they are:
  - The name must start with a letter or an underscore ( \_ )
  - The name can only contain alpha-numeric characters and underscores (a-z, A-Z, 0-9, and \_ )
  - A variable name should not contain spaces If the name is more than one word then it should be separated with an underscore (\$user\_age) or with camel notation (\$userAge)

#### An Introduction to PHP Variables 2

- When creating a variable you will normally store an initial value for the variable
  - For example: \$userName = "Imran Khan";
- But you may also create a variable with no initial value
- For example: \$\text{nserName;}{\text{https://powcoder.com}}\$
  Here is an example of a PHP Script that uses a range of variables and different types to fidataoder

```
usingVariables.php
    −<?php</p>
          $userName = "Wayne Taylor";
          $userAge = 36;
          $userGender = "M";
          SuserCanDrive = false:
          $userEmployed = true;
          SuserDistance = 3.6:
          echo "Name: " . $userName;
          echo "<br />Age: " . $userAge;
11
          echo "<br />Gender: " . $userGender:
12
          echo "<br />Can Drive: " . $userCanDrive;
13
          echo "<br />Is Employed: " . $userEmployed;
          echo "<br />Distance from College: " . $userDistance;
```

When storing text you will need to make sure that you use speech marks on either side of the text

When storing numeric values you do not need to use speech marks

#### An Introduction to PHP Variables 3

The previous PHP script will give you the following output in your browser:

Name: Wayne Taylor

Age: 36 Assignment Project Examt Itisolary a value if you are Gender: M

Can Drive: Is Employed: 1

Distance from College: 3.6

https://powcoder.com But if you store true then it

When using a variable that

contains boolean data it will

storing false

Add WeChat powcoder will display the number 1

Exercise: Try creating a different version of the previous PHP script using data all about you and call it usingVariablesAboutMe.php – Make sure that you save it, upload it and run it in your browser

#### An Introduction to PHP — Arithmetic 1

- There may be times when you are writing PHP scripts when you need to perform calculations with the values stored in your variables
- Simple calculations use the following symbols:
  - +, -, \*, / and https://powcoder.com
  - Division ExamplesWeChat powcoder
    - 72 / 10 = 7.2 (Regular Division)
    - 72 % 10 = 2 (Modular/Remainder Division)

#### An Introduction to PHP — Arithmetic 2

Here is an example of a PHP script that uses most of arithmetic symbols:

```
using Arithmetic.php
           Assignment Project Exam Help
     -<?php</pre>
           $employee2MonthlyWage = 667.00;
           $employee3MonthlyWage = 984.20;
  5
           $employee2YearlySalary = $employee2MonthlyWage * 12;
           $employee3YearlySalary = $employee3MonthlyWage * 12;
  9
 10
                                                     $employee2MonthlyWage + $employee3MonthlyWage;
 11
 12
           $averageMonthlyWage = $totalMonthlyWage / 3;
 13
 14
           echo "Employee 1 Yearly Salary: " . $employee1YearlySalary;
           echo "<br/>br />Employee 2 Yearly Salary: " . $employee2YearlySalary;
 15
 16
           echo "<br/>
<br/>
" . $employee3YearlySalary; " . $employee3YearlySalary;
 17
 18
           echo "<br /><br />Total Monthly Wage: " . $totalMonthlyWage;
 19
           echo "<br /><br />Average Monthly Wage: " . $averageMonthlyWage;
 21
 22
           echo "<br />Division Examples:";
 23
           echo "<br />Regular Division: " . 72 / 10;
 24
           echo "<br />Modular/Remainder Division: " . 72 % 10;
 25
```

#### An Introduction to PHP — Arithmetic 3

Which will give you following in your Browser:

```
Employee 1 Yearly Salary: 10266
Employee 2 Yearly Salary: 8004
Employee 3 Yearly Salary: 11810.4

ASSIGNMENT Project Exam Help

Total Monthly Wage: 2506.7

Average Monthly Wage: 835.566666667

Division Examples:
Regular Division: 7.2

Modular/Remainder Division: 2 Add WeChat powcoder
```

#### Challenging Exercise:

- Write a PHP script (called yearOnePoints.php) that stores all of the points you got from the units you completed in year one using variables and use arithmetic to work out the total number of points you got from the year
- Each Pass is worth 70 points, Merits are worth 80 and Distinctions are 90 points each

- There may be times when you are using PHP that you want your Script to make a decision based on a comparison You can use if in PHP to make Selections
- For example: You may be writing a Script that determines whether your User is able to vote in the UK or not – Here is an example of a PHP

Script called

Once you run canVote.php in your Browser you should get this:

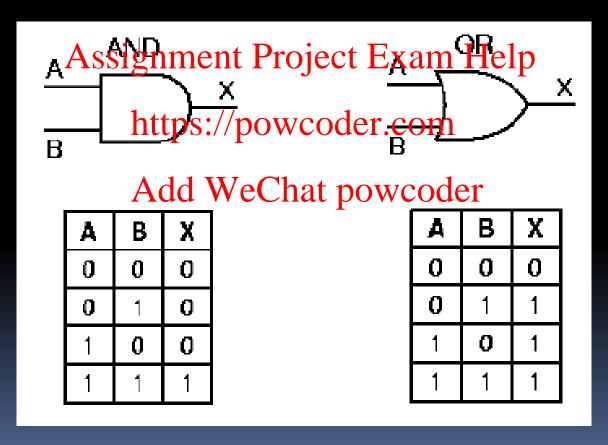
Yes - The user may vote because they are 18 or over! Project Exam Help

- https://powcoder.com
  Note that the \$userAge variable was given a value of 36 and this meant that the user was old enough
- Exercise: Try changing the \$userAge variable to 17 and 18 and notice what happens to the output message in your Browser

- The following symbols are used when comparing values:
  - == means equals
    - 12 == 12 is True and 12 == 13 is False
  - = != means does not equapject Exam Help
    - 12 != 13 is True and 12 != 12 is False
  - < means less than </p>
    - 12 < 13 is True and 13 < 12 is False coder
  - > means greater than
    - 13 > 12 is True and 12 > 13 is False
  - <= means less than or equal to</p>
    - 12 <= 13 is True, 12 <= 12 is True and 12 <= 11 is False</p>
  - >= means greater than or equal to
    - 13 >= 12 is True, 13 >= 13 is True and 13 >= 14 is False

- There may be times when you want to include more than one comparison in your Selection
  - In other words you may want to check more than one thing at a time
     Assignment Project Exam Help
- You can use the following symbols to check more than one comparison at a time.
  - && means And (Also known as Double Ampersand)
    - This allows you to check to see if all of the comparisons are True or not
      - A == A && B == B is True (Both Comparisons are True)
      - A == A && B == A is False (Left Comparison is True and Right Comparison is False)
      - A == B && B == B is False (Left Comparison is False and Right Comparison is True)
      - A == B && B == A is False (Both Comparisons are False)
  - | means Or (This is the symbol next to the Z key and is also known as Double Pipe)
    - This allows you to check to see if any of the Comparisons are True or

The && and the || work in the same way as the AND and OR Logic Gates:



 Here is a Script called comparingAgeAndGender.php that uses a combination of many of the symbols that we have

talked a companing Age And Gender php Assignment Project Exam Help https://powcoder.com echo "No - The user may note vote because he is younger than 18!"; Add WeChat poweoder 9 10 11 echo "No - The user may note vote because she is younger than 18!"; 12 13 else 14 if (\$userGender == "M") 15 16 17 echo "Yes - The user may vote because he is 18 or over!"; 18 19 else 20 21 echo "Yes - The user may vote because she is 18 or over!"; 22 23

You should get the following when running your Script:

Yes - The user may vote because he is 18 or over!

#### Assignment Project Exam Help

- Exercises:
  - Try changing \$userGender to Franchictics what happens
  - Try changing \$userAge to 17 and \$userGender to M and notice what happens
     Add WeChat powcoder
  - Try changing \$userGender to F and notice what happens
- Challenging Exercise:
  - Rewrite the Program (the one using C#) that you created in Unit 16 for assignment 3 during the first year, this time you will need to use a PHP Script and call it comparingUsers.php
  - This was the program where you had to compare data for 2 Users You had to compare their Ages, Genders, Whether they could Drive and the Distance that they live away from the College Campus (Note: You will only need to use Variables and Selections to create this Script and you do not

- There may be times when writing PHP Scripts where you want to repeat lines of code To do this you would use a Loop which is also known as an Iteration
- In PHP you can wife white Loops to Iterate your code
   Add WeChat powcoder
- Here is ar repeatNur sentence

You should get the following when you run your Script:

```
All work and no play makes Jack a dull boy!
All work and no play makes Jack a dull boy!
All work and no play makes Jack a dull boy!
All work and no play makes Jack a dull boy!
All work and no play makes Jack a dull boy!
All work and no play makes Jack a dull boy!
All work and no play makes Jack a dull boy!
All work and no play makes Jack a dull boy!
All work and no play makes Jack a dull boy!
All work and no play makes Jack a dull boy!
All work and no play makes Jack a dull boy!
All work and no play makes Jack a dull boy!
All work and no play makes Jack a dull boy!

We Chat powcoder
All work and no play makes Jack a dull boy!
```

#### • Exercises:

- Try increasing the \$numberOfIterations variable to something like 100 and notice what happens
- Try decreasing the \$numberOfIterations variable to 5 and notice what happens

 Here is an example of a PHP Script called timesTable.php that calculates and displays the Times Table of a number specified in the Script:

You should get the following when you run your Script:

```
12 x 1 = 12

12 x 2 = 24

12 x 3 = 36

12 x 4 = 48

12 x 5 = 60

12 A = Ssignment Project Exam Help

12 x 7 = 84

12 x 8 = 96

12 x 9 = 108

12 x 10 = 120

12 x 11 = 132

12 x 12 = 144

12 x 13 = 156

12 x 14 = 168

12 x 15 = 180

Add WeChat powcoder
```

#### Exercises:

- Try increasing the \$numberOfIterations variable to something like
   100 and notice what happens
- Try decreasing the \$numberOfIterations variable to 5 and notice what happens
- Try changing the \$numberToBeMultiplied variable and notice what happens

- What is an Array?
  - A variable is a storage area holding a number or text and a variable will only hold one value
  - An array can storamultiple valuest Exam Help
  - If you have a list of items (a list of people's names for example) storing the namestusing variables could look like this:
    - \$name1="David";
    - \$names2="Freehald WeChat powcoder"
    - \$names3="Hajra";
- However, what if you want to loop through the names and find a specific one? And what if we had not 3 names but 300?
- The best solution here is to use an array!

- An array can hold all of your values under a single name
- Each element in the array has its own index so that it can be easily accessed (usually the first item in the index has a value of O (2003) ment Project Exam Help
- In PHP, there are three kind of arrays;
  - Numeric Array An array with a numeric index
  - Associative Arrayden array where each lockey is associated with a value
  - Multidimensional Array An array containing one or more arrays
- We will be looking at Numeric Arrays and Associative Arrays during this Presentation but you may wish to research Multidimensional Arrays

- Numeric Arrays
  - Numeric Arrays store values along with a numeric indexnent Project Exam Help
  - There are 2 ways to create a Numeric Array
    - \$names=array("David", "Freda", "Hajra"); is one way
    - \$names[0]=\davideChat powcoder \$names[1]="Freda"; \$names[2]="Hajra"; is another way

 Here is an example of a PHP Script called numericArray.php that uses the first method of creating a

#### Add WeChat powcoder

```
This name is in position 0: David
This name is in position 1: Freda
This name is in position 2: Hajra
```

 Exercise: Add 4 more names to the Array and display them

• Here is another example of a PHP Script called shoppingList.php that uses 2 Numeric Arrays (1 to store the Names of the Items and 1 to store the Prices) and it uses a Loop to galculate the Cotal Price of all Items purchased in a Supermarket:

https://powcoder.com

```
shoppingList.php
    −<?php</p>
         $itemNames=array(ddesWeishhätkpowcoder Food");
         sindex = 0:
         $totalPrice = 0;
         while ($index < 5)
10
              echo "The Price of " . $itemNames[$index] . " is " . $itemPrices[$index] . "<br />";
              $totalPrice = $totalPrice + $itemPrices[$index];
13
14
              $index++:
15
16
17
         echo "<br />The Total Price of all Items is " . $totalPrice;
```

You should get the following when you run your Script:

```
The Price of Cheese is 1.59
The Price of Fish is 2.1
The Price of Milk is 0.99
The Price of Biscuits is 0.65
The Price of Cat Food is 0.88 Signment Project Exam Help
The Total Price of all Items is 6.22
```

#### Exercise:

- Add 3 more Products complete with Names and Prices and change the loop so it calculates the total price of all 8 items
- Challenging Exercise:
  - Add 2 more Numeric Arrays (1 to store the Product Brand and 1 to store the Product Weight), include appropriate values within the Arrays and display the values within the loop
  - Example: For your Cat Food you could display The Price of Whiskas Cat Food is 0.89 and it weighs 400g

- Associative Arrays
  - When using an associative array each ID key is associated with a value
  - With associative arrays we can use the values as keys and assign values to the moder.com
  - There are 2 ways to create an Associative Array:
    - \$ages = array("David"=>32, "Mavis"⊆>17, "Mandeep"=>22); is one way
    - \$ages['David'] = 32;\$ages['Mavis'] = 17;\$ages['Mandeep'] = 22; is another way

 The following PHP Script is called ageArray.php and it uses 2 Associative Arrays, 1 Array is used to store the Surnames of 5 people and the other Array is used to store

David Milton is 32 years old!
Mavis Jack is 17 years old!
Mandeep Singh is 22 years old!
Gok Chung is 29 years old!
Manuel Lopez is 50 years old!

#### Exercises:

- Change the Names, Surnames and Ages in the Script so that the details belong to you and 4 of your friends/family-members oject Exam Help
- Add 3 more of your friends/family members to the Script
- Challenging Exercise:
  - Add another Associative Array called \$hobbies and use it to store the favourite Hobbies of your 8 people and ensure that you display the Hobbies in your output

#### Summary

- In this part of the lab we looked at all of the following:
  - An Introduction to PHP Exam Help
    - Registering for a Server
    - Output <a href="https://powcoder.com">https://powcoder.com</a>
    - Using HTML within PHP powcoder
    - Variables
    - Arithmetic
    - Selections
    - Iterations
    - Arrays