# Advanced Web Programming

PHP FUNCTIONS

# PHP Functions

- A user defined function declaration starts with the word "function":

- **Syntax**

- function *functionName*()
  {
  *code to be executed*;
  }

- **Note:** A function name can start with a letter or underscore (not a number).

# Example

- <?php
function writeMsg()
{
echo "Hello world!";
}

writeMsg(); // call the function
?>

# PHP Function Arguments

- Information can be passed to functions through arguments. An argument is just like a variable.

- Arguments are specified after the function name, inside the parentheses. You can add as many arguments as you want, just separate them with a comma.

# PHP Function Arguments

- ```php
  <?php
  function sum($x,$y)
  {
  $z=$x+$y;
  echo $z;
  }
  sum(10,5);

  sum(15,35);
  ?>
  ```

# PHP Functions - Returning Values

- to let a function return a value, use the return statement:

- **Example**

- ```php
  <?php
  function sum($x,$y)
  {
  $z=$x+$y;
  return $z;
  }

  echo "5 + 10 = " . sum(5,10) . "<br>";
  echo "7 + 13 = " . sum(7,13) . "<br>";
  echo "2 + 4 = " . sum(2,4);
  ?>
  ```

# **Questions**

- Write a program that accepts two numbers from the user. Your program must be defined with four methods. Each of these methods accepts two integer values and returns an integer. Each of these methods is to be called in turn passing to them the values accepted from the user and outputting the return value.

- Method1 – Accepts 2 integer values, adds the values together & returns the answer.

- Method2 – Accepts 2 integer values, subtracts the first value from the second & returns the answer

- Method3 – Accepts 2 integer values, multiples the first value by the second & returns the answer to where it was called.

- Method4 – Accepts two integer values, divides the first number by the second and returns the answer to where it was called.

# Passing By Reference

You can pass a variable by reference to a function so the function can modify the variable. The syntax is as follows:

```php
<?php
function foo(&$var)
{
    $var++;
}

$a=5;
foo($a);
// $a is 6 here
?>
```

# Exercise One

Write a program which accepts (as a double) the users Gross Pay. This is to be passed to a method which will return the tax due on the users input. The method is to calculate tax based on the following:

- The first €7500 of income is exempt from tax.

- The next €12500 is taxed at 23%

- The remainder is taxed at 45%.

Once the method has retuned the tax payable, it must be displayed. You can test your method using the following:

- There is no tax due on earnings of €6470.

- €2070 tax is due on earnings of €16500

- €29402.50 tax is due on earnings of €78950

# Exercise Two

Write a program accepts as input the number of hours a user has parked in a city centre car park. This is to be passed to a method that will return the total charge for the car based on the following:

The car park parking garage charges a €2.00 minimum fee to park for up to three hours.

The garage charges an additional €0.50 per hour for each hour or part thereof in excess of three hours.

The maximum charge for any given 24 hour period is €10.00.

Assume that no car parks for no longer than 24 hours at a time

# Exercise Two Continued

Once the method has retuned the charge payable, it must be displayed. You can test your method using the following:

- There is a €2 .00 charge for a 3 hour stay in the car park.
- There is a €3.50 charge for a 5.5 hour stay in the car park.
- There is a €4.50 charge for an 8 hour stay in the car park.
- There is a €5.00 charge for an 8.75 hour stay in the car park.
- There is a €9 charge for a 17 hour stay in the car park.