Week 7

Thanh Minh

Task 1

```php
mathfunctions.php  ×

mathfunctions.php > PHP > isPositiveInteger
1   <?php
2   /* mathfunctions.php
3      Collection of user-defined maths functions
4      Like any code you should start your file with a header comment
5      Author: A. Tutor
6   */
7
    0 references
8   function factorial ($n) {   // declare the factorial function
9       $result = 10;        // declare and initialise the result variable
10      $factor = $n;        // declare and initialise the factor variable
11      while ($factor > 1) {   // loop to multiple all factors until 1
12        $result = $result * $factor;
13        $factor--;            // next factor
14      }                 // Note that the factor 1 is not multiplied
15      return $result;
16  }
    0 references
17  function isPositiveInteger ($n) {  //declare the function that takes a parameter
18      $result = false;
19      if (is_numeric($n)) //use the inbuilt is_numeric which returns boolean
20          if ($n == floor($n))
21              if ($n > 0)
22                  $result = true;
23      return $result; // function execution will end here if -ve or none-integer
24  }
25  ?>
26
```

1.

```html
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4       <meta charset="UTF-8">
5       <meta http-equiv="X-UA-Compatible" content="IE=edge">
6       <meta name="viewport" content="width=device-width, initial-scale=1.0">
7       <title>Week 7</title>
8   </head>
9   <body>
10      <?php
11          include("mathfunctions.php") // make functions in the included file available
12      ?>
13      <h1>Factorial</h1>
14      <?php
15          $num = 5;
16              if (isPositiveInteger($num)) {
17                  echo "<p>", $num, "! is ", factorial($num), ".</p>";
18              } else {
19                  echo "<p>Please enter a positive integer.</p>";
20              }
21          echo "<p><a href='factorial.html'>Return to the Entry Page</a></p>";
22      ?>
23  </body>
24  </html>
```

2.

Factorial

5! is 120.

Return to the Entry Page

Link to task 1

Task 2:

```php
lab07 > 🐘 factorial_with_get.php > ⊘ html > ⊘ body
  1   <!DOCTYPE html>
  2   <html lang="en">
  3   <head>
  4       <meta charset="UTF-8">
  5       <meta http-equiv="X-UA-Compatible" content="IE=edge">
  6       <meta name="viewport" content="width=device-width, initial-scale=1.0">
  7       <title>Week 7</title>
  8   </head>
  9   <body>
 10       <?php
 11           include("mathfunctions.php") // make functions in the included file available
 12       ?>
 13       <h1>Factorial</h1>
 14       <?php
 15       if (isset($_GET["number"])) {  //check if the form data exists
 16           $num = $_GET["number"];    // obtain the form data
 17           if (isPositiveInteger($num)) {
 18               echo "<p>", $num, "! is ", factorial($num), ".</p>";
 19           } else {
 20               echo "<p>Please enter a positive integer.</p>";
 21           }
 22       }
 23       echo "<p><a href='factorial2.html'>Return to the Entry Pages</a></p>"
 24       ?>
 25   </body>
 26   </html>
```

1.

2.
```
lab07 > <> factorial2.html > ⊘ html
  1   <!DOCTYPE html>
  2   <html lang="en">
  3   <head>
  4       <meta charset="UTF-8">
  5       <meta http-equiv="X-UA-Compatible" content="IE=edge">
  6       <meta name="viewport" content="width=device-width, initial-scale=1.0">
  7       <title>Week7 | Factorial</title>
  8   </head>
  9   <body>
 10       <h1>Factorial Form</h1>
 11       <form action="factorial_with_get.php" method="get">
 12           <label for="number">Enter a positive integer</label>
 13           <input type="number" id="number" name="number">
 14       </form>
 15   </body>
 16   </html>
```

Factorial Form

Enter a positive integer [   ]

Factorial

6! is 720.

Return to the Entry Pages

Link to task2