

Lab 3-2. Functions

Prepared: TrangNTT

- Lab 3-2. Functions1
 - 2.1. Prepare2
 - 2.2. Guess Heads or Tails2
 - 2.3. Guess a number3
 - 2.4. Using printf function3
 - 2.5. Sale.....3
 - 2.6. CarpetEstimate4
 - 2.7. Exercise5

2.1. Prepare

Create Lab3-2 directory in the lab exercise project.

2.2. Guess Heads or Tails

Step 1. Create HeadsOrTails.php

```
HeadsOrTails.php X GotFlip.php
1 <HTML>
2   <HEAD><TITLE> Coin Flip!</TITLE>
3   <BODY>
4     <FONT SIZE=4 COLOR="BLUE"> Please Pick Heads or Tails! </FONT>
5
6     <FORM ACTION="GotFlip.php" METHOD="POST">
7       <?php
8         print "<INPUT TYPE=\"radio\" NAME=\"pick\" VALUE=0 > Heads";
9         print "<INPUT TYPE=\"radio\" NAME=\"pick\" VALUE=1 > Tails";
10        print "<BR>";
11      ?>
12      <INPUT TYPE="SUBMIT" VALUE="Submit">
13      <INPUT TYPE="RESET" VALUE="Restart">
14
15    </FORM>
16  </BODY>
17</HTML>
```

Step 2. Create GotFlip.php

```
HeadsOrTails.php X GotFlip.php X
1 <html>
2 <head><title> Coin Flip Results </title></head>
3 <body>
4   <?php
5     srand ((double) microtime() * 10000000);
6     $flip = rand( 0, 1 );
7     $pick = $_POST["pick"];
8
9     if ( $flip == 0 && $pick == 0 ) {
10       print "The flip=$flip, which is heads! <br> ";
11       print '<font color="blue"> You got it right!</font>';
12     } elseif ( $flip == 0 && $pick == 1 ) {
13       print "The flip=$flip, which is heads! <br> ";
14       print '<font color="red"> You got it wrong!</font>';
15     } elseif ( $flip == 1 && $pick == 1 ) {
16       print "The flip=$flip, which is tails! <br> ";
17       print '<font color="blue"> You got it right!</font>';
18     } elseif ( $flip == 1 && $pick == 0 ) {
19       print "The flip=$flip, which is tails! <br> ";
20       print '<font color="red"> You got it wrong!</font>';
21     } else {
22       print "<br>Illegal state error!";
23     }
24   ?>
25 </body></html>
```

Step 3. Run the ConditionalTest.html

Please Pick Heads or Tails!

☒ Heads ☐ Tails



The flip=0, which is heads!
You got it right!

2.3. Guess a number

Create a GuessANumber.php file to process a game which allows users to guess a number from 0 to 100.

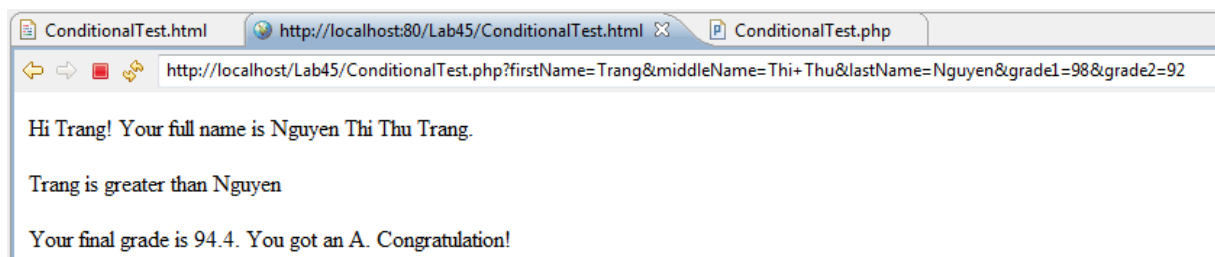
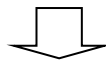
The system first get a random number from 0 to 100. Then the system ask the user to enter a number, if the number the user guesses is less than the random number, notify "Wrong. Please try a higher number. You have guessed 1 time!". Otherwise, notify "Wrong. Please try a lower number. You have guessed 1 time!". Then the user enter another number, so on...

Note to validate the number the user entered (text box). If it is not a number, please notify "You must enter a number!".

2.4. Using printf function

Change the following part to ConditionalTest.php in Lab4. Run and observe the result.

```
20 if ($final > 89) {  
21     printf ("Your final grade is %.1f. You got an A. Congratulation!", $final);  
22 } elseif ($final > 79) {  
23     printf ("Your final grade is %.1f. You got an B.", $final);  
24 } elseif ($final > 69) {  
25     printf ("Your final grade is %.1f. You got an C.", $final);  
26 } elseif ($final > 59) {  
27     printf ("Your final grade is %.1f. You got an D", $final);  
28 } elseif ($final >= 0) {  
29     printf ("Your final grade is %.1f. You got an F.", $final);  
30 } else {  
31     printf ("Illegal grade less than 0. Final grade = %.1f", $final);  
32 }  
33 ?></body></html>
```



2.5. Sale

Create Sale.php to give date information for sale.

```

HeadsOrTails.php  GotFlip.php  Sale.php X
1 <html>
2   <head><title> Our Shop </title> </head>
3   <body>
4       <font size=4 color="blue">
5       <?php
6           $today = date( 'l, F d, Y' );
7           print "Welcome on $today to our huge blowout sale! </font>";
8           $month = date('m');
9           $year = date('Y');
10          $dayofyear = date('z');
11          if ( $month == 12 && $year == 2001 ) {
12              $daysleft = ( 365 - $dayofyear + 10 );
13              print "<br> There are $daysleft sales days left";
14          } elseif ( $month == 01 && $year == 2002 ) {
15              if ( $dayofyear <= 10 ) {
16                  $daysleft = ( 10 - $dayofyear );
17                  print "<br> There are $daysleft sales days left";
18              } else {
19                  print "<br>Sorry, our sale is over.";
20              }
21          } else {
22              print "<br>Sorry, our sale is over.";
23          }
24          print "<br>Our Sale Ends Janurary January 10, 2002";
25      ?>
26      </font>
27  </body>
28 </html>

```

2.6. CarpetEstimate

Step 1. Create Carpet Estimate.html

```

DateTimeProcessing.p  SquareCube.php  CalculateCost.php  CarpetEstimate.html X 4
1 <HTML>
2   <HEAD><TITLE> Carpet Estimate</TITLE></HEAD>
3   <BODY>
4       <FONT SIZE=5 COLOR="BLUE"> Carpet Cost Estimator! </FONT>
5       <FORM ACTION="CalculateCost.php" METHOD="POST">
6           <table>
7               <tr><td>Carpet grade:</td>
8                   <td><INPUT TYPE="radio" NAME="grade" VALUE=1 > Best Quality</td>
9                   <td><INPUT TYPE="radio" NAME="grade" VALUE=2 > Extra Value</td>
10              </tr>
11              <tr>
12                  <td>Room width (in m2):</td>
13                  <td colspan="2"><INPUT TYPE="text" NAME="width" SIZE=4 MAXLENGTH=4></td>
14              </tr>
15              <tr>
16                  <td>Room length (in m2):</td>
17                  <td colspan="2"><INPUT TYPE="text" NAME="length" SIZE=4 MAXLENGTH=4></td>
18              </tr>
19                  <td align="right"> <INPUT TYPE="SUBMIT" VALUE="Submit"></td>
20                  <td align="left"><INPUT TYPE="RESET" VALUE="Reset"></td>
21              </tr>
22          </table>
23      </FORM>
24  </BODY>
25 </HTML>

```

Step 2. Create CalculateCost.php

```

2 <head><title> Carpet Cost Quote </title> </head>
3 <body>
4 <font size=5 color="blue"> Your Estimated Carpet Costs </font>
5 <?php
6     function carpet_cost( $width, $length, $grade, $carpet_cost ) {
7         if ( $width > 0 && $length > 0 ) {
8             if ( $grade == 1 ) {
9                 $carpet_cost = $width * $length * 4.99;
10                return 1;
11            } elseif ( $grade == 2 ) {
12                $carpet_cost = $width * $length * 3.99;
13                return 1;
14            } else {
15                print "Unknown carpet grade = $grade";
16                return 0;
17            }
18        } else { return 0; }
19    }
20    $width = $_POST["width"]; $length = $_POST["length"]; $grade=$_POST["grade"];
21    $carpet_cost = 0; $install_cost = 0;
22    $ret = carpet_cost( $width, $length, $grade, &$amp;carpet_cost );
23    if ( $ret ) {
24        $room_size = $width * $length;
25        $total_cost = $carpet_cost + ($carpet_cost *.5);
26        print "<br>Total square feet = $room_size";
27        print "<br>Carpet grade = $grade";
28        print "<br>Carpet cost = \$$carpet_cost";
29        print "<br>Total cost estimate (installed) = \$$total_cost";
30    } else { print "Illegal value received"; }
31    ?>
32 </body>
```

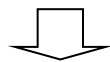
Step 3. Run and observe the result

Carpet Cost Estimator!

Carpet grade: ☐ Best Quality ☒ Extra Value

Room width (in m2):

Room length (in m2):



Your Estimated Carpet Costs

Total square feet = 15
Carpet grade = 2
Carpet cost = \$59.85
Total cost estimate (installed) = \$89.775

2.7. Exercise

1. Write a function to convert radians to degrees and vice versa. Write .php file allowing users to enter 1 factor, and print the other factor.

2. Create a DateTimeFunction.php to do the following jobs:
- Allows users enter two names and their birthdays in number (E.g. 12/12/2008)
 - Validate them if two birthdays
 - If OK, give the following information by write your own functions and call them
 - Display in two dates in letter (E.g. Friday, December 12, 2008) for each person
 - Calculate the difference in days between two dates.
 - Calculate how old are they, the difference years between two persons.