

# Lab 3-1. Conditional Statements

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## 1.1. Prepare

Create Lab 3-1 directory in the lab exercise project.

## 1.2. Conditional Test Example

Create a Conditional Test example to compare your first name and last name; and calculate the final grade as the following formula: final grade = 40% \* mid-term score + 60% \* final-exam score.

### Step 1. Create ConditionalTest.html

```
ConditionalTest.html X
1 <HTML>
2   <HEAD> <TITLE> A Simple Form </TITLE> </HEAD>
3   <BODY>
4     <FORM ACTION="ConditionalTest.php" METHOD="GET">
5       <table>
6         <tr>
7           <td>First Name: </td>
8           <td><input type="text" size="10" maxlength="15" name="firstName"></td>
9         </tr>
10        <tr>
11          <td>Middle Name: </td>
12          <td><input type="text" size="10" maxlength="15" name="middleName"></td>
13        </tr>
14        <tr>
15          <td>Last Name: </td>
16          <td><input type="text" size="10" maxlength="15" name="lastName"></td>
17        </tr>
18        <tr>
19          <td>Enter Mid-term Score </td>
20          <td><input type="text" size="4" maxlength="7" name="grade1"></td>
21        </tr>
22        <tr>
23          <td>Enter Final-exam Score </td>
24          <td><input type="text" size="4" maxlength="7" name="grade2"></td>
25        </tr>
26        <tr>
27          <td align="right"><INPUT TYPE="SUBMIT" VALUE="Submit"></td>
28          <td align="left"><INPUT TYPE="RESET" VALUE="Reset"></td>
29        </tr>
30      </table>
31    </FORM>
32  </BODY>
33 </HTML>
```

## Step 2. Create ConditionalTest.php

```
1 <html>
2 <head><title>Conditional Test</title></head>
3 <body>
4 <?php
5 $first = $_GET["firstName"]; $middle = $_GET["middleName"]; $last = $_GET["lastName"];
6 print ("Hi $first! Your full name is $last $middle $first. <br><br>");
7 if ($first == $last) {
8     print ("$first and $last are equal");
9 }
10 if ($first < $last) {
11     print ("$first is less than $last");
12 }
13 if ($first > $last) {
14     print ("$first is greater than $last");
15 }
16 print("<br><br>");
17
18 $grade1 = $_GET["grade1"]; $grade2 = $_GET["grade2"];
19 $final = (2 * $grade1 + 3 * $grade2)/5;
20 if ($final > 89) {
21     print ("Your final grade is $final. You got an A. Congratulation!");
22 } elseif ($final > 79) {
23     print ("Your final grade is $final. You got an B.");
24 } elseif ($final > 69) {
25     print ("Your final grade is $final. You got an C.");
26 } elseif ($final > 59) {
27     print ("Your final grade is $final. You got an D");
28 } elseif ($final >= 0) {
29     print ("Your final grade is $final. You got an F.");
30 } else {
31     print ("Illegal grade less than 0. Final grade = $final");
32 }
33 ?></body></html>
```

## Step 3. Run the ConditionalTest.html

ConditionalTest.html http://localhost:80/Lab4/ConditionalTest.html

http://localhost/Lab45/ConditionalTest.html

First Name:

Middle Name:

Last Name:

Enter Mid-term Score

Enter Final-exam Score



```
ConditionalTest.html http://localhost:80/Lab4/ConditionalTest.html ConditionalTest.php
http://localhost/Lab45/ConditionalTest.php?firstName=Trang&middleName=Thi+Thu&lastName=Nguyen&grade1=97&grade2=92

Hi Trang! Your full name is Nguyen Thi Thu Trang.

Trang is greater than Nguyen

Your final grade is 94. You got an A. Congratulation!
```

### 1.3. Using switch statement

Modify the ConditionalTest example as the following. Run and observe the result.

```
ConditionalTest.html http://localhost:80/Lab4/ConditionalTest.html ConditionalTest.php Date
20 if ($final > 89) {
21     printf ("Your final grade is %.1f. You got an A. Congratulation!", $final);
22     $rate = "A";
23 } elseif ($final > 79) {
24     printf ("Your final grade is %.1f. You got a B.", $final);
25     $rate = "B";
26 } elseif ($final > 69) {
27     printf ("Your final grade is %.1f. You got a C.", $final);
28     $rate = "C";
29 } elseif ($final > 59) {
30     printf ("Your final grade is %.1f. You got a D", $final);
31     $rate = "D";
32 } elseif ($final > 39) {
33     printf ("Your final grade is %.1f. You got a E", $final);
34     $rate = "E";
35 } elseif ($final >= 0) {
36     printf ("Your final grade is %.1f. You got a F.", $final);
37     $rate = "F";
38 } else {
39     printf ("Illegal grade less than 0. Final grade = %.1f", $final);
40     $rate = "Illegal";
41 }
42
43 print("<br><br>");
44 switch($rate){
45     case "A": print("Excellent!"); break;
46     case "B": print("Good!"); break;
47     case "C": print("Not bad!"); break;
48     case "D": print("Normal!"); break;
49     case "D":
50     case "F": print("You have to try again!"); break;
51     default: print("Illegal grade!");
52 }
53 ?></body></html>
```

ConditionalTest.html http://localhost:80/Lab4/ConditionalTest.htm

http://localhost/Lab45/ConditionalTest.html

First Name:

Middle Name:

Last Name:

Enter Mid-term Score

Enter Final-exam Score

ConditionalTest.html http://localhost:80/Lab4/ConditionalTest.html

http://localhost/Lab45/ConditionalTest.php?firstName=Trang&midd

Hi Trang! Your full name is Nguyen Thi Thu Trang.

Trang is greater than Nguyen

Your final grade is 86.2. You got a B.

Good!

## 1.4. Square and Cube

Step 1. Create a SquareCube.php file to generate square and cube values.

```
ConditionalTest.html ConditionalTest.php SquareCube.php http://localhost:80/Lab4/SquareCube.php
1 <html><head><title>Square and Cube</title></head>
2 <body><font size="5" color="blue">
3 Generate Square and Cube Values </font>
4 <br>
5 <form action="<?php echo $_SERVER['PHP_SELF'] ?>" method="GET">
6
7 <table>
8 <tr>
9 <td>Select Start Number: </td>
10 <td><select name="start">
11 <?php
12     for ($i=0; $i<=10; $i++) {
13         print ("<option>$i</option>");
14     }
15 <?>
16 </select>
17 </td>
18 </tr>
19 <tr>
20 <td>Select End Number: </td>
21 <td><select name="end">
22 <?php
23     for ($i=0; $i<=20; $i++) {
24         print ("<option>$i</option>");
25     }
26 <?>
27 </select>
28 </td>
29 </tr>
30 <tr>
31 <td align="right"> <INPUT TYPE="SUBMIT" VALUE="Submit"></td>
32 <td align="left"><INPUT TYPE="RESET" VALUE="Reset"></td>
33 </tr>
34 </table>
35 <table>
36 <tr><th>Number</th><th>Square</th><th>Cube</th></tr>
37 <?php
38     if (array_key_exists("start", $_GET)) {
39         $start = $_GET["start"];
40         $end = $_GET["end"];
41         $i = $start;
42         while ( $i <= $end ) {
43             $sqr=$i*$i;
44             $cubed=$i*$i*$i;
45             print "<TR><TD>$i</TD><TD>$sqr</TD><TD>$cubed</TD></TR>";
46             $i = $i + 1;
47         }
48     }
49 <?>
50 </table>
51 </form>
52 </body>
53 </html>
```

Step 2. Run and observe the result

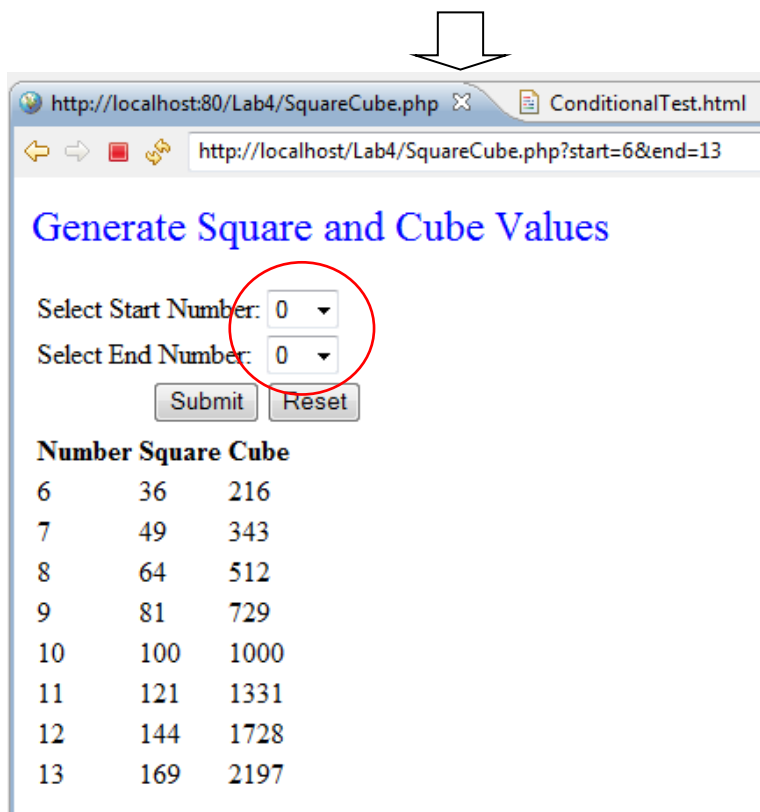
http://localhost:80/Lab4/SquareCube.php ConditionalTest.html

http://localhost/Lab4/SquareCube.php

### Generate Square and Cube Values

Select Start Number:

Select End Number:



http://localhost:80/Lab4/SquareCube.php ConditionalTest.html

http://localhost/Lab4/SquareCube.php?start=6&end=13

## Generate Square and Cube Values

Select Start Number: 0

Select End Number: 0

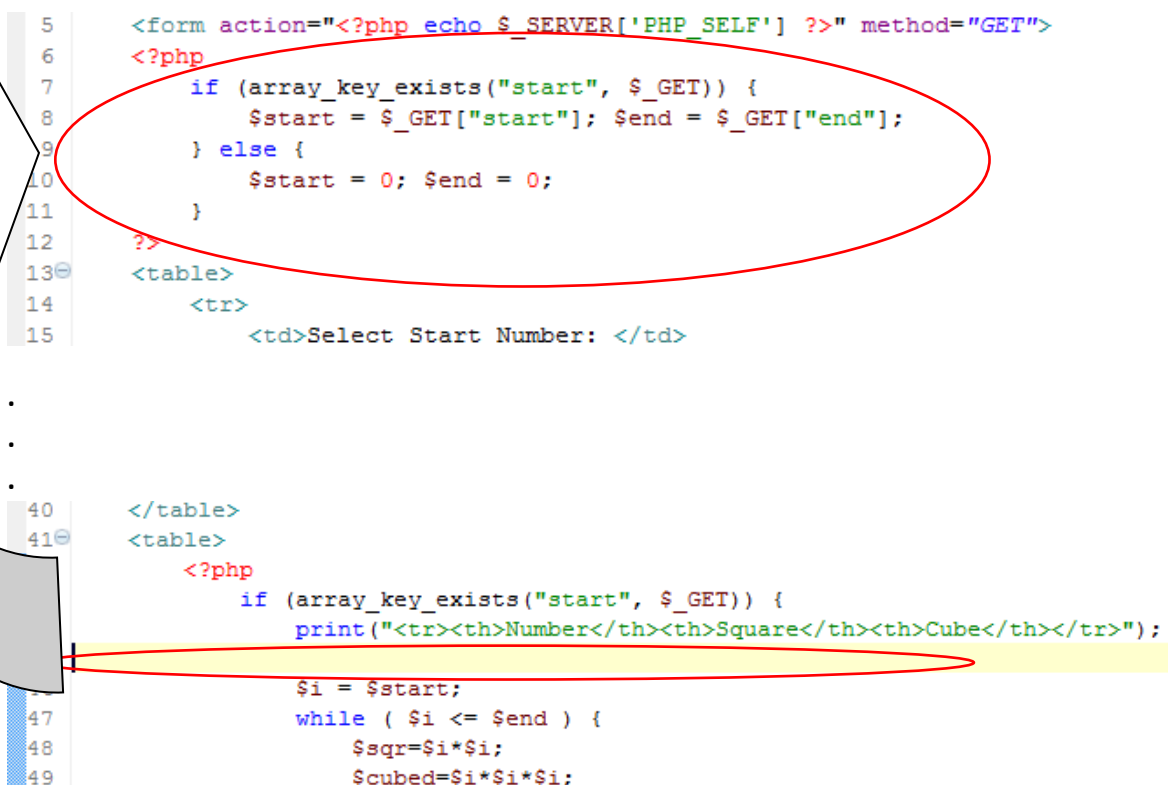
Submit Reset

Number	Square	Cube
6	36	216
7	49	343
8	64	512
9	81	729
10	100	1000
11	121	1331
12	144	1728
13	169	2197

Note that the values of start/end number selection remain 0 even after submitting. Do Step 3 to remain the values that users choose.

### Step 3. Modify the SquareCube.php to remain selection values

- Move and modify the code which get values for \$start and \$end variables before the selection box.



```

5      <form action="<?php echo $_SERVER['PHP_SELF'] ?>" method="GET">
6
7      <?php
8          if (array_key_exists("start", $_GET)) {
9              $start = $_GET["start"]; $end = $_GET["end"];
10         } else {
11             $start = 0; $end = 0;
12         }
13     }
14
15     <table>
16         <tr>
17             <td>Select Start Number: </td>
18
19     .
20     .
21     .
22
23     </table>
24     <table>
25         <?php
26             if (array_key_exists("start", $_GET)) {
27                 print("<tr><th>Number</th><th>Square</th><th>Cube</th></tr>");
28
29                 $i = $start;
30                 while ( $i <= $end ) {
31                     $sqr=$i*$i;
32                     $cubed=$i*$i*$i;
33

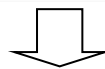
```

- Modify the selection box to remain the values in \$start and \$end variables.

```

11  <?>
12  <table>
13      <tr>
14          <td>Select Start Number: </td>
15          <td><select name="start">
16              <?php
17                  for ($i=0; $i<=10; $i++) {
18                      if ($start==$i){
19                          print("<option selected>$i</option>");
20                      } else {
21                          print("<option>$i</option>");
22                      }
23                  }
24              <?>
25          </select>
26      </td>
27  </tr>
28  <tr>
29      <td>Select End Number: </td>
30      <td><select name="end">
31          <?php
32              for ($i=0; $i<=20; $i++) {
33                  if ($end==$i){
34                      print("<option selected>$i</option>");
35                  } else {
36                      print("<option>$i</option>");
37                  }
38              }
39          <?>
40      </select>
41  </td>
42  </tr>
43  <tr>
44      <td align="right"> <input type="submit" value="Submit"></td>

```



http://localhost:80/Lab4/SquareCube.php

http://localhost/Lab4/SquareCube.php?start=9&end=13

## Generate Square and Cube Values

Select Start Number:

Select End Number:

Number	Square	Cube
9	81	729
10	100	1000
11	121	1331
12	144	1728
13	169	2197

## 1.5. Exercise

Tạo DateTimeProcessing để yêu cầu nhập vào giờ, phút, giây; ngày, tháng, năm. Sau đó, đưa ra thêm một số thông tin về ngày giờ theo định dạng 12 giờ và đưa ra tháng đó có bao nhiêu ngày.

Biết rằng, tháng 1, 3, 5, 7, 8, 10, 12 có 31 ngày; tháng 4, 6, 9, 11 có 30 ngày; tháng 2 có 29 ngày nếu đó là năm nhuận, 28 ngày nếu không là năm nhuận.

Năm nhuận là những năm nào chia hết cho 4 được coi là năm nhuận. Tuy nhiên, vẫn có một số ngoại lệ đối với nguyên tắc này. Những năm chia hết cho 100 chỉ được coi là năm nhuận nếu chúng cũng chia hết cho 400. Ví dụ, 1600 và 2000 là các năm nhuận nhưng 1700, 1800 và 1900 không phải năm nhuận. Tương tự như vậy, 2100, 2200, 2300, 2500, 2600, 2700, 2900 và 3000 không phải năm nhuận nhưng 2400 và 2800 là các năm nhuận.

Enter your name and select date and time for the appointment

Your name:

Date:

Time:

2000

2001

2002

2003

2004

2005

2006

2007

2008

2009

☒ Date Time Validation

Enter your name and select date and time for the appointment

Your name:

Date:

Time:

Hi Trang!

You have choose to have an appointment on 23:23:23, 9/9/2009

More information

In 12 hours, the time and date is 11:23:23 PM, 9/9/2009

This month has 30 days!



Năm nhuận:

Enter your name and select date and time for the appointment

Your name:

Date:

Time:

Hi Trang!

You have choose to have an appointment on 23:23:23, 9/2/2008

More information

In 12 hours, the time and date is 11:23:23 PM, 9/2/2008

This month has 29 days!