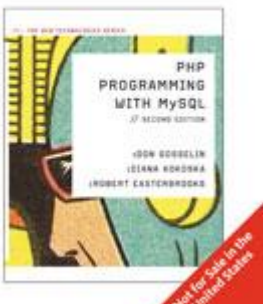




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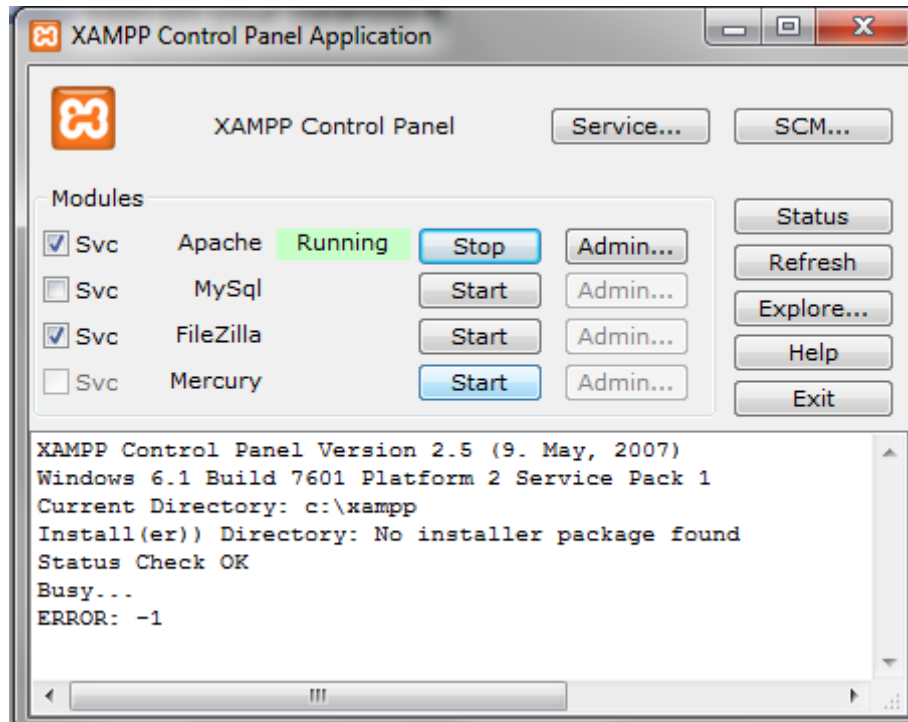
Lab03 – Control Structures and Loops

	<p>PHP Programming with MySQL</p> <p>AUTHORS: Gosselin/Kokoska/Easterbrooks - ©2011 ISBN10: 0-538-46814-9 ISBN13: 978-0-538-46814-5</p>
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How to run your PHP programs:



1. Double click the XAMPP icon on your desktop. The XAMPP control panel will be displayed:



2. Click the **Start** button beside the **Apache** module. The status should display **Running**.
3. Edit and save your PHP code file.
4. Copy your PHP code file to the `\xampp\htdocs` folder.
5. Launch your browser.
6. Enter `localhost/myCode.php` into the address bar to execute the program.

PHP if Statement

1. Open Notepad++ and create an HTML file with embedded PHP as follows:

```
<!DOCTYPE html>
<html>
<head>
<title>Dice Roll</title>
<meta charset="utf-8" />
</head>
<body>
<?php
$FaceNamesSingular = array("one", "two", "three", "four", "five", "six");
$FaceNamesPlural = array("ones", "twos", "threes", "fours", "fives", "sixes");

function CheckForDoubles($Die1, $Die2) {
    global $FaceNamesSingular;
    global $FaceNamesPlural;

    if ($Die1 == $Die2) // Doubles
        echo "The roll was double ", $FaceNamesPlural[$Die1-1], "<br />";
    else // Not Doubles
        echo "The roll was a ", $FaceNamesSingular[$Die1-1],
            " and a ", $FaceNamesSingular[$Die2-1], "<br />";
}

function DisplayScoreText($Score) {
    if ($Score == 2)
        echo "You rolled snake eyes!<br />";
    if ($Score == 3)
        echo "You rolled a loose deuce!<br />";
    if ($Score == 5)
        echo "You rolled a fever five!<br />";
    if ($Score == 7)
        echo "You rolled a natural!<br />";
    if ($Score == 9)
        echo "You rolled a nina!<br />";
    if ($Score == 11)
        echo "You rolled a yo!<br />";
    if ($Score == 12)
        echo "You rolled boxcars!<br />";
}
```

```
$Dice = array();
$Dice[0] = rand(1,6);
$Dice[1] = rand(1,6);
$Score = $Dice[0] + $Dice[1];
echo "<p>";
echo "The total score for the roll was $Score.<br />";
CheckForDoubles($Dice[0],$Dice[1]);
DisplayScoreText($Score);
echo "</p>";
?>
</body>
</html>
```

2. Save the file as `DiceRoll.php`. Copy the file into your **XAMP\htdocs** folder.

To run your program:

3. Open your default browser.
4. Enter <http://localhost/DiceRoll.php> into the address bar and hit Enter.

PHP if...else Statement

1. Open `DiceRoll.php` from the previous exercise in Notepad++.
2. Modify the functions as follows:

```
function CheckForDoubles($Die1, $Die2) {  
    global $FaceNamesSingular;  
    global $FaceNamesPlural;  
    $ReturnValue = false;  
  
    if ($Die1 == $Die2) { // Doubles  
        echo "The roll was double ", $FaceNamesPlural[$Die1-1], "<br />";  
        $ReturnValue = true;  
    }  
    else { // Not Doubles  
        echo "The roll was a ", $FaceNamesSingular[$Die1-1],  
            " and a ", $FaceNamesSingular[$Die2-1], "<br />";  
        $ReturnValue = false;  
    }  
  
    return $ReturnValue;  
}
```

```
function DisplayScoreText($Score, $Doubles) {  
    if ($Doubles) {  
        if ($Score == 2)  
            echo "You rolled snake eyes!<br />";  
        if ($Score == 12)  
            echo "You rolled boxcars!<br />";  
    }  
    else {  
        if ($Score == 3)  
            echo "You rolled a loose deuce!<br />";  
        if ($Score == 5)  
            echo "You rolled a fever five!<br />";  
        if ($Score == 7)  
            echo "You rolled a natural!<br />";  
        if ($Score == 9)  
            echo "You rolled a nina!<br />";  
        if ($Score == 11)  
            echo "You rolled a yo!<br />";  
    }  
}
```

3. Save the file as `DiceRoll.php`.. Copy the file into your **XAMP\htdocs** folder.

To run your program:

4. Open your default browser.
5. Enter <http://localhost/DiceRoll.php> into the address bar and hit Enter.

PHP case Statement

1. Open `DiceRoll.php` from the previous exercise in Notepad++.
2. Modify the `DisplayScoreText` function as follows:

```
function DisplayScoreText($Score, $Doubles) {  
    switch ($Score) {  
        case 2:  
            echo "You rolled snake eyes!<br />";  
            break;  
        case 3:  
            echo "You rolled a loose deuce!<br />";  
            break;  
        case 5:  
            echo "You rolled a fever five!<br />";  
            break;  
        case 7:  
            echo "You rolled a natural!<br />";  
            break;  
        case 9:  
            echo "You rolled a nina!<br />";  
            break;  
        case 11:  
            echo "You rolled a yo!<br />";  
            break;  
        case 12:  
            echo "You rolled boxcars!<br />";  
            break;  
        default:  
            if ($Score % 2 == 0) { /* An even  
                                   number */  
                if ($Doubles) {  
                    echo "You rolled a hard  
                        $Score!<br />";  
                }  
                else { /* Not doubles */  
                    echo "You rolled an easy  
                        $Score!<br />";  
                }  
            }  
            break;  
    }  
}
```

3. Save the file as `DiceRoll.php`.. Copy the file into your **XAMP\htdocs** folder.

To run your program:

4. Open your default browser.
5. Enter <http://localhost/DiceRoll.php> into the address bar and hit Enter.

PHP while Loop

1. Open `DiceRoll.php` from the previous exercise in Notepad++.
2. Modify the code **after** the function definitions as follows:

```
$Dice = array();
$DoublesCount = 0;
$RollNumber = 1;
while ($RollNumber <= 5) {
    $Dice[0] = rand(1,6);
    $Dice[1] = rand(1,6);
    $Score = $Dice[0] + $Dice[1];
    echo "<p>";
    echo "The total score for roll $RollNumber was $Score.<br />";
    $Doubles = CheckForDoubles($Dice[0], $Dice[1]);
    DisplayScoreText($Score, $Doubles);
    echo "</p>";
    if ($Doubles)
        ++$DoublesCount;
    ++$RollNumber;
} // End of the while loop
echo "<p>Doubles occurred on $DoublesCount of the five rolls.</p>";
?>
</body>
</html>
```

3. Save the file as `DiceRoll.php`.. Copy the file into your **XAMP\htdocs** folder.

To run your program:

4. Open your default browser.
5. Enter <http://localhost/DiceRoll.php> into the address bar and hit Enter.

PHP do...while Loop

1. Open `DiceRoll.php` from the previous exercise in Notepad++.
2. Modify the code **after** the function definitions as follows:

```
$Dice = array();
$DoublesCount = 0;
$RollNumber = 1;
do {
    $Dice[0] = rand(1,6);
    $Dice[1] = rand(1,6);
    $Score = $Dice[0] + $Dice[1];
    echo "<p>";
    echo "The total score for roll $RollNumber was $Score.<br />";
    $Doubles = CheckForDoubles($Dice[0], $Dice[1]);
    DisplayScoreText($Score, $Doubles);
    echo "</p>";
    if ($Doubles)
        ++$DoublesCount;
    ++$RollNumber;
} while ($RollNumber <= 5); // End of the do ... while loop
echo "<p>Doubles occurred on $DoublesCount of the five rolls.</p>";
?>
</body>
</html>
```

3. Save the file as `DiceRoll.php`.. Copy the file into your **XAMP\htdocs** folder.

To run your program:

4. Open your default browser.
5. Enter <http://localhost/DiceRoll.php> into the address bar and hit Enter.

PHP for Loop

1. Open `DiceRoll.php` from the previous exercise in Notepad++.
2. Modify the code **after** the function definitions as follows:

```
$Dice = array();
$DoublesCount = 0;
for ($RollNumber = 1; $RollNumber <= 5; ++$RollNumber) {
    $Dice[0] = rand(1,6);
    $Dice[1] = rand(1,6);
    $Score = $Dice[0] + $Dice[1];
    echo "<p>";
    echo "The total score for roll $RollNumber was $Score.<br />";
    $Doubles = CheckForDoubles($Dice[0], $Dice[1]);
    DisplayScoreText($Score, $Doubles);
    echo "</p>";
    if ($Doubles)
        ++$DoublesCount;
} // End of the for loop
echo "<p>Doubles occurred on $DoublesCount of the five rolls.</p>";
?>
</body>
</html>
```

6. Save the file as `DiceRoll.php`.. Copy the file into your **XAMP\htdocs** folder.

To run your program:

7. Open your default browser.
8. Enter <http://localhost/DiceRoll.php> into the address bar and hit Enter.

PHP foreach Loop

1. Open Notepad++ and create an HTML file with embedded PHP as follows:

```
<!DOCTYPE html>
<head>
<title>Musical Scale</title>
<meta charset="utf-8" />
</head>
<body>
<?php
$MusicalScale = array("do", "re", "mi", "fa", "so", "la", "ti");
$OutputString="The notes of the musical scale are: ";
foreach ($MusicalScale as $CurrentNote)
    $OutputString .= " " . $CurrentNote;
echo "<p>$OutputString</p>";
?>
</body>
</html>
```

Exercise:

Modify the `foreach` loop in the previous exercise to output the array index position of each element in the `$MusicalScale` array using the `=>` notation.

The final output to the browser should be:

