

HTML/PHP - Lecture 8

COEN 10

PHP - loops

★Loops execute a block of code

©for a specified number of times,
or

©while a specified condition is true

PHP - loops

★In PHP:

©while

✧Executes a block of code while a specified condition is true

©do...while

✧Executes a block of code once, and then repeats the code while a specified condition is true

©for

✧Executes a block of code a specified number of times

©foreach

✧Executes a block of code for each element in an array

PHP - loops

★The while loop

©Executes a block of code while a condition is true.

★Syntax

```
while (condition)
{
    <code to be executed>;
}
```

PHP - loops

★ Example

```
<?php
$i=1;
while ($i <= 5)
{
    echo $i . "<br />";
    $i++;
}
?>
```

this will output 6
if you want to start
with the value of i is
1, you need to restate
\$i=1

PHP - loops

★ The do...while loop

© Executes the block of code once and repeats while the condition is true.

★ Syntax

```
do
{
    <code to be executed>;
}
while (condition);
```

PHP - loops

★ Example

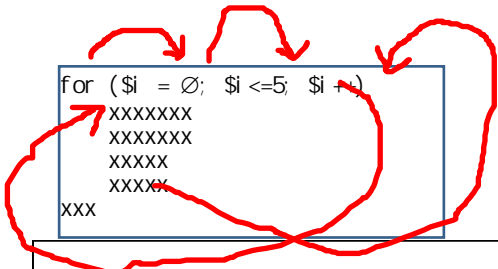
```
<?php
$i=1;
do
{
    $i++;
    echo $i . "<br />";
}
while ($i <= 5);
?>
```

has to be true in the
beginning, unless it
is doing something
wrong (because it is
doing again and again)

PHP - loops

★ The for loop

© Used typically to execute a block of code for a number of times.



```
for ($i = 0; $i<=5; $i++)
{
    XXXXXXXX
    XXXXXXXX
    XXXXX
    XXXXX
    XXX
}
```

The for Loop - Syntax

```
for (init; condition; increment)
{
    <code to be executed>;
}
```

★ init

Ⓢ Executes before the loop. Mostly used to set a counter.

★ condition

Ⓢ Evaluated before each loop iteration. If it is TRUE, the loop continues. If it is FALSE, the loop ends.

★ increment

Ⓢ Executes after each iteration of the loop. Mostly used to increment a counter.

```
for ($i = , $j = ; &&$i<=5, $j<=6; $i++)
```

The for Loop - Syntax

```
for (init1, inti2; condition; inc1, inc2)
{
    <code to be executed>;
}
```

★ Each of the parameters can be empty
for (; ;) → is a loop that runs forever

★ Init and increment may have multiple expressions (separated by commas)

★ Conditions may be combined with logical operators: && and ||

The for Loop - Syntax

★ Example

```
<?php
    for ($i=1; $i<=5; $i++)
    {
        echo $i . "<br />";
    }
?>
```

Examples

★ Write the code to calculate the sum of the numbers between \$a and \$b that are multiple of \$x

★ Write the code to output every other number between \$x and y, starting with \$x

```
$sum=0,
for ($i=$a; $i<=$b;$i++)
{
    if $i % $x == 0
        $sum += $i;
}
```

```
for ($i=$x;$i<=$y;$i+=2)
{
    echo $i;
}
```

Examples

★Write the code to **count** how many numbers between \$x and \$y are multiple of \$z

```
$count=0,  
for ($i=$x;$i<=$y;$i++)  
{  
    if ($i%=$z==0)  
        $count++;  
}
```

★Write the code to **calculate the factorial** of \$x

```
fact=1  
for($i=n;$i>=1;$i--)  
{  
    $fact*=$i;  
}
```