PHP Loops/Repetition

Repetition

- Every programming languages makes use of a construct that allows the continual iteration of blocks of code

- These constructs usually take the form of **for loops** and **conditional loops**

General Format of a For Loop

for (*init counter; test counter; increment counter*) {
    code to be executed;
}

```php
<?php
for ($x = 0; $x <= 10; $x++) {
    echo "The number is: $x <br>";
}
?>
```

The PHP foreach Loop

- The foreach loop works only on arrays, and is used to loop through each key/value pair in an array.

Syntax

foreach ($*array* as $*value*) {
    code to be executed;
}

Example

```php
<?php
$colors = array("red", "green", "blue",
"yellow");

foreach ($colors as $value) {
    echo "$value <br>";
}
?>
```

While Loops

Syntax
while (*condition*) { *code to be executed*; }
Example
```
<html>
<body>
<?php
$i = 0;
$num = 50;
while( $i < 10)
{
        $num--;
        $i++;
}
 echo ("Loop stopped at i = $i and num = $num" ); ?>
</body>
</html>
```

The do...while loop statement

Syntax
do { *code to be executed;* }while (*condition*);
Example
<html>
<body>
<?php
$i = 0;
$num = 0;
do
 {
    $i++;
}while($i < 10);
echo ("Loop stopped at i = $i"); ?> </body> </html>

Exercises

1. Create a form that allows a user to enter their name and a 'number'. Display their name 'number' of times.

2. Create a form that allows a user to enter a starting population, an annual percentage growth and the number of years. When submitted calculate and display the new yearly population.

3. Create a form that allows a user to enter number. Clicking the submit button will calculate the factorial of that number i.e. 5=5x4x3x2x1=120.

DO NOT FORGET TO UPLOAD AND LINK YOUR WORK UNDER YOUR UNIT 1 PAGE ON YOUR CLASS WEBSITE!!!