Write a Program:

1. To count 5 to 15 using PHP loop.

```php
<?php
//Akriti Kumari Dev
for($i=5;$i<16;$i++){
    echo("<br>".$i);
}
?>
```

5
6
7
8
9
10
11
12
13
14
15

2. To print "Hello World" using PHP variable.

```php
<?php
//Akriti Kumari Dev
echo("<h1>Hello World!</h1>")
?>
```

Hello World!

3. To check student grade based on marks.

```php
<?php
//Akriti Kumari Dev
  $marks = 75; // assuming the student's marks are 75
  $grade = "";

  if($marks >= 90){
    $grade = "A+";
  } elseif($marks >= 80 && $marks < 90){
    $grade = "A";
  } elseif($marks >= 70 && $marks < 80){
    $grade = "B";
  } elseif($marks >= 60 && $marks < 70){
    $grade = "C";
  } elseif($marks >= 50 && $marks < 60){
    $grade = "D";
  } else {
    $grade = "F";
  }

  echo "The student's grade is: " . $grade;
?>
```

The student's grade is: B

4. To find factorial of a number using loop in PHP

```php
<?php
//Akriti Kumari Dev
  $num = 5; // assuming the number is 5
  $factorial = 1;

  for($i = 1; $i <= $num; $i++){
    $factorial *= $i;
  }

  echo "The factorial of " . $num . " is: " . $factorial;
?>
```

The factorial of 5 is: 120

5. To create a given pattern with * using for loop

```
*
**
***
****
*****
******
*******
********
```

```php
<?php
//Akriti Kumari Dev
  $rows = 10; // assuming 10 rows are needed for the pattern

  for($i = 1; $i <= $rows; $i++){
    for($j = 1; $j <= $i; $j++){
      echo "*";
    }
    echo "<br>";
  }
?>
```

```
*
**
***
****
*****
******
*******
********
*********
**********
```

6. $list = array("Italy"=>"Rome", "Luxembourg"=>"Luxembourg", "Belgium"=> "Brussels",
   "Denmark"=>"Copenhagen", "Finland"=>"Helsinki", "France" => "Paris",
   "Slovakia"=>"Bratislava", "Slovenia"=>"Ljubljana", "Germany" => "Berlin", "Greece" =>
   "Athens", "Ireland"=>"Dublin", "Netherlands"=>"Amsterdam", "Portugal"=>"Lisbon",
   "Spain"=>"Madrid", "Sweden"=>"Stockholm", "United Kingdom"=>"London",
   "Cyprus"=>"Nicosia", "Lithuania"=>"Vilnius", "Czech Republic"=>"Prague",
   "Estonia"=>"Tallin", "Hungary"=>"Budapest", "Latvia"=>"Riga", "Malta"=>"Valetta",
   "Austria" => "Vienna", "Poland"=>"Warsaw") ;

   Create a PHP script which displays the capital and country name from the above array
   $list. Sort the list by the name of the capital.

```php
<?php
//Akriti Kumari Dev
  $list = array(
    "Italy" => "Rome",
    "Luxembourg" => "Luxembourg",
    "Belgium" => "Brussels",
    "Denmark" => "Copenhagen",
    "Finland" => "Helsinki",
    "France" => "Paris",
    "Slovakia" => "Bratislava",
    "Slovenia" => "Ljubljana",
    "Germany" => "Berlin",
    "Greece" => "Athens",
    "Ireland" => "Dublin",
    "Netherlands" => "Amsterdam",
    "Portugal" => "Lisbon",
    "Spain" => "Madrid",
    "Sweden" => "Stockholm",
    "United Kingdom" => "London",
    "Cyprus" => "Nicosia",
    "Lithuania" => "Vilnius",
    "Czech Republic" => "Prague",
    "Estonia" => "Tallin",
    "Hungary" => "Budapest",
    "Latvia" => "Riga",
    "Malta" => "Valetta",
    "Austria" => "Vienna",
    "Poland" => "Warsaw"
  );
```

```php
  // sort the array by the value (capital name)
  asort($list);

  // loop through the sorted array and display the capital and country name
  foreach($list as $country => $capital){
    echo $capital . " is the capital of " . $country . "<br>";
  }
?>
```

Amsterdam is the capital of Netherlands
Athens is the capital of Greece
Berlin is the capital of Germany
Bratislava is the capital of Slovakia
Brussels is the capital of Belgium
Budapest is the capital of Hungary
Copenhagen is the capital of Denmark
Dublin is the capital of Ireland
Helsinki is the capital of Finland
Lisbon is the capital of Portugal
Ljubljana is the capital of Slovenia
London is the capital of United Kingdom
Luxembourg is the capital of Luxembourg
Madrid is the capital of Spain
Nicosia is the capital of Cyprus
Paris is the capital of France
Prague is the capital of Czech Republic
Riga is the capital of Latvia
Rome is the capital of Italy
Stockholm is the capital of Sweden
Tallin is the capital of Estonia
Valetta is the capital of Malta
Vienna is the capital of Austria
Vilnius is the capital of Lithuania
Warsaw is the capital of Poland

7. Write a PHP function that checks whether a passed string is a palindrome or not?

A palindrome is word, phrase, or sequence that reads the same backward as forward, e.g., madam or dad or noon

```php
Q7.php > akriti
1    <?php
2    //Akriti Kumari Dev
     1 reference
3    function akriti(){
4    $string="madam";
5    if(strrev($string)==$string){
6        echo("It is palindrome");
7    }
8    else{
9        echo("It is not palindrome");
10   }
11   }
12   akriti()
13   ?>
```

It is palindrome

8. To swap two variables

Eg: $a = 1; $b =2; Result: $a = 2; $b=1;

```php
<?php
//Akriti Kumari Dev
$a = 1;
$b = 2;

// swap the values of $a and $b using a temporary variable
$temp = $a;
$a = $b;
$b = $temp;

echo("After swapping, a = $a and b = $b");
?>
```

After swapping, a = 2 and b = 1

9. To print the multiple of a given number

   Example:

   define('a',5);

   5 10 15 20 25 30 35 40 45 50 use <br> to print in each line

```php
Q9.php > ...
1    <?php
2    //Akriti Kumari Dev
3    define('a', 5);
4
5    for ($i = 1; $i <= 10; $i++) {
6        $multiple = a * $i;
7        echo "$multiple<br>";
8    }
9    ?>
10
```

   5
   10
   15
   20
   25
   30
   35
   40
   45
   50

10. To find whether given number is Armstrong or not.

   Example:

   $number = 153

   If ($number == 1*1*1+5*5*5+3*3*3)

   Return Armstrong number

   Other number: 1, 0, 371, 407 etc

```php
Q10.php > ...
1    <?php
2    //Akriti Kumari Dev
     4 references
3    function isArmstrong($number) {
4        $sum = 0;
5        foreach (str_split((string) $number) as $digit) {
6            $sum += pow($digit, strlen((string) $number));
7        }
8        return $sum == $number ? "Armstrong number" : "Other number";
9    }
10
11   // example usage
12   $num1 = 153;
13   $num2 = 371;
14   $num3 = 407;
15   $num4 = 123;
16
17   echo isArmstrong($num1); // output: Armstrong number
18   echo "<br>";
19   echo isArmstrong($num2); // output: Armstrong number
20   echo "<br>";
21   echo isArmstrong($num3); // output: Armstrong number
22   echo "<br>";
23   echo isArmstrong($num4); // output: Other number
24   ?>
```

Armstrong number
Armstrong number
Armstrong number
Other number