Fungsi dan Array

- Fungsi adalah blok pernyataan yang dapat digunakan berulang kali dalam suatu program.
- Sebuah fungsi tidak akan dijalankan secara otomatis saat halaman dimuat.
- Suatu fungsi akan dieksekusi dengan memanggil nama fungsi tersebut.
- Jenis fungsi:
  - User Defined Functions
  - Built-in Functions

User Defined Functions

Syntax

```
function functionName() {
  code to be executed;
}
```

Contoh:

```
<?php
function pesan() {
  echo "Hello world!";
}

pesan(); // pemanggilan fungsi
?>
```

pass-by-value

```
<?php

function tambah(int $x, int $y) {
   $a=$a+ 10;
   $z = $x +  $y;
  return $z;
}
$a=10;
$b=5;
echo "5 +  10 = " . tambah(5, 10) . "<br>";
echo "7 +  13 = " . tambah(7, 13) . "<br>";
echo “$a +  $b = " . tambah($a, $b);
echo $a;
?>
```

pass-by-reference

```
<?php

function tambah(int $x, int $y) {
   $a=$a+ 10;
   $z = $x +  $y;
  return $z;
}
$a=10;
$b=5;
echo "5 +  10 = " . tambah(5, 10) . "<br>";
echo "7 +  13 = " . tambah(7, 13) . "<br>";
echo “$a +  $b = " . tambah($a, $b);
echo $a;
?>
```

Built-in Functions

PHP has more than 1000 built-in function

Array	Calendar	Date	Directory	Error
Exception	Filesystem	Filter	FTP	JSON
Keywords	Libxml	Mail	Math	Misc
MySQLi	Network	Output	RegEx	SimpleXML
Stream	String	Var Handling	XML Parser	Zip

String

strlen() - Return the Length of a String
str_word_count() - Count Words in a String
strrev() - Reverse a String
strpos() - Search For a Text Within a String
str_replace() - Replace Text Within a String

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```
<?php
echo strlen("Hello world!"); // outputs 12
echo str_word_count("Hello world!"); // outputs 2
echo strrev("Hello world!"); // outputs !dlrow olleH
echo strpos("Hello world!", "world"); // outputs 6
echo str_replace("world", "Dolly", "Hello world!"); // outputs Hello Dolly!
?>
```

Math

PHP has a set of math functions that allows you to perform mathematical tasks on numbers.

```
<?php
echo(abs(-6.7));  // returns 6.7
echo(sqrt(64));  // returns 8
echo(round(0.60));  // returns 1
echo(round(0.49));  // returns 0
echo(rand());
echo(rand(10, 100));
?>
```

Date

- date(format,timestamp)
- parameter format:

d - Represents the day of the month (01 to 31)

m - Represents a month (01 to 12)

Y - Represents a year (in four digits)

l (lowercase 'L') - Represents the day of the week

H - 24-hour format of an hour (00 to 23)

h - 12-hour format of an hour with leading zeros (01 to 12)

i - Minutes with leading zeros (00 to 59)

s - Seconds with leading zeros (00 to 59)

a - Lowercase Ante meridiem and Post meridiem (am or pm)

Contoh Tanggal & Waktu

```
<!DOCTYPE html>
<html>
<body>

<?php
echo "Today is " . date("Y/m/d") . "<br>";
echo "Today is " . date("Y.m.d") . "<br>";
echo "Today is " . date("Y-m-d") . "<br>";
echo "Today is " . date("l");
?>

</body>
</html>
```

```
<!DOCTYPE html>
<html>
<body>

<?php
echo "The time is " . date("h:i:sa");
?>

</body>
</html>
```

Date From a String

```
<!DOCTYPE html>
<html>
<body>

<?php
$dd=strtotime("10:30pm April 15 2014");
echo "Created date is " . date("Y-m-d h:i:sa", $dd);

$d=strtotime("tomorrow");
echo  date("Y-m-d h:i:sa", $d) . "<br>";

$d=strtotime("next Saturday");
echo  date("Y-m-d h:i:sa", $d) . "<br>";

$d=strtotime("+ 3 Months");
echo  date("Y-m-d h:i:sa", $d) . "<br>";
?>

</body>
</html>
```

Array

- An array is a special variable, which can hold more than one value at a time.
- types of arrays:
  - **Indexed arrays** - Arrays with a numeric index
  - **Associative arrays** - Arrays with named keys
  - **Multidimensional arrays** - Arrays containing one or more arrays

Indexed Array

```
<!DOCTYPE html>
<html>
<body>

<?php
$cars = array("Volvo", "BMW", "Toyota");
echo  "I like " . $cars[1] . " and " . $cars[2] . ".";

$arrlength = count($cars);

for($x = 0; $x < $arrlength; $x++) {
  echo $cars[$x];
  echo "<br>";
}
?>

</body>
</html>
```

Associative Arrays

```
<!DOCTYPE html>
<html>
<body>

<?php
$age = array("Peter"=>"35", "Ben"=>"37", "Joe"=>"43");

foreach($age as $x => $x_value) {
  echo "Key=" . $x . ", Value=" . $x_value;
  echo "<br>";
}
?>

</body>
</html>
```

Two-dimensional

```
<!DOCTYPE html>
<html>
<body>
<?php
$cars = array (
  array("Volvo",22,18),  array("BMW",15,13),  array("Saab",5,2),  array("Land Rover",17,15)
);
echo  $cars[0][0].": In stock: ".$cars[0][1].", sold: ".$cars[0][2].".<br>";
for ($row = 0; $row < 4; $row++) {
  echo "<p><b>Row number $row</b></p>";
  echo "<ul>";
  for ($col = 0; $col < 3; $col++) {
    echo "<li>".$cars[$row][$col]."</li>";   }
  echo "</ul>";
}
?>
</body>
</html>
```

Sorting Indexed array

```
<!DOCTYPE html>
<html>
<body>
<?php
function printArr($x){
 $p = count($x);
  for($i = 0; $i < $p; $i++) {
      echo $x[$i];
       echo "<br>";
   }
}
$cars = array("Volvo", "BMW", "Toyota");
printArr($cars);
rsort($cars);
echo "<br />";
echo "setelah di sortir desc";
echo "<br />";
printArr($cars);
?>
</body>
</html>
```

Sorting Associative Arrays

```
<!DOCTYPE html>
<html><body>
<?php
function printArr($Arr){
        foreach($Arr as $x => $x_value) {
          echo "Key=" . $x . ", Value=" . $x_value;
          echo "<br>";}
}
$age = array("Peter"=>"35", "Ben"=>"37", "Joe"=>"43");
printArr($age);
echo "setelah di sortir berdasarkan value(umur)";
echo "<br />";
asort($age);  //arsort
printArr($age);
echo "setelah di sortir berdasarkan key(Nama)";
echo "<br />";
ksort($age); //krsort
printArr($age);
?>
</body></html>
```