WEB BASED APPLICATION DEVELOPMENT WITH PHP

UNIT-02 :- Arrays, Functions and Graphics:

PHP Arrays

PHP Array is usedto hold more than one value at a time. In another words, we can say that an array stores multiple values in one single variable. Following are the advantages of Array.

- It reduces the code.
- We can store data easily.
- Easy to traverse.

How to create Array in PHP In PHP, the array() function is used to create an array.

Syntax:

```
array();
```

Example

```php
<?php
$arr= array(10,11,12,13,14,15);
echo $arr[0];
?>
```

Output <u>10 There are three types</u>

In PHP, there are three types of arrays:

- **Indexed arrays** - Arrays with a numeric index
- **Associative arrays** - Arrays with named keys
- **Multidimensional arrays** - Arrays containing one or more arrays

PHP Indexed Arrays:- PHP indexed array is used to store the number, string and object. Itis represented by number and starts with 0. There are two ways to represent indexed array:

1stway:
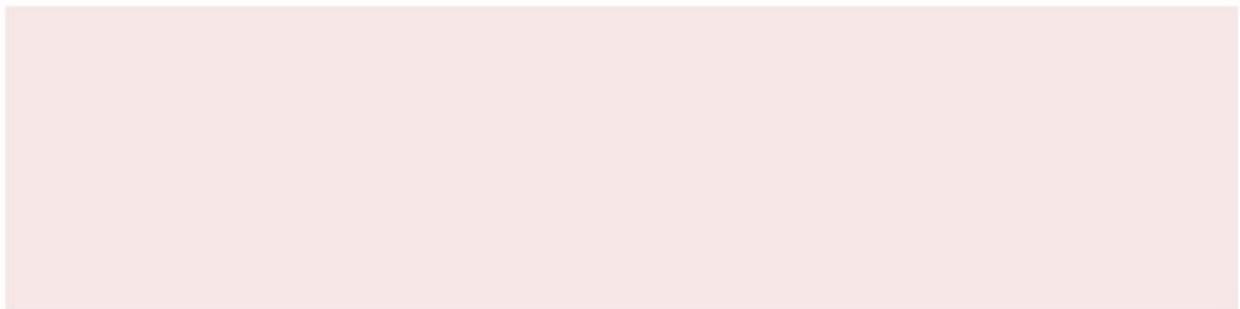
```
$name=array("Rohit","Rohan","Shyam");
```

Example 1:

```
<!DOCTYPE html>

<html>

<head>

<title>PHP Tutorial</title>

</head>

<body>

        <?php
          $name=array("Geeta","Rohan","Shyam");
echo "Your Name: $name[0],$name[1],$name[2]";
?>

</body>

</html>
```

Output Your Name: Geeta,Rohan,Shyam **2nd Ways:**

```
<html>
<head>
<title>PHP Tutorial</title>
</head>
<body>
<?php
        $size=array("Geeta","Rohit","Shyam");
//Traversing PHP Indexed Array
        foreach($size as $s){
        echo "Your Name:$s<br />";
        }
?>
</body>
</html>
```

Output

```
<!DOCTYPE html>
<html>
<head>
<title>PHP Tutorial</title>
</head>
<body>
<?php
$size=array("Geeta","Rohit","Shyam");
echo count($size);
```

```
?>
</body>
</html>
```

Output 3

What is Associative Arrays in PHP ?

PHP associate array is used to access the elements with keys by "=>" symbol. There are two ways to create an associative array.

1st way:
```
$age    =    array("John"=>"20",    "Helena"=>"30",
"Rasmus"=>"29")
```

or:

```
$age['Peter'] = "35";
$age['Ben'] = "37";
$age['Joe'] = "43";
```

```php
<!DOCTYPE html>

<html>

<body>


<?php

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

echo "Peter is " . $age['Peter'] . " years old.";

?>
```

```
</body>

</html>
```

Example2

```
<!DOCTYPE html>

<html>

<head>

<title>PHP Tutorial</title>

</head>

<body>

        <?php

        $age = array("John"=>"20", "Helena"=>"30",
"Rasmus"=>"29");

        //  Traversing PHP Associative Array

        foreach ($age as $k => $v) {

                echo "Key: ".$k." Value:
".$v."<br/>";

        }

        ?>

</body>

</html>
```

Output Key: John Value: 20 Key: Helena Value: 30 Key: Rasmus Value: 29

What is Multidimensional Array in PHP ?

An array of arrays is called multidimensional array. It is used to store the data in a tabular form. It is represented in the form of matrix (row*column). **Example:** We can store the data in the form of two dimensional arrays.

Emp-id	Name	Salary
John	20	30000
Helena	30	60000
Rasmus	29	40000

```
<!DOCTYPE html>

<html>

<head>

<title>PHP Tutorial</title>

</head>

<body>

<?php

$emp = array

(

array(1,"john",300000),

array(2,"Helena",60000),

array(3,"Rasmus",40000)

);

//traversal 2D elements of an array in the form of (row*column)

for ($row = 0; $row < 3; $row++) {

for ($col = 0; $col < 3; $col++) {
```

```php
echo $emp[$row][$col]."   ";

}

echo "<br/>";

}

?>
```

```html
</body>

</html>
```

Output 1 john 300000 2 Helena 60000 3 Rasmus 40000 **Example2**

```html
<!DOCTYPE html>

<html>

<head>

<title>PHP Tutorial</title>

</head>

<body>

<?php

error_reporting(1);

$emp=array(array("emp_id"=>1,"name"=>"John","mob"=>9143434323),

array("emp_id"=>2,"name"=>"Helena","mob"=>9134433235),

array("emp_id"=>3,"name"=>"Rasmus","mob"=>9133534323)

);

echo '<table border="3">';

echo '<tr>';

echo '<td align="center">Employee Id</td>';

echo '<td align="center">Employee Name</td>';
```

```php
echo '<td align="center">Mobile no</td>';

foreach($emp as $k){

echo '<tr>';

foreach($k as $v){

echo '<td align="center">'.$v.'</td>';

}

echo '</tr>';

}

echo '</table>';

?>

</body>
</html>
```

Employee Id	Employee Name	Mobile no
1	John	9143434323
2	Helena	9134433235
3	Rasmus	9133534323

PHP Array Functions

There are various array functions in PHP. They are used to access and manipulate the elements of an array. Following are functions of array.

Array Function	Description
array()	It is used to create an array.
array_change_key_case()	It is used to convert lowercase or uppercase of all keys in an array.
array_chunk()	It is used to split an array into chunks of arrays.
array_pop()	It is used to delete the last element of an array.
array_merge()	It is used to merge one or more arrays into one array.
array_rand()	It is used to returns one or more random keys from an array.
array_reverse()	It returns an array in the reverse order.
array_search()	It searches an array for a given value and returns the key.
count()	It returns the number of elements in an array.
extract()	It imports variables into the current symbol table from an array.
sort()	PHP sort() function sorts all the elements in an array.

PHP String

PHP string is a sequence of characters. It is used to store and manipulate text. We can specify a string literal in four ways:

- single quoted
- double quoted
- heredoc syntax
- nowdoc syntax (since PHP 5.3.0)

Single quoted: We can specify string in single quotes (the Character). **Example**

```php
<?php

$s='Hello string with single quote';

echo $s;

?>
```

Output
Hello string with single quote

Double quoted: We can also specify string in double quotes. **Example1**

```php
<?php

$s="Hello php with Double Quotes.";

echo $s;

?>
```

Output Hello php with Double Quotes.

Example2

```php
<html>

<body>

<?php

$s="Using double "quotes" directly inside double quoted
string";

echo $s;

?>
```

```
</body>
```

Output Parse error: syntax error, unexpected 'quotes' (T_STRING) in C:\xampp\htdocs\phpfolder\index.php on line 4 **PHP String** There are various string functions in PHP. These are given below: Following are string functions

String Functions	Description
strtolower()	It returns string in lowercase letter.
strtoupper()	It returns string in uppercase letter.
strlen()	It returns the length of a string.
str_word_count()	It counts the number of words in a string.
strrev()	It reverses a string.
strpos()	It searches for a specific text within a string.
str_replace()	It replaces some characters with some other characters in a string.
ltrim()	It removes characters from the left side of a string.
md5()	It calculates the MD5 hash of a string.
strtok()	It splits a string into smaller strings (tokens). etc
range()	It is an array that contains a range of elements.

PHP strtolower() function: The *strtolower()* function is used to return string in lowercase letter. **Example**

```
<!DOCTYPE html>

<html>

<body>

<?php

    $str="HELLO WORLD PHP";
```

```
echostrtolower($str);

  ?>

</body>

</html>
```

PHP strtoupper() function: The *strtoupper()*function is used to return string in uppercase letter.

Example

```
<!DOCTYPE html>

<html>

<body>

<?php

    $str="hello world php";

echomb_strtoupper($str);

  ?>

</body>

</html>
```

PHP strlen() function: The *strlen()* function is used to return the length of a string.

Example

```
<!DOCTYPE html>

<html>

<body>

<?php

    $str="hello world php";

echostrlen($str);

  ?>
```

```
</body>

</html>
```

PHP strrev() function: The *strrev()* function is used to reverse a string.

Example
```
<!DOCTYPE html>

<html>

<body>

<?php

$str="hello world php";

echostrrev($str);

?>

</body>

</html>
```
Output phpdlrowolleh

Basic Graphics Concepts:-

PHP Imagearc() Function

Imagearc( ) function is another inbuilt PHP function mainly used to draw an arc of a circle with a particular center and given coordinates. The function works using the x and y-axis, used to set coordinates for the starting point from where the picture has to be drawn. The origin coordinates (0, 0) are of the top left corner of the browsing window, and from the origin, we can set

the coordinates to get the resulting arc according to our needs. The function returns Boolean values true on success and false on failure.

Syntax

1. bool imagearc($image, $cx, $cy, $width, $height, $start, $end,
2. $color)

Parameters

This function accepts these eight parameters.

S.No	Parameter	Description	Optional / mandatory
1	$ image	This parameter is used to define the size of the image we want to display. This parameter is used by an image resource like the imagecreatetruecolor( ) function used to return an image source.	Mandatory
2	$ cx	This parameter is used to set the desired arc's x-coordinates. Starting from the origin	Mandatory
3	$ cd	This parameter is used to set the desired arc's y-coordinates. Starting from the origin	Mandatory
4	$ width	This parameter is used to define the width of the arc that will be printed	Mandatory
5	$ height	This parameter is used to define the height of the arc that will be printed	Mandatory
6	$ start	This parameter is used to define the start angle of the arc in degrees that will be printed	Mandatory

7	$ end	This parameter is used to define the end angle of the arc in degrees that will be printed 0° is located at the three o'clock position, and the arc is drawn clockwise.	Mandatory
8	$ color	This parameter is used to define the color of the image. This parameter is used for creating a color identifies like the imagecolorallocate ( ) function	optional

The imagearc( ) function returns TRUE on successful execution of the program and FALSE on a failed attempt.

Which PHP function is used to create an array?

    A. array()
    B. arr()
    C. new_array()
    D. array()

Answer: A) array()

How many types of arrays are there in PHP?

    A. 1
    B. 2
    C. 3
    D. 4

Answer: C) 3

Which is/are valid types of arrays in PHP?

    A. Indexed arrays
    B. Associative arrays
    C. Multidimensional arrays
    D. All of the above

Answer: D) All of the above

Which is the correct example of an Indexed array in PHP?

    A. $cities = array("Delhi"; "Mumbai"; "Banglore");
    B. $cities = array("Delhi", "Mumbai", "Banglore");
    C. $cities = new array("Delhi", "Mumbai", "Banglore");
    D. $cities = new array(3) ("Delhi", "Mumbai", "Banglore");

Answer: B) $cities = array("Delhi", "Mumbai", "Banglore");

Which is the correct example of an Associative array in PHP?

A. $person = array("Alvin"=>"Delhi", "Alex"=>"Mumbai",
"Bhavik"=>"Banglore");
B. $person = array("Alvin"=>"Delhi"; "Alex"=>"Mumbai";
"Bhavik"=>"Banglore");
C. $person = new array("Alvin"=>"Delhi", "Alex"=>"Mumbai",
"Bhavik"=>"Banglore");
D. $person = new array("Alvin"=>"Delhi"; "Alex"=>"Mumbai";
"Bhavik"=>"Banglore");

Answer: A) $person = array("Alvin"=>"Delhi", "Alex"=>"Mumbai",
"Bhavik"=>"Banglore");

What is the use of PHP sort() function?

A. Sorts an indexed array
B. Sorts an associative array
C. Sorts a multi-dimensional array
D. Sorts any kind of array

Answer: A) Sorts an indexed array

42. Which function is used to replace text within a string?

A. str_replace()
B. replace()
C. replace_str()
D. string-replace()

Answer: A) str_replace()

41. What will be the output of the following PHP code?

```php
<?php
echo strpos("Hello, Includehelp!", "Includehelp!");
?>
```

A. 6
B. 7
C. 8

D. -1

Answer: B) 7

Which PHP functions are used to convert string to lowercase and uppercase?

    A. strupper() and strlower()
    B. str_toupper() and str_tolower()
    C. toupper() and tolower()
    D. strtoupper() and strtolower()

Answer: D) strtoupper() and strtolower()

Which keyword is used to define a function in PHP?

    A. def
    B. fun
    C. func
    D. function

Answer: D) function

1. PHP's numerically indexed array begin with position _____
a) 1
b) 2
c) 0
d) -1

2. Which function returns an array consisting of associative key/value pairs?
a) count()
b) array_count()
c) array_count_values()
d) count_values()

3. Which of the following PHP function will return true if a variable is an array or false if it is not an array?
a) this_array()
b) is_array()
c) do_array()
d) in_array()

4) Which of the following function is used to sort an array in descending order?

a.   sort()
   b. asrot()
   c. dsort()
   d. rsort()

5) Which of the following is the correct way to create an array in PHP?

a. $season = array["summer" , "winter" , "spring" , "autumn"];
   b. $season = array("summer" , "winter" , "spring" , "autumn");
   c. $season = "summer" , "winter" , "spring" , "autumn";
   d. All of the above

6) Which of the following function converts a string to all uppercase?

a.   upper()
   b. uppercase()

c. struppercase()

d. strtoupper()

7. What does explode ( ) function do?
    1. Converts a string into integers
    2. Converts a string into arrays
    3. Finds the length of array
    4. Finds the length of string