

PRN NO: 2241032

Group B

Practical 5

Title: Write a function to swap two string values using call by value and call by references.

Objective : Illustrate the difference between call by value and call by reference.

Theory:

PHP Functions:

PHP function is a piece of code that can be reused many times. It can take input as argument list and return value. There are thousands of built-in functions in PHP. In PHP, we can define Conditional function, Function within Function and Recursive function also.

PHP Built-in Functions:

PHP has over 1000 built-in functions that can be called directly, from within a script, to perform a specific task.

PHP Call By Value:

In call by value, the value of a variable is passed directly. It means, if the value of a variable within the function is changed, it doesn't get changed outside of the function.

PHP Call By Reference:

In call by reference, the address of a variable (their memory location) is passed. In the case of call by reference, we prepend an ampersand (&) to the argument name in the function definition.

Value passed to the function doesn't modify the actual value by default (call by value). But we can do so by passing value as a reference. By default, value passed to the function is call by value. To pass value as a reference, you need to use ampersand (&) symbol before the argument name.

There is no reference sign on a function call - only on function definitions. Function definitions alone are enough to correctly pass the argument by reference.

```
<?php
function foo(&$var)
{
    $var++;
}
$a=5;
foo($a);
// $a is 6 here
here ?>
```

Code:

```
<?php

// Function to swap values (Call by Value)
function SwapValue($a, $b) {
    $temp = $a;
    $a = $b;
    $b = $temp;
    echo "Inside SwapValue Function (Call By Value): a = $a, b = $b\n";
}

// Function to swap references (Call by Reference)
function SwapReference(&$a, &$b) {
    $temp = $a;
    $a = $b;
    $b = $temp;
    echo "Inside SwapReference Function (Call By Reference): a = $a, b = $b\n";
}

$str1 = (string)readline("Enter the First word: ");
$str2 = (string)readline("Enter the Second word: ");

echo "Before Swapping by Call By Value: a = $str1, b = $str2\n";
SwapValue($str1, $str2);
echo "After Swapping By Value: a = $str1, b = $str2\n\n";

echo "Before Swapping by Call By Reference: a = $str1, b = $str2\n";
SwapReference($str1, $str2);
echo "After Swapping By Reference: a = $str1, b = $str2\n";
?>
```

Output:

```
PS C:\Users\DELL\Desktop\Clg programs\PHP\programs> php "c:\Users\DELL\Desktop\Clg programs\PHP\programs\p5.php"
Enter the First word: Good
Enter the Second word: Morning
Before Swapping by Call By Value: a = Good, b = Morning
Inside SwapValue Function (Call By Value): a = Morning, b = Good
After Swapping By Value: a = Good, b = Morning

Before Swapping by Call By Reference: a = Good, b = Morning
Inside SwapReference Function (Call By Reference): a = Morning, b = Good
After Swapping By Reference: a = Morning, b = Good
PS C:\Users\DELL\Desktop\Clg programs\PHP\programs> █
```

Conclusion:

Thus performed the program for a function to swap two string values using call by value and call by references in PHP.