

PHP Functions

Lecture 5

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L#05: PHP Functions

Introduction

- A Function is a self-contained block of code that can be called by a script.
- When called, its code is executed and perform a particular tasks.
- We can pass values or references to the function.
- A function can return values to its caller.

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Functions Types

- **Built-in Functions**
 - They are functions built in to the language.
 - You can only call them using their appropriate arguments.
- **User-defined Functions**
 - They are built by you
 - You will decide what it will do and what will take.

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Why Do We Need Functions?

- To avoid typing identical code in two or more places.
- To make the code easier to understand.

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Defining a Function

- In any language to use a user-defined function, you have to:
 - Declare the function “prototype”
 - Define it
 - Call it in your code and send the needed arguments, if any.
- In older version of PHP, you have to declare or put you definition before any calls to that function.

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Defining a Function cont.

- **Syntax:**

```
function fun_name($ar1, $ar2,...)
{
    //definition body
}
```

- Notice that **a data type is not specified** for the return value or for the arguments.

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Defining Functions cont.

- Naming rules for the function name are like naming variables
- Functions names are **NOT** case-sensitive.

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Example

- Write a function called “printBold” that will display to the browser any given text in bold.

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Example cont.

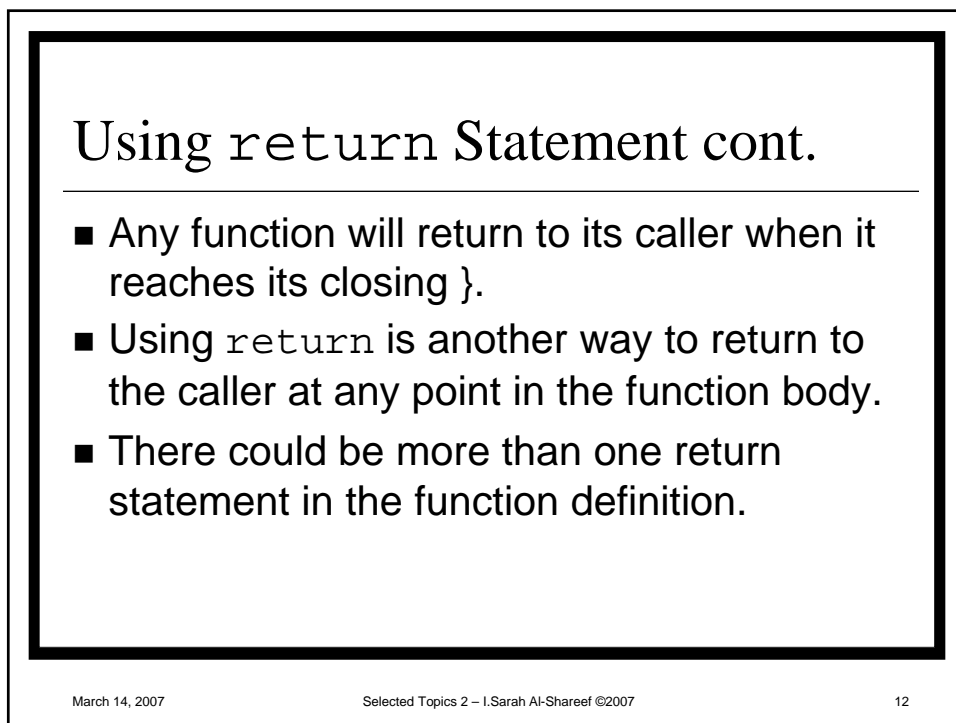
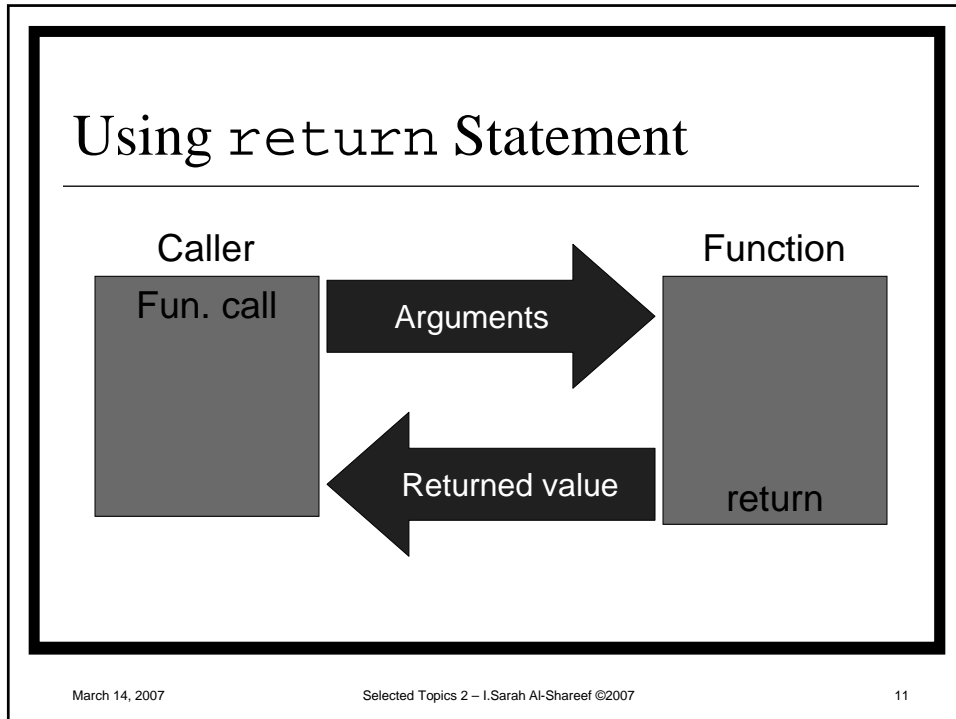
```
<?php
function printBold($text)
{ print("<b>$text</b>");
}
print("This line is not bold<br>");
printBold("But this is bold");
?>
```

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Using return Statement cont.

- Syntax:

```
function fun_name($ar1, $ar2,...)
{
    //definition body
    return;
}
```

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Using return Statement cont.

- If an expression is followed return statement, its value will returned to the caller.

Syntax: `return(exp) ;`

- A function also can return a reference. A '&' must be precede the function name in the definition.

Syntax: `function &funName()`

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Scope & Global Variables

```
<?php                                     Global Scope
    $varX;
    function fun1()                         fun1 Scope
    {   $var1;
    }
    function fun2()                         fun2 Scope
    {   $var2;
    }
    varY;
?>
```

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Scope & Global Variables cont.

■ Example:

```
<?php
    function assignName()
    {   $name="Ali";
    }
    $name="Sami";
    assignName();
    print($name);
?>
```

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Scope & Global Variables cont.

- To reach a global variable inside the function scope, use `global` before the variable name.

Example:

```
<?php
    function calDiscount($p)
    {
        global discount;
        return($p-$p*$discount*100);
    }
    $discount = 20;
    $total = calDiscount(120);
    print("Total: $total");
?>
```

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Static Variables

- When we create a variable inside a function, it will exist only while the function is executing.
- If we want a function to remember its variables' values, we have to either make these variables global or static.
- To make a variable static, precede its name with `static` before its use in the function.

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Example

- Build a PHP script that will build a table with alternate row colors. These colors will be “#FFFF99” and “#CCCCFF”. Use a function to choose the color with a static variable `currentColor`.

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Example Solution

```
<?php
function chooseColor()
{ //Remember the last used color:
  static currentColor="#FFFF99";
  //Choose the next color:
  if(currentColor=="#FFFF99")
    currentColor = "#CCCCFF";
  else
    currentColor = "#FFFF99";
  return(currentColor);
}
```

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Example Solution cont.

```
print("<table width=\"300\">\n");
for($i=0; $i<10; $i++)
{
    $bgValue=chooseColor();
    echo "<tr style=\"background:$bgValue\">\n".
        "<td>Row number $i".
        "</td>".
        "</tr>\n");
}
print("</table>");

?>
```

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Arguments

- Arguments are defined inside the () after the function name.
- Argument names are preceded by a \$ and become variables inside the function body.

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Arguments cont.

- We can give a default value to an argument by use = operator after its name with the desired value.

```
function funName($arg=value)
{
}
```

- We use default values to the optional argument in or function.

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Arguments cont.

- There are two types of passing arguments to a function:
 - By-value:
The default way and it won't change its original value.
 - By-reference:
The argument name is precede by a &. And any changes happened in the function affect the original value.

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