

Introduction to PHP

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Dept. of Computer Science
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Introduction to PHP



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Learning Objectives



- In this lecture , we will learn how to install PHP in your local computer. We will use XAMPP as our Environment to run PHP script.
- We will learn all aspect of PHP as a programming Language; e.g. data type and variables, conditions, loop, functions and object.

PHP Installation and Run



- **Install XAMPP in your PC or server.**
- XAMPP is the most popular PHP development environment
- Apache + MariaDB(Mysql) + PHP + Perl
- Any PHP script as **index.php** in htdocs/application folder in the Apache XAMPP.
- Start the server and browse <http://localhost/application/index.php> in the browser.

PHP Language



- A PHP script can be placed anywhere in the document.
- A PHP script starts with `<?php` and ends with `?>`
- keywords (e.g. if, else, while, echo, etc.), classes, functions, and user-defined functions are not case-sensitive.

```
C:/xampp/htdocs/Application/index.php (Application) - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

FOLDERS
- Application
  - index.php

index.php
1 <!DOCTYPE html>
2 <html>
3 <body>
4
5 <h1>My first PHP page</h1>
6
7 <?php
8 echo "Hello World!";
9 ?>
10
11 </body>
12 </html>
```



PHP Variables

- A variable starts with the \$ sign, followed by the name of the variable
- A variable name must start with a letter or the underscore character
- A variable name cannot start with a number
- A variable name can only contain alpha-numeric characters and underscores (A-z, 0-9, and _)
- Variable names are case-sensitive (\$age and \$AGE are two different variables).

```
<?php
```

```
$txt = "Hello world!";
```

```
$x = 5;
```

```
$y = 10.5;
```

```
echo "I love " . $txt . "!";
```

```
echo $x + $y;
```

```
?>
```



PHP Data Type and Array

- PHP is not strictly typed language (loosely typed language).
- PHP supports the following data types:
 - String
 - Integer
 - Float (floating point numbers - also called double)
 - Boolean
 - Array
 - Object

```
<?php
```

```
$x = 5985;  
var_dump($x);
```

```
$y = 10.365;  
var_dump($y);
```

```
$cars = array("Volvo", "BMW", "Toyota");  
var_dump($cars);
```

```
?>
```



PHP if-else and switch

- Like most programming languages, PHP also allows you to write code that perform different actions based on the results of a logical or comparative test conditions at run time.
- There are several statements in PHP that you can use to make decisions:
 - **The if statement**
 - **The if...else statement**
 - **The if...elseif....else statement**
 - **The switch...case statement**

PHP if-else and switch

```
<?php
$favcolor = "red";
switch ($favcolor) {
    case "red":
        echo "Your favorite color is red!";
        break;
    default:
        echo "Your favorite color is neither red, blue, nor green!";
}
?>
```

```
<?php
$age = 30;
if ($age < 10) {
    echo "you are baby!";
} elseif ($age > 10 and $age <18 ) {
    echo "You are grown up!";
} else {
    echo "you are adult!";
}
?>
```



PHP Loops

- PHP supports four different types of loops.
 - **while** — loops through a block of code as long as the condition specified evaluates to true.
 - **do...while** — the block of code executed once and then condition is evaluated. If the condition is true the statement is repeated as long as the specified condition is true.
 - **for** — loops through a block of code until the counter reaches a specified number.
 - **foreach** — loops through a block of code for each element in an array.

PHP for and foreach Loop

```
<?php
for ($x = 0; $x <= 10; $x++) {
    echo "The number is: $x <br>";
}
?>
```

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

foreach($age as $x => $val) {
    echo "$x = $val<br>";
}
?>
```



PHP Functions

- PHP has more than 1000 built-in functions, and in addition you can create your own custom functions.
- **Write a Calculator: add, subtraction, multiplication and division as PHP function.**

```
<?php
function add(int $a, int $b) {
    return $a + $b;
}
echo add(5, 5);
?>
```



PHP class and Object

- In PHP, an object must be explicitly declared.
- **Write a Employee class which has employee id, employee name and salary attributes; also has constructor, getter, setter and one print function to print the object.**

```
<?php
class Student{
    function Student($id) {
        $this->id = $id;
        $this->name = $name;
    }
}

// create an object
$richard = new Student(100,"Richard");

// show object properties
echo $richard;
var_dump($richard);
?>
```



Books

- W3Schools Online Web Tutorials; URL: <http://www.w3schools.com>
- PHP Documentation; URL: <http://www.php.net/docs.php>
- Sams Teach Yourself Ajax JavaScript and PHP All in One; Phil Ballard and Michael Moncur; Sams Publishing; 2010
- JavaScript Phrasebook; Christian Wenz; Sams Publishing; 2007
- PHP and MySQL Web Development, 4/E; Luke Welling and Laura Thomson; Addison-Wesley Professional; 2009
- JavaScript for Programmers Paul J. Deitel and Harvey M. Deitel; Prentice Hall; 2009
- Beginning PHP5, Apache, and MySQL Web Development; Elizabeth Naramore, Jason Gerner, Yann Le Scouarnec, Jeremy Stolz and Michael K. Glass; Wiley Publishing; 2005
- XML in a Nutshell, 3/E; Elliotte Rusty Harold and W. Scott Means; O'Reilly Media; 2004



References

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2. <https://developer.mozilla.org/enUS/docs/Web/HTTP/Status>
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