

PHP 01

Introduction

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Based on Rasmus Lerdorf & Kevin Tatroe: Programming PHP. Sebastopol: O'Reilly, 2002.

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What does PHP do?

Simple yet powerful language designed for creating **dynamic web content**.

Mainly used to **output HTML**, however, any document format can be generated (supports PDF files, GIF, JPG, and PNG images, Flash movies, XML)

One of PHP's main features is its wide-ranging **database support** (e.g. **MySQL**, PostgreSQL, Oracle, Sybase, ODBC)

note: this class will focus on the use of php to output HTML/XML
creating dynamic web content

History

Rasmus Lerdorf first conceived PHP in 1994 as Personal Home Page Tools (PHP Tools)

Originally written for a project at the University of Toronto to represent data from various places in a web interface

with PHP 3.0 it developed from a one-person effort to an open source project with developers around the world

PHP3 supported all major operating systems, databases and developed to a complete scripting language.

In 2001 more than one million unique IP-Addresses used PHP

Language Basics

PHP is strongly influenced by other programming languages, therefore the concepts behind the lexical structure of PHP can be easily applied to other languages, e.g. ActionScript, Java or Processing.

PHP is not case sensitive, all three lines are equivalent:

```
echo ("hello!");
```

```
ECHO ("hello!");
```

```
EcHo ("hello!");
```

As in HTML, whitespace doesn't matter in a PHP program, you can spread statements across any number of lines or put them in a single line.

Syntax

Elements of the language and how they are structured.

- Statement
- Statement terminator
- Function (Command)
- Parameter
- Comments

```
// Program to write my name  
$name = "Daniel";  
echo ($name);
```

Variables

- are used to store values
- always begin with a dollar sign (\$)
- have a name/identifier and a value
- are case-sensitive
- must not begin with special characters or number, no space.

```
$name = "Daniel"; // Declare and assign  
$number = 32; // Declare and assign  
$counter = 12; // Assign variable  
echo ($number);  
echo ($name);  
echo ($counter);
```

Keywords

A keyword is a word reserved by the PHP programming language for its core functionality. You cannot give a variable, function, or class name the same name as a keyword.

Selected keywords are for example:

`and, not, or`

`do, for, while`

`if, else, elseif, switch`

`new`

`true, false`

`eval`

`return`

`...`

Data Types (selected)

```
20038, -33, 2 // Integer, whole numbers
```

```
3.1254, 0.1 //Floating Point, numeric values with decimal digits
```

```
`hot dog`, "Daniel" // String, sequence of characters
```

```
false, true, 0, "" // Boolean, "truth value" of conditional statement
```

```
$person = array('Zai', 'Daniel', 'you'); // Array, group of values
```

```
$person[0] = "Zai";
```

```
$person[1] = "Daniel";
```

```
$person[2]= "you";
```

Relational Operators

Used to compare values:

> (greater than)
< (less than)
>= (greater than or equal to)
<= (less than or equal to)
!= (inequality)
== (equality)

Relational Operators

```
5 > 4      // True
5 < 3      // False
5 > 5      // False
5 >= 5     // True
5 >= 6     // False
5 != 5     // False (not equal)
5 == 5     // True
5 == 4     // False
```

Conditional Statements

Used to make decisions about which code to execute and which to ignore. E.g.:

```
$num = 5; // assigning the value
if($num < 10) { // if condition is true
    echo("Less than 10"); // this line is executed
}
```

```
$num = 5;
if($num < 10) {
    echo("Less than 10");
} else if($num > 10) {
    echo("More than 10");
} else {
    echo("Equal to 10");
}
```

note:

in order to understand PHP quickly and effectively, a sound understanding of HTML is required.

Because PHP and HTML code is mixed within the Code, knowing exactly what belongs to which language is essential

This is also true later in the authoring process when JavaScript or CSS elements are added

Please refer to Web Design in a Nutshell (Jennifer Niederst, see required readings) to revisit concepts of HTML, JavaScript and CSS if required.