

DBW - PHP

DBW2016

PHP: PHP hypertext processor

- PHP is a “embedded” language.
 - Source code is included into normal HTML pages and executed by the web server
 - Most text is written as HTML outside PHP code.
- Source code is enclosed in
 - `<?php?>`
 - `<script language=“php”></script>`
 - Or `<? ?>` for short (not always available)

 - `<?=?>` shortcut for including PHP output in HTML.
- PHP is a full featured language, but it is used mainly in web applications
- PHP has extensions for PDF, Flash, Databases,...

PHP scripts

- Usually stored as ...php files. Server should be configured to handle php files. No special directory (like cgi-bin) required.
- Can be run as external CGI applications (not recommended) or executed by the web server.
- Mostly used in combination with MySQL
- Syntax similar to PERL

Data types

- Primitive:
 - Boolean, integer, float, string
 - No need to declare
 - Numerical and string types can be interpreted as boolean (like PERL)
- Complex
 - Array (both lists and hashes), object
- Variable scope is always local!!
 - Global variables must be declared explicitly (global \$...), or used from \$GLOBALS[...]

Arrays

- Lists and hashes use the same format
- Creating arrays
 - `$array = Array (1,2,3,4,5,6);`
 - `$array = Array (key1 => 1, key2 => 2, ...);`
 - Numeric keys are used as indexes!!
- Values can be of any type
 - `$array = Array (key1 => Array (1,2,3,4,5), key2=>3);`
- Elements are recovered as `$array[key]`
- `$array[] = New_element` goes to the end of the array

Predefined variables (Superglobals)

- `$GLOBALS` (all of them)
- `$_SERVER` (Server set vars, from CGI protocol)
- `$_GET` (arguments of GET requests)
- `$_POST` (arguments of POST requests)
- `$_COOKIE` (cookies sent by the user)
- `$_FILES` (uploads files)
- `$_ENV` (S.O. environment vars)
- `$_REQUEST` (`$_GET` and `$_POST`)
- `$_SESSION` (persistent vars)

Forms

- Variables `$_GET` or `$_POST` and `$_REQUEST` are set automatically
- Special characters are escaped (`\`) to avoid problems
- Multiple values can be passed from forms if name is set to `"something[]"`
 - `<input type="text" name="param[]" size="30">`
 - `<select name="values[]" multiple>...</select>`
- PHP changes special characters in field names by `"-"`

Control structures

```
If (cond)  
    Command  
If (cond) {Block}
```

```
If (cond1)  
    ...  
elseif (cond2)  
    ...  
else  
    ...
```

```
While (cond) {BLOCK}  
Do {BLOCK} while (cond)  
Switch ($var) { case ... case ... case ...}
```


Functions

- function name (parameters) {BLOCK}
- Output is given by “return”
- Parameters can be passed by value (default) or by reference (indicated by &\$...)

Loops

- For (expr1; expr2; expr3;) {BLOCK}
- Foreach (expr_array as \$val) {BLOCK}
- Foreach (expr_array as \$key => \$value) {BLOCK}
 - \$key and \$value are copies of the original array elements (could be modified)
- Break / continue (last/next from PERL!)

Cookies PHP

- Set cookies:

```
Setcookie("UserName", $name, time()+3600, '/',  
".mmb.pcb.ub.es");
```

- Reading cookies:

```
$_COOKIE["UserName"];
```

Sessions in Apache/PHP

- Apache web servers and PHP automatically send identification Cookies, and have a Session space assigned to every ID.
- PHP can store data variables in Session space. Those variables are available as long as user ID is identified

```
session_start ();
```

```
a) session_register("MySessionVar");  
   $MySessionVar["user"]=$user;  
   session_register("$user");  
   $user="Pepe";
```

```
b) $_SESSION['user'] = "Pepe";
```

- Session persistence is normally based in the used of cookies.
- If cookies are not available, PHP adds a PHPSESSIONID hidden field to all forms

File uploads

- Requires a special encoding format to be declared in `<form...enctype="multipart/form-data">` and entries like `<input name="userfile" type="file"...>`
- Information about uploaded files is in `$_FILES`
 - `$_FILES["userfile"]["name"]`
 - `$_FILES["userfile"]["type"]`
 - `$_FILES["userfile"]["tmp_name"]`
 - `$_FILES["userfile"]["size"]`
 - `$_FILES["userfile"]["error"]`
- `move_uploaded_file ($filename, $new_destination)`