DBW - PHP

DBW2018

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)

  <?= ....?> shorcut 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 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 (uploades 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

- Do not trust in "magics"

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

- Reading cookies:

```
$_COOKIE["UsersName"];
```

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)