Multimedia im Netz
(Online Multimedia)
Wintersemester 2014/15

Übung 10 (Nebenfach)
Today’s Agenda

• Announcements
• Repetition: PHP Basics
  – Arrays
  – Control flow statements
  – Forms
• Repetition: Sessions
• Repetition: mysqli
Announcements

• Remaining tutorial dates / topics
  – 21.01.2015: Repetition
  – 28.01.2015: Q&A

• No more new assignments. Use the time wisely to prepare for the exam!

• Exam:
  – 16.02.2015 14-16h, Rooms A140 & A240 (Main Building)
  – register until: 09.02.2015
  – de-register until: 13.02.2015
  – If you do not de-register, the attempt will be treated as “failed”
PHP Basics

• PHP is a server side scripting language
• Basic example:

```php
<?php
    echo "My first PHP Script. ";
    echo "Well actually my second, because this is a repetition.";
?>
```
Activity #01

• Create a variable that holds your name
• Print „Hello <YourName>“ (replace with your name...)
• Make your name bold
• What is „concatenation?“
Arrays (1)

• Arrays: data structure for storing multiple values inside a single variable

• There are different types of arrays:
  – Arrays with numeric index
  – Associative arrays
  – Multidimensional arrays (eg. 2D arrays or nested arrays)
Arrays (2)

• Example: Array with numeric index

```php
$fruits = array("Apples", "Bananas");
echo $fruits[1];
```

• Example: Associative Array

```php
$grades = array("Alice"=>1.0, "Bob"=>2.3);
echo $grades["Bob"];  
```
Arrays (3)

• Example: Multidimensional array

```php
$table = array(
    array(18, 1, 85),
    array(62, 6, 26),
    array(2, 54, 5)
);

echo $table[1][2];
```

```
<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>18</td>
<td>1</td>
<td>85</td>
</tr>
<tr>
<td>1</td>
<td>62</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>54</td>
<td>5</td>
</tr>
</tbody>
</table>
```
Control flow statements

• Choice:
  – if – else if – else
  – switch

• Loops:
  – while
  – for
  – foreach

• Break: terminates a loop
• Continue: current iteration is ended, but the loop continues
Activity #02

• Create a PHP Script that uses the following multidimensional array:

```php
$table = array(
    array(18, 1, 85),
    array(62, 6, 26),
    array(2, 54, 5)
);

echo $table[1][2];
```

• Print each value in this multidimensional array in a new line.
Forms

```html
<!DOCTYPE html>
<html>
<head lang="en">
  <meta charset="UTF-8">
  <title>Forms Example</title>
</head>
<body>
<form action="03-formsScript.php" method="post">
  Phone: <input type="text" name="phone" />
  <input type="submit" value="Submit" />
</form>
</body>
</html>
```
Forms (2)

```php
<?php
    $phone = $_POST['phone'];
    echo "Your phone number is $phone";
?>
```

- **GET:**
  - Form data is passed directly through the URL. Parameters are appended to the URL.
  - Could become problematic for many parameters

- **POST:**
  - Form data is transmitted through HTTP protocol and not visible to the user
  - more data can be transfered
Sessions (1)

• Quiz:
  – Why do we need sessions?
  – Where are sessions stored?
  – How does the server identify clients?
  – How do you start a session?
  – How do you store and access data with sessions?
Sessions (2)

• Variable values are lost, if the page is refreshed. To prevent this, we save values to session variables.

• Starting a session:
  ```php
  session_start();
  ?>
  ```

• Store and retrieve session data:
  ```php
  $_SESSION['attempts'] = 10;
  echo $_SESSION['attempts'];
  ```
Activity #03

```html
<html><head><title>Session</title></head>
<body>
    <?php
        $counter = 0;
        $counter++;  
    ?>
    <form action="03-sessions.php" method="get">
        <input type="submit" value="count"/>
    </form>

    <h3>Output</h3>
    
    <?php
        echo $counter;
    ?>
</body></html>
```
PHP & MySQLi

- **MySQLi** is an interface offered by PHP to work with databases.

- Most important database operations:
  - Connection: `mysqli_connect`; `mysqli_close`
  - Database selection: `mysqli_select_db`
  - Queries: `mysqli_query`
  - Result processing: `mysqli_fetch_array`

- Important SQL statements:
  - `SHOW DATABASE; CREATE DATABASE; USE; DROP DATABASE; ...`
  - `CREATE TABLE; INSERT INTO ... VALUES; SELECT ... FROM ...; ...`
Activity #04

- You are given the following table containing people:

<table>
<thead>
<tr>
<th>id</th>
<th>firstname</th>
<th>lastname</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Max</td>
<td>Mustermann</td>
</tr>
<tr>
<td>2</td>
<td>Laura</td>
<td>Stern</td>
</tr>
<tr>
<td>3</td>
<td>Tanja</td>
<td>Baumann</td>
</tr>
<tr>
<td>4</td>
<td>Felix</td>
<td>Maurer</td>
</tr>
</tbody>
</table>
<!DOCTYPE html><html><head><title>MySQLi</title></head><body>
<form method="post">
  <input type="text" name="firstname" />
  <input type="submit" value="search" />
</form>
<h3>Results</h3>
<?php
if(isset($_POST["firstname"])){
    $firstname = "firstname";

    $db = mysqli_connect(  
        "localhost", "root", "", "mmn-1415-rep");  
    $query = "SELECT * FROM people  
        WHERE firstname='". $firstname .'";  
    $results = $query;

    while($row = mysqli_fetch_array($results)){
    }
}
?>
</body></html>
Thanks!

What are your questions?