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 scritping 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];
```

	0	1	2
0	18	1	85
1	62	6	26
2	2	54	5

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
<?php
    session_start();
?>
```

- Store and retrieve session data:
```php
$_SESSION['attempts'] = 10;
echo $_SESSION['attempts'];
```

Activity #03

```php
<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:

id	firstname	lastname
1	Max	Mustermann
2	Laura	Stern
3	Tanja	Baumann
4	Felix	Maurer

```php
<!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)){
      echo $row[1] . ", " . echo $row[2] . echo "<br />";
    }
  }
?>
</body></html>
```

Thanks!

What are your questions?