Multimedia im Netz
(Online Multimedia)
Wintersemester 2014/15

Übung 11 (Hauptfach)

Today's Agenda

- Announcements & miscellaneous
- Repetition
  - PHP
  - HTML5
  - jQuery
  - NodeJS
  - Multimedia Content
- Discussion of assignment 10

Announcements

- Next Week (26.01.2015): Q&A
  - Prepare questions & send them via email to tobias.stockinger@ifi.lmu.de
  - Discussion of the repetition sheet

- Repetition Sheet:
  - Not submitted to UniWorX → personal preparation
  - Do it on paper!

Exam (1)

- Exam Details:
  - Open Book: it's okay to bring handwritten notes, printed slides, code and other resources (do not bring books)
  - You can bring a non-programmable calculator, but you are not going to need it.
  - Bring a valid student card and personal ID card!

- Registration for the 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"

Exam (2)

- Possible topics:
  - Interactive web applications
  - digital rights
  - multimedia content description
  - streaming architectures

- Excluded:
  - Market trends, statistics, numerical data

- Distribution Lecture : Tutorial = roughly 40:60

Exemplary Solutions

- Some of you allowed us to publish your submissions on-line, thank you!

- These solutions are **one way of doing it**, not necessarily the perfect way.

- Find the solutions here: http://www.medien.ifi.lmu.de/lehre/ws1415/mmn/uebung/loesungen/

- Password: communicated during the tutorial.

Repetition

PHP (1)

```php
<!DOCTYPE html>
<html>
<head><title>Counter</title></head>
<body>
<?php
    $counter = 0;
    $counter++;
?>
<form action="01_counter.php" method="get">
    <input type="submit" name="submit" value="count" />
</form>
<h3>Output</h3>
<?php
    echo $counter;
?>
</body></html>
```

PHP (2)

- What's the problem with the code on the previous slide?

- Fix the code, so that the counter is incremented when the form is submitted

- Extend the code, so that the user can enter a number that is added to the counter

JavaScript

- You get the following output in the JavaScript console:

```
⊗ ▶  Uncaught TypeError: Cannot read     05 undefined.html:11
     property 'length' of undefined
```

The responsible code block looks like this:

```javascript
for(var i = 0; i < data.bands.length; i++){
    console.log(data.bands[i]);
}
```

What's the problem?
How do you solve it?

HTML5

- Name 3 elements that are 'new' in HTML5!
- Which document type is correct for HTML5:
  a) <!DOCTYPE html>
  b) <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 5.0//EN" "http://www.w3.org/TR/html5/strict.dtd">
  c) <!DOCTYPE HTML5>
- onblur and onfocus are...
  a) elements
  b) event attributes
  c) style attributes
- Which attribute of <script> is no longer required?
  rel | href | src | type

HTML5 (2)

```javascript
var x,y;
var canvas = document.getElementById('canv');
var context = canvas.getContext('2d');
var columns = 3, rows = 4, size = 20, offset = 5;

for(var i = 0; i < columns; i++){
    for(var j = 0; j < rows; j++){
        x = i * (size + offset), y = j * (size + offset);

        context.beginPath();
        context.fillStyle = i % 2 == 0 ? '#0000ff' : '#ff0000';

        context.strokeStyle = '#000000';
        context.lineWidth = "2";

        context.rect(x,y,size,size);
        context.stroke();
        context.fill();
    }
}
```

What does the output look like? Draw it!

AJAX

- Describe what asynchronous communication means!

- How does it show in web apps?

- You wrote the following script:

```
<script>
    $.get(   'http://www.google.com',
             {q : 'test search'},
             function(data){
                 console.log(data);
             }
    );
</script>
```

How do you fix this problem:

❌ **XMLHttpRequest cannot load** http://www.google.com/?q=test+search.   04_ajaxProblem.html:1
   No 'Access-Control-Allow-Origin' header is present on the requested resource. Origin
   'http://localhost:63342' is therefore not allowed access.

NodeJS

- Name 5 significant differences between Apache+PHP and NodeJS!

- Explain the difference of „non-blocking I/O" using PHP and NodeJS as examples!

Multimedia Content

- You are asked to create a 3 minute video clip about thunderstorms for a television news magazine. The company you work for has a huge collection of video snippets.
    - Explain how meta data comes into play now!
    - The company uses a software tool that implements the MPEG-7 standard.
      Which meta data parts are standardized by MPEG-7?
    - A colleague recommends searching the library by "segments". What is a segment? Explain 3 subclasses of segments!

Watermarking

- Name 3 things that digital watermarks should „survive"?

- What does „imperceptible watermarking" mean?

- Explain and discuss the following statement:
  Steganography aims for imperceptibility to human senses, digital watermarking tries to control the robustness as top priority. (Wikipedia)

eBooks

- ePub is just a container. What does it actually contain? What other e-book formats do you know?

- Explain how an e-Ink display works in your own words!

- A friend of yours needs to decide whether to buy an eBook-reader or a tablet PC. She mainly wants to read books. Explain the pro's and con's of each technology to her!

Off Topic: Tutors wanted!

- If you enjoyed this course and are excited about the topic, become a tutor!

- Responsibilities:
  - run tutorials (at least one)
  - help with corrections

- Feel free to contact us for further details ☺
  tobias.stockinger@ifi.lmu.de

Thanks!

What are your questions?