

# Multimedia im Netz (Online Multimedia)

Wintersemester 2014/15

Übung 05 (Nebenfach)



# Today's Agenda

- Flashback! 4<sup>th</sup> tutorial
- Introduction to JavaScript
- Assignment 4 - discussion

# Flashback!

## What do you remember from last week's tutorial?

# JavaScript

- JavaScript (JS) is a programming language
- JS code is **interpreted** by the web browser
- Code can be directly embedded into the HTML file

```
<script>
```

```
  /*
```

```
    this is where you put your code
```

```
  */
```

```
</script>
```

- Script file with the JS code can be imported  

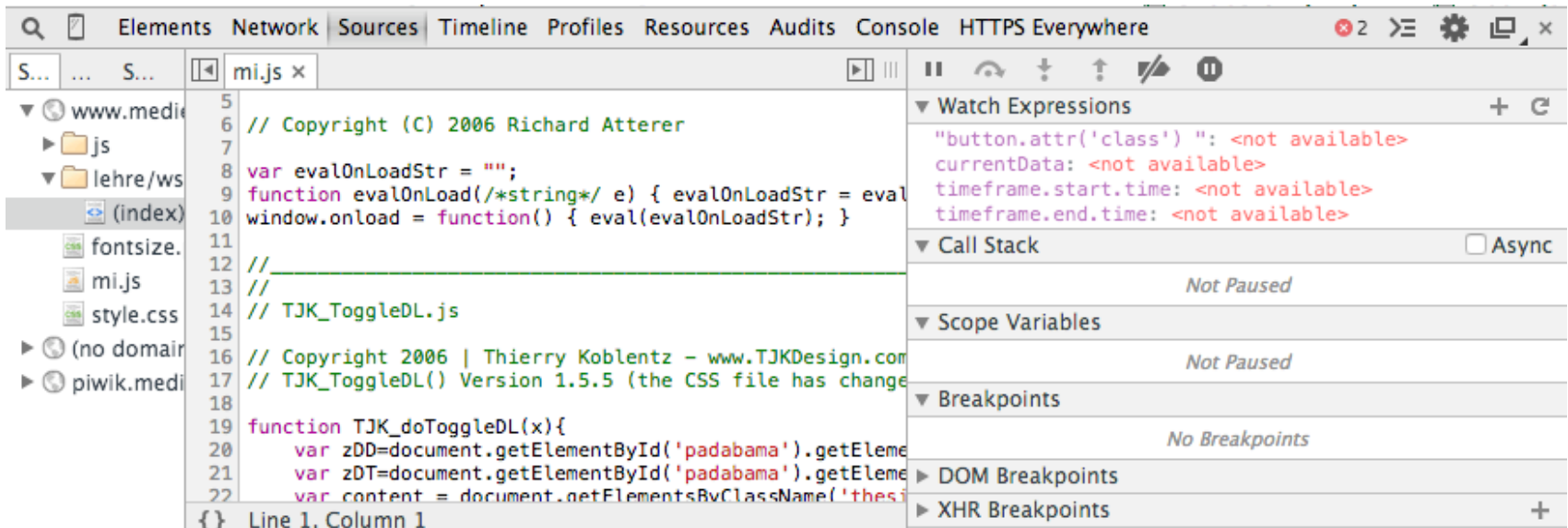
```
<script src="myScript.js"></script>
```

# Hello World (I)

```
<!DOCTYPE html>
<html>
<head lang="en">
  <meta charset="UTF-8">
  <title>Hello World</title>
  <script>
    alert("Hello World");
  </script>
</head>
<body>
</body>
</html>
```

# Debugging JavaScript

- Inside the script: `console.log("Hello World");`
- Modern browsers come with developer tools:
  - Firefox + Firebug
  - Chrome + JS-Console



# Variables and Scopes

- Variables possess different scopes depending on where they have been declared.
- Declare variables:  
`var var1 = 10;`  
`var2 = 10;`

# Example: Scopes

```
<script>
  var var1 = 10;

  function fun1(){
    var var2 = 20;
    var3 = 30;
    var var1 = 40;
    alert("Var 1: " + var1);
  }

  alert("Var 1: " + var1);
  alert("Var 2: " + var2);
  alert("Var 3: " + var3);

  fun1();

  alert("Var 1: " + var1);
  alert("Var 2: " + var2);
  alert("Var 3: " + var3);
</script>
```



# Example: For Loops, Arrays, Concatenation

```
<script>
  var fruits = new Array("Oranges", "Apples", "Pears");
  var output = "";
  for(var i=0; i<fruits.length; i++){
    output = output + fruits[i] + ", ";
  }

  alert("I like eating: " + output);
</script>
```

# Example: Functions

```
<script>
  var fruits = new Array("Oranges", "Apples", "Pears");
  var output = "";

  for(var i=0; i<fruits.length; i++){
    output = output + fruits[i] + ", ";
  }

  iEat(output);

  function iEat(something){
    alert("I like eating: " + something);
  }
</script>
```

# JavaScript and HTML

**text**

Farbe eingeben

**button**

Daten absenden

- 
- **Mouse Events**
    - onclick
    - onmouseover
    - ...
  - **Keyboard Events**
    - onkeypress
    - onkeyup
    - ...
  - ...

# Hello World (II)

```
<!DOCTYPE html>
<html>
<head lang="en">
  <meta charset="UTF-8">
  <title></title>
  <script>
    function sayHi(){
      alert("Hello World");
    }
  </script>

</head>
<body>
<input type="button" onclick="sayHi()" value="Say Hi!" />
</body>
</html>
```

# Document Object Model (DOM)

- The DOM lets us reference every element and its content within an HTML document.
- The elements, their content and their structure is modifiable:
  - `document`: What is shown in the browser window.
  - `getElementById()`: Retrieves an element with a given ID
  - `getElementsByTagName()`: Retrieves all elements with given tag
  - `node.firstChild`: Return the first child node within another
  - `node.nodeValue`: Gets/Sets a node's value
- <http://de.selfhtml.org/javascript/index.htm>

# Example: DOM Access (I)

```
<!DOCTYPE html>
<html>
<head lang="en">
  <meta charset="UTF-8">
  <title></title>
  <script>
    function sayHi() {
      var name = document.getElementById("username").value;
      if (name == "") {
        alert("Please enter your name!");
      } else {
        alert("Hello " + name + "!");
      }
    }
  </script>
</head>
<body>
<p>What's your name?</p>
<input type="text" id="username"/>
<input type="button" onclick="sayHi()" value="Say Hi!"/>
</body>
</html>
```

# Example: DOM Access (II)

```
<!DOCTYPE html>
<html>
<head lang="en">
  <meta charset="UTF-8">
  <title></title>
  <script>
    function sayHi() {
      var name = document.getElementById("username").value;
      if (name == "") {
        alert("Please enter your name!");
      } else {
        var output = document.getElementById("output");
        output.innerHTML = "<b>Hello " + name + "!</b>";
      }
    }
  </script>
</head>
<body>
<p>What's your name?</p>
<input type="text" id="username"/>
<input type="button" onclick="sayHi()" value="Say Hi!"/>
<div id="output"></div>
</body>
</html>
```

# Assignment 5

- **Topic: JavaScript und HTML**
- Due in: 1 Week
- Due date: 17.11.2014 **16:00h**

### Der Text

```
Hier steht ein Text. Der Text wird nach einem Begriff durchsucht. Wird ein Begriff gefunden, wird dieser hervorgehoben und in einem div angezeigt.
```

### Der Suchbegriff

### Die Ausgabe

Hier steht ein **Text**. Der **Text** wird nach einem Begriff durchsucht. Wird ein Begriff gefunden, wird dieser hervorgehoben und in einem div angezeigt. Ansonsten kommt der Hinweis, dass nichts gefunden wurde.



**Thanks!**  
**What are your questions?**