

Multimedia im Netz (Online Multimedia)

Wintersemester 2014/15

Übung 08 (Nebenfach)



Today's Agenda

- Flashback – Quiz preparation
- jQuery
 - Basics
 - DOM Operations
 - Events
 - Effects
- Discussion of assignment 07

jQuery

- <http://jquery.com>
- JavaScript-Library, currently at version 1.11.1 or 2.1.1
- Features:
 - Easy DOM-access
 - Nice event-handling
 - Animations
 - Simplified AJAX-Requests
- „jQuery is designed to change the way that you write JavaScript“
- But don't get confused: jQuery **IS STILL** JavaScript!



Including the jQuery library

- Only 1 JavaScript file is required
- 3 Options:

- Download and include locally (offline):

```
<script src="jquery-1.11.1.min.js"
        type="text/javascript"></script>
```

- Hotlink (hosted by Google)

```
<script
src="http://ajax.googleapis.com/ajax/libs/jquery/1.11.1/jquery.min.js"></script>
```

- Hotlink (jQuery Site):

```
<script src="http://code.jquery.com/jquery-1.11.1.min.js"></script>
```

Basics

- Global jQuery function: `$ ()`
- Parameters: any CSS Selector
- Returns: jQuery-object, that offers handy methods.

- Examples:
 - `$("#myDiv")`
 - `$(".container")`
 - `$("#input[type='text']")`

- `$` offers additional methods, e.g. `$.isArray(value,array)`

DOM Manipulation (1)

```
<div id="myDiv">Container</div>
```

- Get the HTML Content of an element:

```
var content = $('#myDiv').html();
```
- Modify the HTML content of elements:

```
$('#myDiv').html("<span>My New Content</span>");
```
- **Note:** `.html()` can be used as both getter and setter!

DOM Manipulation (2)

```
<div id="myDiv">Container</div>
```

- Create nodes and add them to the DOM:

```
$("#myDiv").after("<span>More Content</span>");
```
- Get/set attributes:

```
$("#myDiv").addClass("container");  
$("#myDiv").attr("id", "newID");
```
- More examples:
<http://api.jquery.com/category/Manipulation/>

Method Chaining

- basically, any jQuery method returns another jQuery object, that you can now work with.
- Advantages: Efficiency (less code), readability (sometimes)
- Examples:

```
$("#myDiv").removeClass("off").addClass("on");
```

```
$("#myDiv")  
  .css("color", "#cccccc")  
  .removeClass("container")  
  .attr("id", "neueID")  
  .append("<span>Text</span>");
```


Traversing the DOM

- Traverse the DOM tree with CSS selectors
- Useful to select and edit elements efficiently.
- Examples:
 - `$("#myDiv").next("div")`
gets the first `div`-element that follows the element with ID `myDiv`
 - `$("ul").find("li.item")`
finds all `li`-elements having the class `item` within all `ul`-elements
 - More Examples: <http://api.jquery.com/category/Traversing/>

Callback-Functions

- Very important jQuery paradigm: Callback-functions
- Function is passed to a function. jQuery calls this function at a certain point.

```
$( "li" ).each( function() {  
    console.log( $( this ).text() );  
} );
```

\$.each()

- Powerful „for-loop shortcut“

```
$.each(collection, function(index, item) {  
    // ...  
});  
  
// is equivalent to:  
  
for(var index=0; index<collection.size(); index++){  
    item = collection.get(index);  
}
```

- Example: 07_fruits.html (material from MMN web page)

\$(document).ready()

- `$(document).ready(onLoadCallback)` ensures that the DOM has been loaded entirely and that you can access any element inside it.
- Once the DOM is loaded, the callback is fired

```
$(document).ready(function(){  
    //JavaScript-Code  
});
```

Event-Handling (1)

- Event-Handler: get notified about certain events (e.g. clicks) and proceed to execute a given action (= callback)

- jQuery click handling:

```
$("#myID").click(function(e) { ... });
```

Alternative:

```
$("#myID").on("click", function(e) { ... });
```

Event-Handling (2)

- There are a lot of event-handlers:
click, change, focus, submit, keypress, ...
<http://api.jquery.com/category/Events/>
- Prevent the default handler: `preventDefault()`;

```
$( "a" ).click( function( event ) {  
    event.preventDefault();  
    alert( "Link: " + $( this ).attr( "href" ) );  
} );
```

Effects

- jQuery allows you to quickly create common animations

```
<div class="box"></div>
```

```
$(document).ready(function(){  
    $(".box").fadeOut();  
});
```

- Find an overview here:
<http://api.jquery.com/category/effects/>

Assignment 8

- **Topic: Interactive Menu with jQuery**
- Due in: 1 Week
- Due date: 15.12.2014 16:00h

Click to watch the video

- Menu 1
 - Item 1-1
 - Item 1-2
 - Item 1-3
- Menu 2
 - Item 2-1
 - Item 2-2
 - Item 2-3
 - Item 2-4
- Menu 3
 - Item 3-1
 - Item 3-2
 - Item 3-3

Last Visited:

Item 3-3-2

Click History:

Item 2-3
Item 1-3
Item 2-4
Item 3-2
Item 3-3-2
Item 3-3

Thanks!

What are your questions?