Javascript, was sonst?

von Tobias Nickel

Anfang in HTML

```
<!DOCTYPE html>
<html>
    <head>
        <title>Text im Tabreiter</title>
    </head>
    <body>
        eine gute HTML-Dokumentation findet man unter
        http://de.selfhtml.org/index.htm
    </body>
</html>
```

ganz schnell HTML

```html
<body>
    <div class="breich">
        <h1 class="ueberschrift">die Überschrift</h1>
        <p>    ein Text sollte dann in einem Paragraphen
            eingefasst werden, damit Absätze nicht durch
            mehrfaches einfügen von Zeilenumbrüchen.
        </p>
        <h2 class="untergeordneteUeberschrift">
            Zweite Überschrift </h2>
        <p>...</p>
    </div>
</body>
```

ganz schnell HTML

```html
<body>
  <table>
    <tr><td>Z1S1</td><td>Z1S2</td></tr>
    <tr><td>Z2S1</td><td>Z2S2</td></tr>
  </table>
  <ul><li>ListItem 1</li><li>ListItem 2</li></ul>
  <ol><li>ListItem 1</li><li>ListItem 2</li></ol>
</body>
```

ganz schnell HTML

```html
<head>
    <title>text im Tab</title>
    <meta name="Beschr." content="value" />
    <style type="text/css">
        h1{ color: lightblue; }
    /* http://de.selfhtml.org/navigation/css.htm */
    </style>
    <script type="text/javascript"></script>
</head>
```

einfachstes Javascript

```javascript
window.onload=function(){
    var x = 21;
    console.log(x);
    var b = x*2;
    if(true){ console.log(true); }
    switch(x){
        case 21: console.log('x is 21'); break;
    }
    for(y=0;y<10;y++){ console.log(x+'time'); }
    document.getElementByTagName( 'body' )
        .innerHTML="hello World ! !";
}
```

Einstieg in JQuery

```html
<script src="jquery.js"></script>
<script>
$.onLoad(function(){
    // some init code
    $('.imageTumb').each(function(e){
        e.effect( "shake" );
    }
});
</script>
```

Ajax

```javascript
// neue Daten vom Server holen
// $.get('url',callback);
$.get("myserver.de/someData.json",
function(data){
    // update the Data-Model
    // display the model in DOM
    console.log(data);
});
```

Vorbereitung der Bildbarbeitung

```html
<canvas id="myCanvas" />
<script type="text/javascript">
function ImageEditor(imageUrl,canvasId){
    this.that=this;
    var context = document.getElementById(canvasId).getContext('2d');
    var image = new Image();
    image.src = imageUrl;
    image.onload = function(){
        document.getElementById(canvasId).width = image.width;
        document.getElementById(canvasId).height = image.height;
        context.drawImage(image,0,0);
        ready = true;
    } // some Function
}
</script>
```

Schreiben eines Filters

```javascript
this.invert = function (){
    var image_data = context.getImageData(
        0, 0, image.width, image.height);
    var pixel = image_data.data;
    for (var i = 0, n = pixel.length; i < n; i += 4)
    {
        pixel[i]   = 255 - pixel[i];      //Rot
        pixel[i+1] = 255 - pixel[i+1]; //Grün
        pixel[i+2] = 255 - pixel[i+2]; //Blau
    }
    context.putImageData(image_data, 0, 0);
};
```

Nutzen des ImageEditors

```javascript
$.onLoad(function(){
    var BildEditor = new ImageEditors(
        'Pfad/zum/bild.jpeg',
        'myCanvas'
    );
    BildEditor.invert();
});
```

3D Animationen / Games

- webGL
  - based on OpenGL-ES
  - im "3d" context von Canvas
- Engines
  - three.JS
  - Unity (komerziell)

"Hello World" in NodeJS

```javascript
var http = require('http');

http.createServer(function (req, res) {
    res.writeHead( 200,{'Content-Type':'text/plain'}
);
    console.log(req.path);
    res.end('Hello World\n');
}).listen(1337);

console.log('Server running at port 1337');
```

nonblocking IO

```php
<?php
$connect = db_connect(host,user,pw);

$result['a'] = db_query($connect, "select * from a");

$result['b'] = db_query($connect, "select * from b");

$result['c'] = db_query($connect, "select * from c");

json_encode($result);
?>
```

nonblocking IO

```php
<?php
$connect = db_connect(host,user,pw);
    //warten
$result['a'] = db_query($connect, "select * from a");
    //warten
$result['b'] = db_query($connect, "select * from b");
    //warten
$result['c'] = db_query($connect, "select * from c");
    //warten
json_encode($result);
?>
```

Longpolling

```javascript
var http = require('http');
var mWaiter=new Array();
http.createServer(function (req, res) {
    if(req.path=='/'){
        mWaiter.push(res);
    }else{
        mWaiter.each(function(e){e.end(req.path);});
        mWaiter=new Array();
    }
}).listen(1337);
```

Wiederholung der Initialisierung

```php
<?php
    include_once 'myFramework.php';
    include_once 'myExtraFunctions.php';
    include_once 'config.php';

    $web = new myFramework();
    $web.bootstrap();
    $web.render();
    $web.response();
?>
```

CouchDB

- Dokumentenbasiert
- API ist http / REST
- suchen mittels Map/Reduce
- horizontal + vertikal Skalieren

DesignDokumente

```json
{
    "_id": "_design/company",
    "views": {},
    "lists": {},
    "shows": {}
}
```

DesignDokumente

```json
{   "_id": "_design/company",
    "_rev":    "12345",
    "language": "javascript",
    "views":      {
        "all": {
            "map": "function(doc) {
                if (doc.Type == 'customer')
                emit(null, doc);
            }"
        }
    }
}
```

Wegweiser zum Glück

html / css

    http://de.selfhtml.org/

    http://www.w3schools.com/

Javascript im Browser

    http://www.w3schools.com/

    http://jquery.com/

nodejs Programmierung

    http://nodejs.org/

    https://npmjs.org/

    oder einfach googeln

CouchDB

    http://couchdb.apache.org/

    http://guide.couchdb.org/