JQUERY

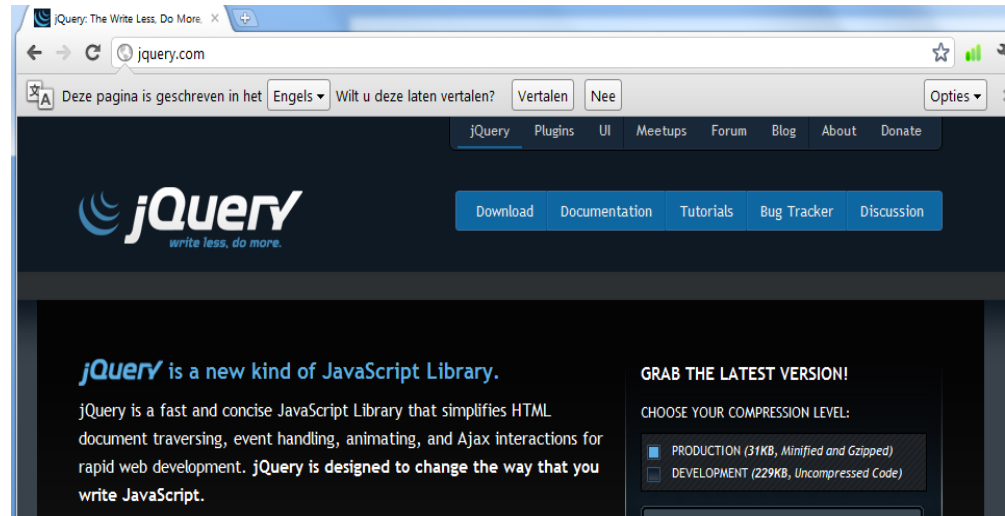*" jQuery makes writing Javascript much easier "*

Lightweight open source javascript library (één van meest populaire libraries op www)

DOM scripting & event handling

Ajax

User interface effects

Form validation

Wat?

Elegantere javascript code en manipulatie van HTML elementen *(via SELECTOR API)*

$("div").text("dit is een test");

$("div).click(function(){"$("#eenId").fadeOut("slow")});

Build-in set voor animaties

Voorbeeld:

◦ Zoek alle <div> elementen met een CSS class "product", en laat deze stilletjes verdwijnen. *(1.html)*

Starten

Download eigen kopie van jQuery lib van de 'Downloading jQuery' page , of

```html
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Untitled Document</title>

<script type="text/javascript" src="http://code.jquery.com/jquery-latest.js"></script>

<script type="text/javascript">
$(document).ready(function()
{
    alert("start");
});
</script>

</head>

<body>
</body>
</html>
```

Voorbeeld: vroeger.. En nu met JQUERY

```
<a href="#" onclick="toggle_visibility('foo');">Click here to toggle visibility of #foo</a>

function toggle_visibility(id) {
    var e = document.getElementById(id);
    if(e.style.display == 'block')
        e.style.display = 'none';
    else
        e.style.display = 'block';
}
```

```
$().ready(function(){
    $("a").click(function(){
            $("#more").toggle("slow");
                        });
});
```

Waarom is de *"library"* zo populair

Cross-browser

AJAX

Selectors

Page Load

Animation & effects

Maken HTML5 + advanced Javascript Engines einde aan Adobe Flash?

Selectors

Selecteren van elementen door
- jquery() *of korter,*
- $()

HTML item	Selectie	JQUERY selector	HTML voorbeeld
Class	.class	$('.mijnCl')	<div class="mijnCl">
Element	Paragraaf	$('p')	
Id	#id	$('#mijnId')	<div id="mijnId">
Style	p.Second	$("p.second")	<p class="second">
Hierarchie	Div p ul	$('div p ul')	<div><p> ..

Selectors - elementen

$('p')
◦ Selectie van alle **p**-elementen

◦ Selecteren van de eerste p tag
$('p:first')
$('p:eq(0)') *(de index nummer start vanaf 0 !)*

◦ Selecteren van de laatste p tag
$("p:last")

var nr = $('p').size()
$("p:eq()")

Looping over elementen in een '*wrapped set*'

```
 9  <script>
10
11      $(function(){
12
13          $("button").click(function(){
14
15              $("p").each(function(m){
16                  $("p:eq(" + m + ")").text(m);
17              });
18
19          });
20      });
21  </script>
```

```
24  <body>
25      <button>Button</button>
26      <p>paragraaf 1</p>
27      <p>paragraaf 2</p>
28      <p>paragraaf 3</p>
29      <p>paragraaf 4</p>
30
31  </body>
```

Selectors : special functions

Selector	Example
$('tr:even')	$("tr:even").toggleClass("even");
$('tr:odd')	
:hidden	
:visible	
:selected	
:checked	
:contains(text)	

```
10⊖ <style>
11⊖     .even {
12          background: red;
13      }
14      </style>
15⊖     <script>
16⊖         $(function() {
17
18⊖             $("button").click(function() {
19                 $("tr:even").toggleClass('even');
20
21             });
22          });
23      </script>
```

```
27⊖         <button>
28              Button
29          </button>
30⊖         <table>
31⊖             <tr>
32              |       <td>een</td><td>twee</td>
33              </tr>
34⊖             <tr>
35                  <td>drie</td><td>vier</td>
36              </tr>
37⊖             <tr>
38                  <td>vijf</td><td>zes</td>
39              </tr>
40⊖             <tr>
41                  <td>zeven</td><td>acht</td>
42              </tr>
43          </table>
```

Running code when a page is ready

Vroeger : onLoad event
- ◦ Wanneer alle afbeeldingen geladen zijn

Nu:
- ◦ $(document).ready(function()
  { }) ;

- ◦ Of $().ready(function(){});

- ◦ *Of korter*

$(function()
  { }) ;

Herschrijven van elementen

```
<!DOCTYPE >
<html>

    <head>
        <title>voorbeeld</title>

        <script type="text/javascript" src="http://ajax.googleapis.com,

<script type="text/javascript">

    function klik()
    {
        $('p').each(function(m)
        {
            //this.innerHTML = m;
            $('p:eq(' + m + ')').text("<b>" + m + "</b>");
            $('p:eq(' + m + ')').html("<b>" + m + "</b>");

        });


        p('')
    }
</script>
    </head>

    <body>

        <a href="#" onclick="klik()">doe iets</a>

        <p>eerste p tag</p>
        <p>tweede p tag</p>
        <p>derde p tag</p>
        <p>vierde p tag</p>
    </body>
</html>
```

.text(): je vervangt enkel de tekst binnen het element

.html() : je vervangt het hele element

Content aan elementen toevoegen

```
<!DOCTYPE >
<html>

    <head>
        <title>voorbeeld</title>

        <script type="text/javascript" src="http://ajax.googleapis.com

<script type="text/javascript">

    function klik()
    {



        $('#winnaar').append('<b> 1000 euro</b>');
    }
</script>
    </head>

    <body>

        <a href="#" onclick="klik()">doe iets</a>
        <p id="winnaar">You have won</p>
    </body>
</html>
```
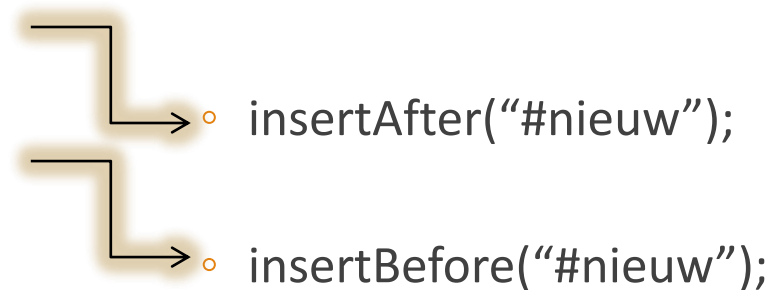
.append()

.before(), .after() : *meer controle!*

Nieuwe HTML elementen maken vanuit code

$("<p>Dit is een nieuw element</p>")

- ○ insertAfter("#nieuw");

- ○ insertBefore("#nieuw");

```
11⊖        $(function(){
12
13⊖            $("button").click(function(){
14
15                $("<p>nieuw element</p>").insertAfter("#oud");
16
17            });
18        });
```

Events

Algemene notatie:

◦ $(' '). event (function(arg) {   });

Events						
blur	Scroll	Mouseup	Mouseover	Mousemove	Mouseout	Focus
Unload	Load	Dbclick	Mousedown	Mouseenter	Mouseleave	Change
Select	Submit	Keydown	Keypress	Keyup	error	

Events – een voorbeeld
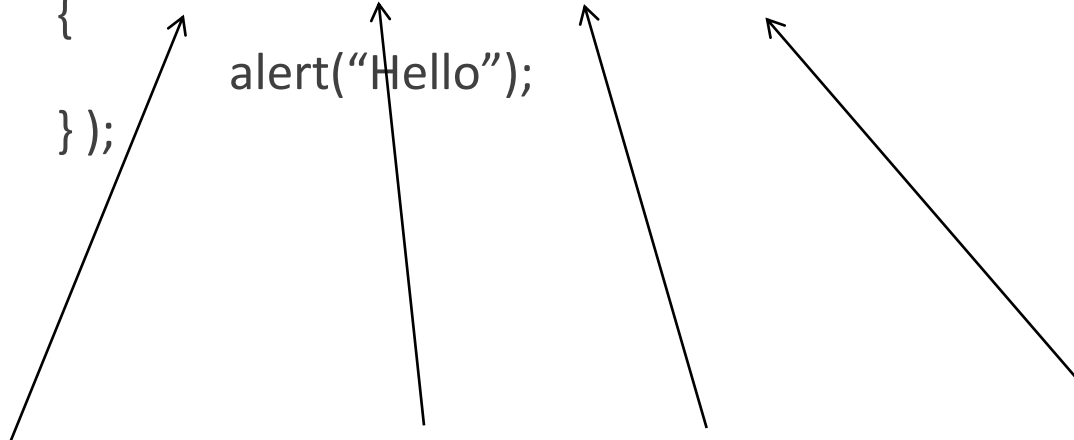
```
$('#target').click( function (arg)
{
        alert("Hello");
} );
```

HTML element   Event type   Callback function   Event object

Event object gebruiken

Event object properties			
Event.altkey	Event.ctrkey	Event.data	Event.keyCode
Event.result	Event.screenx	Event.screeny	Event.shiftKey
Event.pageX	Event.pageY	Event.relatedTarget	
Event.target	Event.timeStamp	Event.type	

Event object gebruiken - 2

```
<a href="#" id="event" >start
een event</a>
```
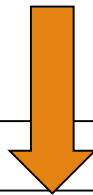
```
$('#event').click(function(arg)
                            {

alert(arg.pageY);
                            });
```

```
<body id="target">
        //

</body>
```

```
$('#target').keydown(function(arg)
{
        alert(String.fromCharCode(arg.keyCode));
});
```

Visuele Effecten / animaties

Show / Hide

HTML	JQUERY code
	$(function()
``<style type="text/css">
.recipe
{
   display:none;
}
</style>

 LiNk

<div class="recipe">
   Some Text , bla bla bla bla bla bla
       bla bla, text text ..
   </div>``` | ```{

$('#mijnLink').click(function(event)
                            {

   $('.recipe').toggle(1000);

                            });

});``` |

$(' ').toggle(duration, callback);

fadeIn / Out

```
$('#event').click(function(arg)
{
      $('#recipe').fadeOut(1000,mijnCallback);
});
                              });
```

E.g. :

$('#recipe').fadeTo(1000, mijnCallback);

Custom animations

Definitie: **animate(params, duration, easing, callback);**

Params: bijvoorbeeld CSS properties

Duration: tijd in milliseconden

Easing: de snelheid van de animatie (vb. lineair)

Callback: functie opgeroepen bij einde van de animatie

```
$(function() {

    $("#recipe").animate({
        "width" : "80%",
        "opacity" : 0.33,
        "font-size" : "30px"
    }, 2000);

});
```

Interactive & exciting tables -1

```html
<table border="1" cellpadding="4">

<thead>

  <tr>
    <th>Category</th>
    <th>Product</th>
    <th>Price</th>
    <th>Status</th>
  </tr>

</thead>
<tbody>
<tr>
<td>Clothing</td>
<td>North Face Jacket</td>
<td>189.99</td>
<td>In-stock</td>
</tr>
```

Category	Product	Price	Status
Clothing	North Face Jacket	189.99	In-stock
Shoes	Nike	59.99	In-stock
Electronica	Led TV	589.99	Out of stock
Sporting Goods	Pint Golf clubs	159.99	In-stock
Clothing	Sweater	19.99	In-stock

```html
<script type="text/javascript" src="http://code.jquery.com/jquery-latest.js'

<script type="text/javascript">
$().ready(function()
    {
        $("tr:even").css('background','#dedede');
        $("tr:odd").css('background','#ffffff');

    });
</script>
```

Category	Product	Price	Status
Clothing	North Face Jacket	189.99	In-stock
Shoes	Nike	59.99	In-stock
Electronica	Led TV	589.99	Out of stock
Sporting Goods	Pint Golf clubs	159.99	In-stock
Clothing	Sweater	19.99	In-stock

Interactive & exciting tables -2 (hover effect to rows)

```
$().ready(function()
    {
        $("tr:even").css('background','#dedede');
        $("tr:odd").css('background','#ffffff');

        $("tr").hover(over,out)


    });

function over()
{
        $(this).css('background','pink');
}

function out()
{
    $(this).css('background','#ffffff');
}
```
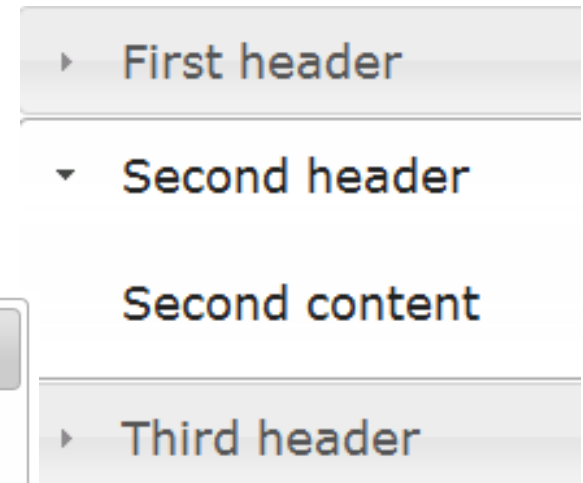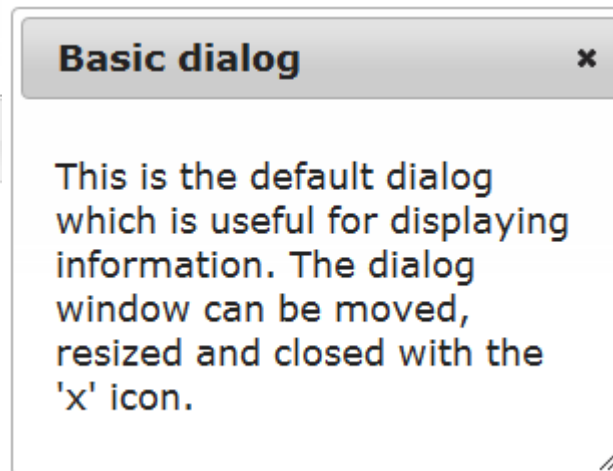
Category	Product	Price	Status
Clothing	North Face Jacket	189.99	In-stock
Shoes	Nike	59.99	In-stock
Electronica	Led TV	589.99	Out of stock
Sporting Goods	Pint Golf clubs	159.99	In-stock
Clothing	Sweater	19.99	In-stock

JQUERY UI: http://jqueryui.com/demos/

jQuery UI is a widget and interaction library built on top of the jQuery JavaScript Library, that you can use to build highly interactive web applications.
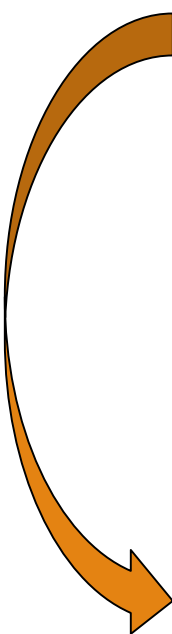
Stap 1: Build your custom jQuery UI download

Kies componenten (vb. accordion, dialog,…) die je wil hebben

Selecteer een thema (eigenlijk een css voor je componenten)

```
<link type="text/css" href="jqueryUI/css/custom-theme/jquery-ui-1.8.17.custom.css" rel="stylesheet"/>
<script type="text/javascript" src="jqueryUI/js/jquery-1.7.1.min.js"></script>
<script type="text/javascript" src="jqueryUI/js/jquery-ui-1.8.17.custom.min.js"></script>
```
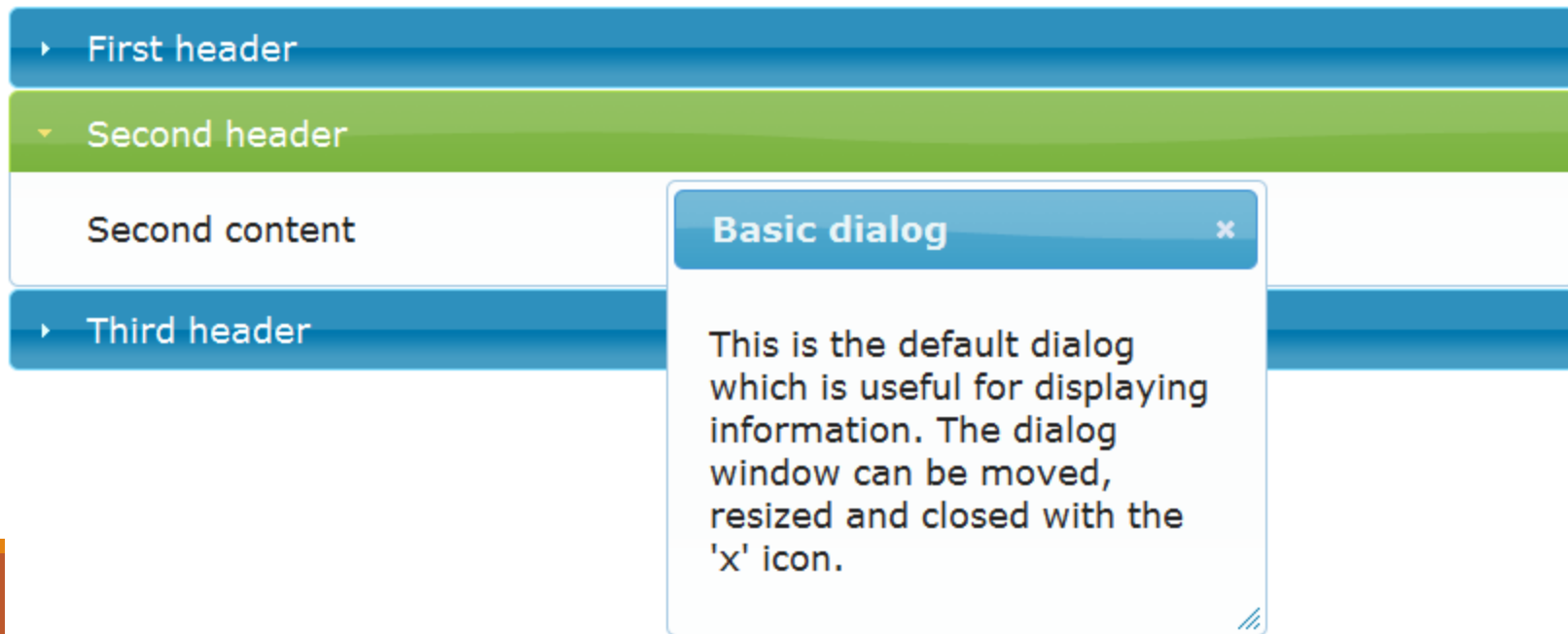
Test enkele demo's uit

Customize JQUERY UI

Download your theme:

http://jqueryui.com/themeroller/

Oefening

Zoek op hoe je elementen "draggable & droppable" kan maken. Tracht onderstaande te implementeren: *(start project:)*
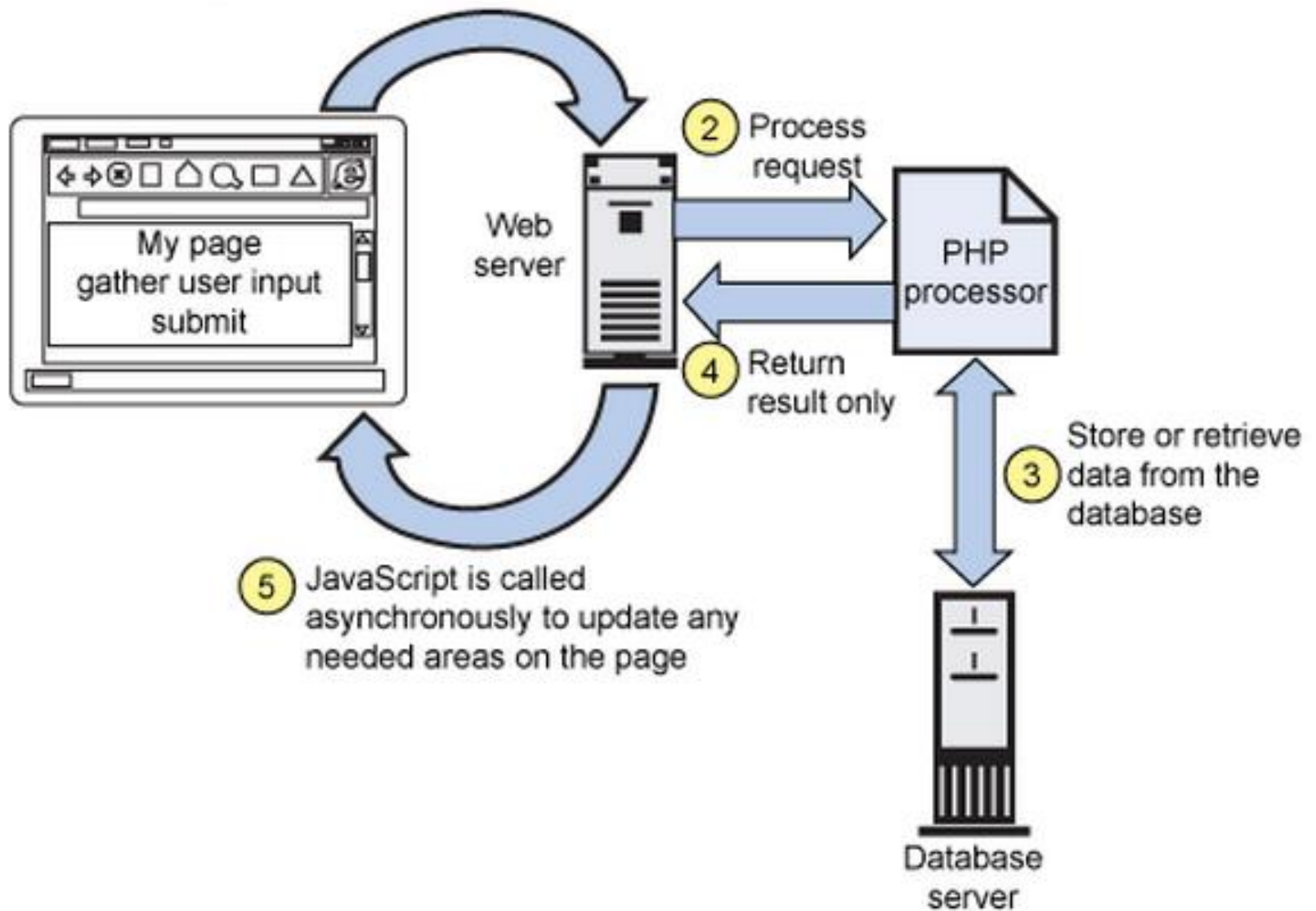
AJAX

Asynchronous Javascript And XML

*Communiceer met de server achter de schermen
– met geen "page refresh"*

*De browser connecteert met de server, download de data zonder page refresh,
update het pagina element met de nieuwe data*

1. Send request to server using XMLHttpRequest

My page
gather user input
submit

Web server

2. Process request

PHP processor

4. Return result only

3. Store or retrieve data from the database

Database server

5. JavaScript is called asynchronously to update any needed areas on the page
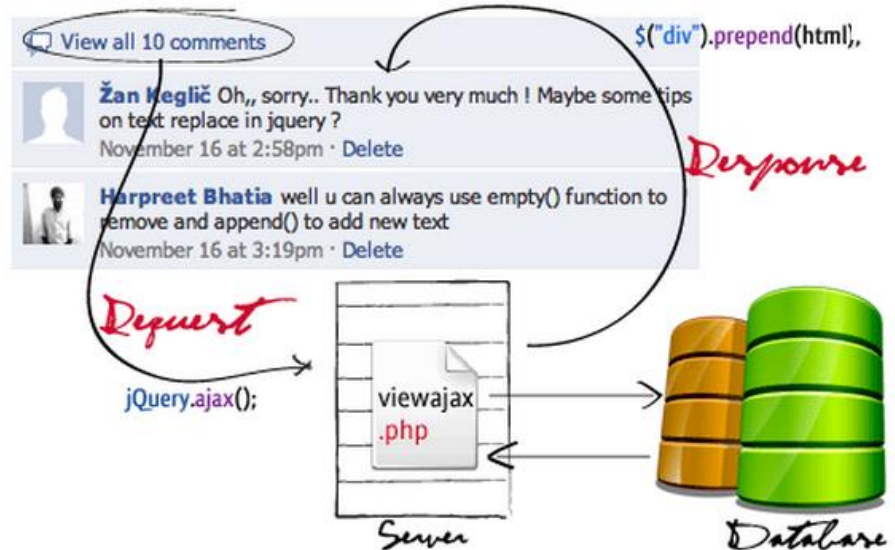
TODO

Implementeer XMLHttpRequest object

Configureer dit object met de data die je naar de server wil sturen

Set up een callback functie (en lees het antwoord van de server)

Connecteer met de server via de SEND functie

=> Via JQUERY !

load function

```html
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Untitled Document</title>

<script type="text/javascript" src="http://ajax.googleapis.com/ajax/libs/jquery/1.6.4/jquery.min.js"></script>
<script type="text/javascript">
$(document).ready(function()
                    {
                        $("div").load("message.txt")
                    });
</script>
</head>

<body>

Gekregen van de server: <div></div>
</body>
</html>
```

Firefox ▼

Untitled Document +

file:///C:/Users/Administrator/Documents/school1112/ProjectICT4/ajax_load.html

NCH ▼   ▼ **WEB SEARCH** ▼ Find Software ▼

Gekregen van de server:

tekst van de server.. Tom Peeters

Load & Callbacks

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Untitled Document</title>

<script type="text/javascript" src="http://ajax.googleapis.com/ajax/libs/jquery/1.6.4/jquery.min.js"></script>
<script type="text/javascript">
$(document).ready(function()
                        {
                          $("div").load("message.txt", callback)
                        });

function callback()
{


    $("#targetDiv").text("data ontvangen");
}
</script>
</head>

<body>

Gekregen van de server: <div></div>
<div id="targetDiv"></div>
</body>
</html>
```
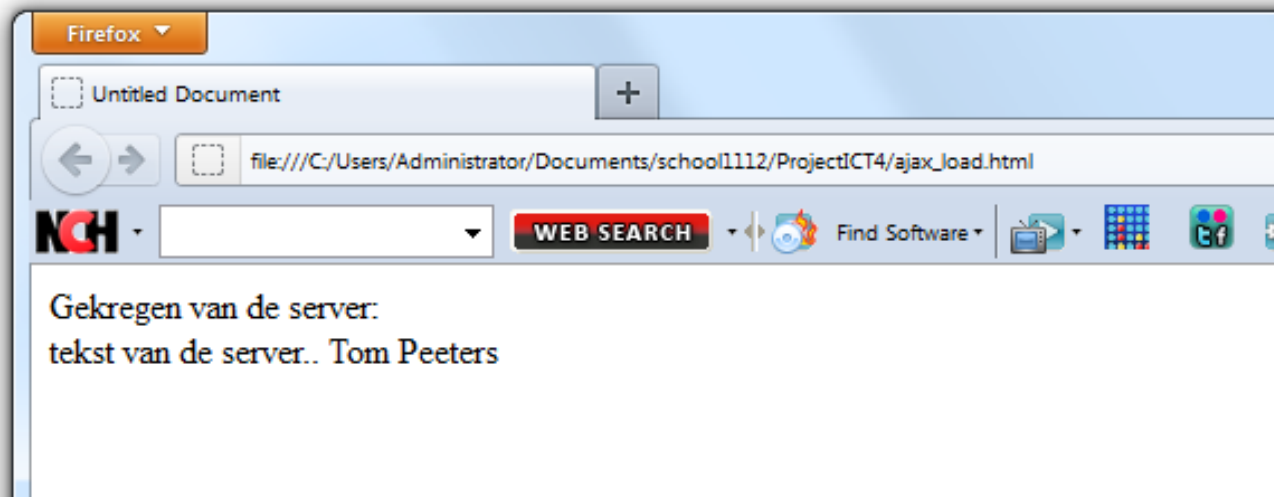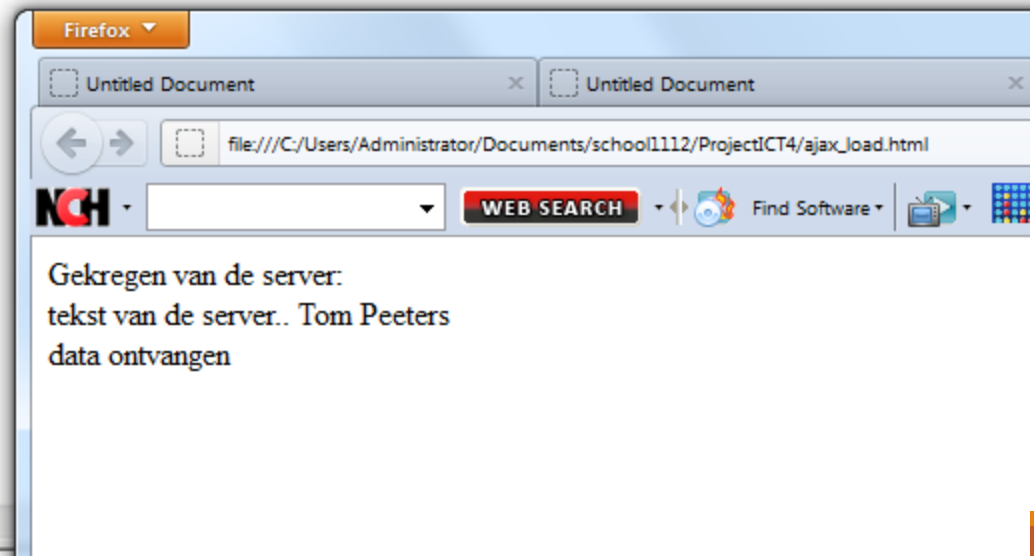

Firefox ▼

Untitled Document × Untitled Document ×

file:///C:/Users/Administrator/Documents/school1112/ProjectICT4/ajax_load.html

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Gekregen van de server:
tekst van de server.. Tom Peeters
data ontvangen

Advanced AJAX tasks

```html
<script type="text/javascript" src="http://ajax.googleapis.com/ajax/libs/jquery/1.6.4/jquery.min.js"></script>
<script type="text/javascript">
$(document).ready(function()
                {
                    $.ajax(
                        {
                            type:"GET",
                            url:"message.txt",
                            success:callback
                        });


                });

function callback(data,status)
{
    $("div").text(data.toString());
}
</script>
</head>

<body>

Gekregen van de server: <div></div>

</body>
</html>
```

Untitled Document

localhost:81/Ajax/ajax3_fullPower.html

Gekregen van de server:
tekst van de server.. Tom Peeters
tekst van de server.. Tom Peeters