



## Assignment 13 (NF, minor subject)

---

*Due: not submitted to UniWorX. No due date. Only for your own preparation.*

### Goals

After doing the exercises,

- You should be better prepared for the exam.

### Task 1: JavaScript Video Event Handlers

**8 Points**

Imagine you want to show a video on your web page. You don't need sophisticated video controls, but you want to allow the user to start and stop the video.

Use the code fragment below. Add a click event handler to the video element. Make sure that the video starts if it is paused and the other way round. You can use jQuery, but it's not required.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Video Events</title>
</head>
<body>
<video id="myVid">
  <source src="http://bit.ly/20unJGY" type="video/mp4">
</video>
<script>

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



## Task 2: jQuery & AJAX

20 Points

```
{
  "bands": [
    {
      "name": "Beatles",
      "members": [
        "John",
        "Paul",
        "George",
        "Ringo"
      ]
    },
    {
      "name": "The Rolling Stones",
      "members": [
        "Keith",
        "Mick",
        "Ronnie",
        "Charlie"
      ]
    }
  ]
}
```

Response from the web-service at [www.bands.info](http://www.bands.info) (fictional).

- a) There is a web-service that delivers information about bands. The data is returned as JSON like the fragment above. The fictional web-service's URL is <http://www.bands.info>. Use jQuery's AJAX capabilities to load the data from this URL.

Your solution should:

- Perform a GET request to the web service.
- Handle the response in the callback function.
- Put the band names into <h2> elements
- Create an <ul> for the member list
- Create an <li> for each band member
- Put all created elements into the #container.

**Put your code into the fragment on the next page!**

- b) Name one advantage and one disadvantage of AJAX.  
c) Explain two advantages of JSON over XML.

### Band Member Overview

#### Beatles

- John
- Paul
- George
- Ringo

#### The Rolling Stones

- Keith
- Mick
- Ronnie
- Charlie



```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Bands</title>
</head>
<body>
<h1>Band Infos</h1>
<div id="container"></div>

<script src="https://code.jquery.com/jquery.min.js"></script>

<script>
  var container = $('#container');

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



### Task 3 – PHP Sessions

10 Points

- a) You want to implement a “guess-my-number” game with PHP. The user enters a number into a form submits it. A PHP script evaluates the number and provides feedback whether the guess was too high or too low.

```
<!DOCTYPE html><html>
<head lang="en">
  <title>Guess a Number</title>
</head>
<body>
<form method="post">
  <input type="number" name="guess" />
  <input type="submit" value="Check!" />
</form>
```

Extend the code fragment above to meet these requirements:

- Create a variable that holds a static secret number of your choosing.
- If the form was submitted, check if the user entered the correct number. If the guess was correct, inform the user and reset the game. Otherwise, inform the user that the guessed number was incorrect.
- The game counts how often the user submits the form. Display the number of guesses!



- b) What is the difference between `session_destroy()` and `$_SESSION = array();`?
- c) How do you transmit form data to a server without the user seeing the parameters immediately?
- d) Does a user need to allow cookies to make PHP sessions work? Why (not)?
- e) What is the “cookie law”?

#### Task 4 – PHP & MySQL

6 Points

There is a database “mmn\_exam” that contains the table “students” with the following data:

*1 - students*

ID	matNr	lastname	firstname	program	semester
1	22548796	Mustermann	Max	MI	3
2	54563254	Hauser	Tanja	MI	1
3	55222336	Sauer	Simon	KUMM	5
4	24563535	Deutsch	Sara	BWL	9
5	98996542	Lauber	Ina	BWL	8

- a) What is the returned result for each of the following SQL statements:
  - a. `SELECT * FROM students`
  - b. `SELECT lastname, firstname FROM students WHERE matNr=24563535`
  - c. `SELECT matNr FROM students WHERE program='BWL' AND semester > 4`



- b) You want to utilize a PHP script to **display** data from the table above in a web page. Extend the following statement to do just that. The data should be put into a <table> element.

```
<?php
$db = mysqli_connect("localhost", "root", "", "mmn_exam");
$query = "SELECT matNr FROM students WHERE semester >= 3 ";

?>
```

## Task 5 – HbbTV

6 Points

Read this article: [HbbTV 2.0 spec released](http://www.broadbandtvnews.com/2015/02/10/hbbtv-2-0-spec-released/) by Chris Dziadul  
<http://www.broadbandtvnews.com/2015/02/10/hbbtv-2-0-spec-released/>

Briefly answer the following questions:

- What are the most anticipated features of HbbTV 2.0?
- Is HbbTV capable of UltraHD? Which codec is mentioned for in this context?
- Name two implications of “synchronization between TV, tablets and smartphones”
- Is HbbTV 2.0 downward-compatible with older versions of HbbTV?

## Submission

This assignment is not submitted. If you have questions, please ask them during the tutorials.