



Assignment 1 (minor subject / Nebenfach)

Due: Wed 28.10.2015; 12:00h (1 Week)

Goals

After doing these exercises you will be able to...

- understand JavaScript's quirks better
- handle events with JavaScript
- comprehend the workings of tools like Google Analytics

Task 1: Hoisting

Do an online research about what the term 'hoisting' refers to when working with JavaScript.

- Briefly describe **in your own words** what hoisting is.
- Provide an example and describe the problems / potential error sources that come along with hoisting.
- Find out what "run time" and "parse time" mean and describe the concepts in your own words.

Put your solution as .txt or .pdf file in the folder 'task1'.

Task 2: Measuring Webpage Visits

Tools like Google Analytics measure and quantify a user's interactions with a website. Many different interactions (clicking, typing, scrolling...) can be logged and analyzed afterwards, e.g. to gain insights about usability problems. Events on a website can be handled and logged with JavaScript. This exercise shou

Create a webpage displaying a form that takes:

- A first name
- A last name
- A password
- An email address

The user can submit the form by clicking a button, but the page doesn't need to send the data anywhere or take the user somewhere else then.

Measure the interactions given on page 2.



- **Input time for each field (in milliseconds).** Create variables for the start and end date. Use the `Date()` function and find out when the user stops typing in this field. You don't need to measure again, if the field is focused twice.
- **Length of the password.**
- **Total input time.** This is the time between the first keystroke and sending the form, i.e. the user clicking the 'send' button.

Show all the measurements in a separate output container `<div>`.

Put your solution as single HTML file in the folder 'task 2'.

Task 3: Propose a task for the future or for the exam

Take into consideration what this week's lecture and tutorials are about and propose a task for this assignment sheet in future runs of this course. We want to diversify the tasks and are eager to find out what you come up with.

Also, if you want to, you can propose a task for the final exam. We reserve the right to actually use it. You are welcome to do this with every assignment this year.

Submission

Please turn in your solution via UniWorX. You can form groups of up to three people.

If you have questions or comments before the submission, please do not hesitate to contact one of the tutors. You can find their email addresses on UniWorX. Remember, that they also want to enjoy their weekends 😊

Also, feel free to ask questions by tweeting to https://twitter.com/MMN_WS1516. We try to react in a timely manner. That way, all the followers benefit from your questions. You can also leave us feedback about the tasks in this assignment (e.g. difficulty, attractiveness)