Human-Computer Interaction Group

Leibniz Universität Hannover

Exercise sheet 7

Interactive Systems - SoSe 24

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All exercises that are not explicitly declared as a group task must be carried out individually and submitted individually. Identical submissions will be treated as plagiarism.han

Submission by Monday May 27th. at 11:59 p.mhttps://assignments.hci.uni-hannover.de/SoSe2024/ ISy. The submission must consist of a single zip file containing all necessary files. Please resolve umlauts in file names.

Introduction - project work

The next four exercises are about planning, carrying out and evaluating a small experiment yourself. The breakdown is as follows:

1. Plan an experiment (exercise sheet 7)
2. Develop test prototype (exercise sheet 8)
3. Carry out the experiment (exercise sheet 9)
4. Analyze results (exercise sheet 10)

Task 1: Plan an experiment (10 points)

Find a (micro) research question regarding an interaction technique that can be empirically tested. This can, for example, concern the comparison of two variants of the interaction technology. Since you will be developing the test prototype yourself as the only task of the upcoming assignment, you only choose a small, manageable question. The test prototype can then be implemented either in JavaFX or with the web technologies discussed.

a) Describe your inte rakti onstechnik. What problem does it solve or what is achieved through it? possible?

b) Describe your fors chung question regarding the interaction technology. Which variants will be compared to each other?

c) Briefly describe yours Hypothesis.

Limit yourself to one question and this will be part of exercise sheet 9

minimal prototype that can be implemented to the extent that the e not agile test data can be recorded. The test prototype was with a exchanged for testing by other participants in the lecture.

Task 2: AJAX Requests (12 points)

Ajax requests can be used to asynchronously reload data on websites.

a) Briefly describe the process in the Ajax model in your own words. Also name two advantages over the classic model.

b) Find a website which**after a user action**Reloads data asynchronously. noteren the website, the action and what data is being reloaded. Also include screenshots showing this behavior in the submission.

Tip: Many browsers offer thisDev toolswhere you can track the site's network activities as shown in the exercise.

Note: The example from the exercise (hannover.de) may not be used.

Task 3: Flexible Designs (10 points)

The Leibniz University website (uni-hannover.de) uses a flexible design. Investigate this behavior (Home page only). You can do this, as in the last taskDev toolsUse your browser to simulate different window dimensions and examine the structure.

a) At what window width does the page design “change”? How does the layout change?

b) Analyze one of the changing elements. Which CSS instructions cause the layout to change depending on the window width?