Practical Courses in Web Technologies
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Exercise Sheet 3

(Web-Shop - JavaScript)

Submission until: 29.11.2025 23:59h   **Presentation:** 01.12.2025

Introduction

In task sheet 3, various dynamic elements will be implemented for the web shop using JavaScript. If necessary, you can use dummy data to show the implemented functionality.

Task 1 (Registration, Login, Customer Profile)

The registration, login, and customer's profile forms should check the input values and visualize whether it is correct or whether there are errors.

If there are errors, the form should not be able to be sent. In case of errors, the corresponding form field must be visualized in red, otherwise visualize the field in green.

Please check at least the following aspects:

- The selected username should consist at least of five characters
- The selected username must contain at least one capital letter and one lower case letter.
- The password must have at least 10 characters
- The password repetition must correspond to the password

Task 2 (Style Modifications)

In the previous task sheet you implemented your first CSS style. In this task, you should be able to change the style using JavaScript.

Change the visibility of the web shop to a "dark mode" style. That means the background should use dark colors (e.g., black, brown etc.), and the foreground must be correspondingly visualized in bright colors. It must be possible to return back to the initial style definition.

Additionally, you can change the layout between a horizontal (i.e., for personal computers) and a vertical format (i.e., for smartphones).

Task 3 (Collection List)

Use JavaScript to collect products from a list in a collection list. You can add appropriate buttons with the text "add to collection list" to the pages showing different products. An additional field should allow to define the number of selected items.

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The collection list should be presented at the same page below the item selection area (it is not the shopping cart page!).

Note: You don't have to save them in additional files.

Task 4 (Calculating Prices and Further Functions)

Define a JavaScript function `getTotalPrice(double priceWOTax)` which calculates a price with taxes of 19%. Use this function to show the price with and without taxes. You can use an input field to define the price without taxes. Use this value for the parameter `priceWOTax` to calculate the remaining values.

In the second part of this task you should define at least two further functions in JavaScript that help to change functionality at the client's side. You are free to define your own functions, however, you must implement at least 10 lines of code for each function and to use them in order to show the new functionality.

Submission hints:
- Upload a solution **ZIP document** containing all solution files (i.e. html, css, js, and pdf).
- Please write all names of the team that participated in the solving process of this task in the PDF file.
- All team members must be present for a certificate in the following course. For a successful acceptance, the proposed solution must be explained by all team members.