LU07.A09 - Basic caluclator with methods

Prerequisites

- Work type: Individual
- Means of aid: only teaching materials, no websearch, no use of ai.
- Timeframe: 50 Minutes
- Expected result: A browser based calulator which can sum up 2 digits in the easiest way.

Source

Extend the solution of LU06.S08

Assignment

In LU06.S08 we were programming a basic calulator by manipulation the values directly when clicking the buttons. This is convenient, but limits the possibilities of the calculator significantly.

Therefore we need to do it, but this time by using a couple of methods

- to set values of diggit1, diggit2 and the operator
- to calulate the result
- to reset all values of the variables

Assignment A - 3'

- A01: Copy the solution of LU06.s07 and name it **LU07.s09.html**
- A02: Make sure to have
  - the assignmen number in <h1> and
  - the description in <h3>-format
- A03: Safe it.

Assignment B - Required methods - 16'

- B01: method **setDiggit1(number)**: It sets the value of the variable **diggit1** to the clicked number (diggit-block 1).
- B02: method **setDiggit2(number)**: It sets the value of the variable **diggit2** to the clicked number (diggit-block 2).
- B03: method **setOperator(op)**: It sets the value of the variable **operator** to the clicked operation, e.g **+**. Hint: further operations are possible.
- B04: method **calcResult(op)**: Performes the calculation correspondigly to the chosen operation, e.g. **+**.
- B05: method **reset()**: Sets all variables to the initial values.

Assignment C - Variables - 1'

- C01: A basic calculation **3 + 3 = 6** compraises several variables and their initial values:
  - diggit1: 0
  - operator: ''
  - diggit2: 0
  - result: 0

Assignment D - Button for diggit 1 - 10'

- D01: When clicking on one of them the content will be saved in the variable **diggit1**
- D02: But unlike in the previous task, this time the click triggers a method **setDiggit1(dig1)**
- D03: Continue with the other three buttons in the same fashion.
- D04: Check the result by displaying the content of the variable **diggit1** on the display.

Assignment E - Button the operation - 5'

- E01: When clicking the **+**-button the content will be saved in the variable **operator**
- E02: Check the result by displaying the content of the variable **operator** on the screen.

Assignment F - Button for diggit 2 - 5'

- F01: When clicking on the button in diggit2-block, the content will be saved in the variable **diggit2**
- F02: But unlike in the previous task, this time the click triggers a method **setDiggit2(dig2)**
- F03: Continue with the other three buttons in the same fashion.
- F04: Check the result by displaying the content of the variable **diggit2** on the display.

Assignment G: Implementation of the calculation - 10'

- G01: To execute our addition-operation we finally need a button **ENTER**. This triggers the method **caldResult(operator)**
- G02: If the variable operator == +, then the calculation is an addition. In that case the result is **this.result = diggit1 + diggit2**. Hint: subtraktion, multiplication and division are similiar to programm.
- G03: Display the result of the variable **result** on the screen.

Solution

Lösung

Vocabulary

English	German
diggit	Ziffer
initial values	Startwerte
to suffice	ausreichen
respectively	beziehungsweise
to compraise	umfassen
several	einige, etliche