

LU01.A03 - myBubbleSort

Teilauftrag 1: Statisch

In zwei FOR-Schleifen wird ein unsortiertes Array eine feste Anzahl mal durchlaufen. Die Anzahl der Schleifendurchlaeufer ist abhaengig von der Anzahl unsortierter Array-Elemente.

```

scripts_m307 > lu01_script4fun > JS lu01_i03_myBubbleSort_v1.js > bubbleSortV1
1  var unsortedArrayV1 = [3, 55, 2, 8, 33, 199, 120, 100, 999, 53, 44, 54, 67, 22, 0]; // unsorted array of numbers
2  console.clear();
3
4  console.log("array bubbleSortV1 - Vorher: ", unsortedArrayV1);
5  console.log("function bubbleSortV1 - Nachher: " + bubbleSortV1(unsortedArrayV1));
6
7
8  /* ***** */
9  /* Author: volkan.demir@bzz.ch, 02.03.23 */
10 /* Call: bubbleSortV1 (array) */
11 /* Desc: Returns the array in a ascending or descending order. */
12 /* The algorithm is not smart, since it uses 2 for-loops with fixe rage.*/
13 /* ***** */
14 function bubbleSortV1(myUnsArray) {
15     let arrLen = myUnsArray.length;
16     let myLocArray=myUnsArray;
17     let swapCnt = 0; // count of the necessary swap due to the wrong order of the numbers
18     let loopCnt = 0; // count of the necessary swap due to the wrong order of the numbers
19
20     for (var i=0; i<=arrLen; i++) {
21         for (var j=0; j<arrLen; j++) {
22             loopCnt++;
23             if (myLocArray[j]>myLocArray[j+1]) { // ascending = <; descending = >
24                 swapCnt++; // count swap
25                 // console.log("swap1:"+swapCnt);
26                 var tmp=myLocArray[j]; // change of two values of variables
27                 myLocArray[j]=myLocArray[j+1];
28                 myLocArray[j+1]=tmp;
29             }
30         }
31     }
32     console.log("loopCnt: "+loopCnt);
33     console.log("swapCnt: "+swapCnt);
34     return myLocArray;
35 }

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```

3, 55, 2, 8, 33, 199,
120, 100, 999, 53, 44, 54,
67, 22, 0
]
loopCnt: 240
swapCnt: 51

```



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