LU01.A03 - myBubbleSort

Teilauftrag 1: Statisch

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

scripts_m307 > lu01_script4fun > JS lu01_l03_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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