

```
1 // array to sort
2 var array = [9, 2, 5, 6, 4, 3, 7, 10, 1, 8];
3
4 // swap function helper
5 function swap(array, i, j) {
6     var temp = array[i];
7     array[i] = array[j];
8     array[j] = temp;
9 }
10
11 // be careful: this is a very basic implementation which is nice to understand the
    deep principle of bubble sort (going through all comparisons) but it can be greatly
    improved for performances
12 function bubbleSortBasic(array) {
13     for(var i = 0; i < array.length; i++) {
14         for(var j = 1; j < array.length; j++) {
15             if(array[j - 1] > array[j]) {
16                 swap(array, j - 1, j);
17             }
18         }
19     }
20     return array;
21 }
22
23 console.log(bubbleSortBasic(array.slice())); // => [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 ]
24
25 // correct implementation: this is the usual implementation of the bubble sort
    algorithm. Some loops execution are avoided if not they are not needed
26 function bubbleSort(array) {
27     var swapped;
28     do {
29         swapped = false;
30         for(var i = 0; i < array.length; i++) {
31             if(array[i] && array[i + 1] && array[i] > array[i + 1]) {
32                 swap(array, i, i + 1);
33                 swapped = true;
34             }
35         }
36     } while(swapped);
37     return array;
38 }
39
40 console.log(bubbleSort(array.slice())); // => [ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 ]
41
```