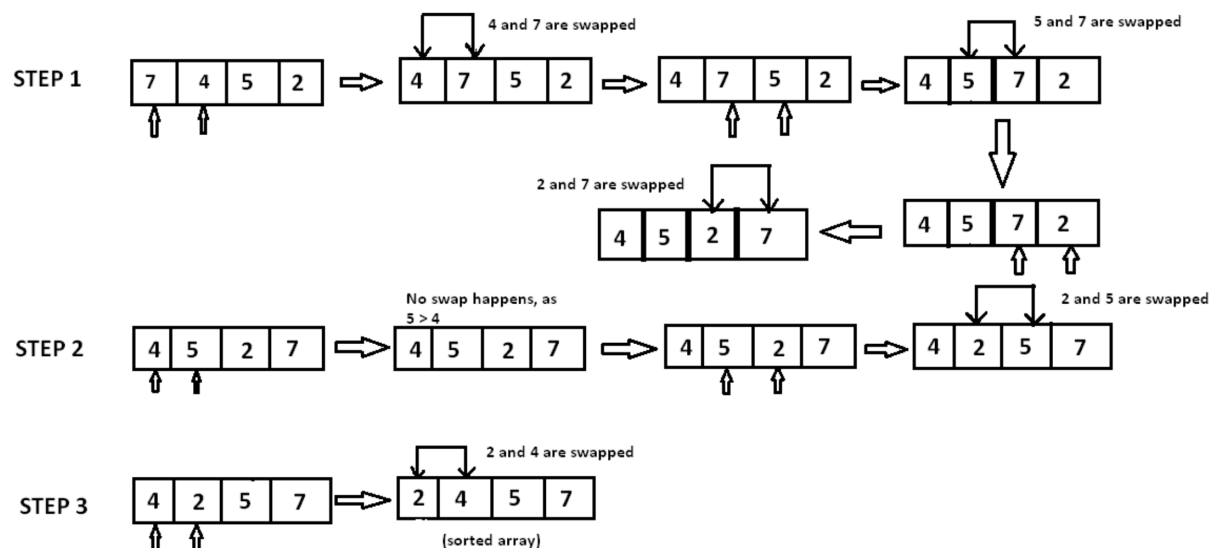# Bubble Sort

Bubble Sort is the simplest sorting algorithm that works by repeatedly swapping the adjacent elements if they are in wrong order.

Working of the algorithm :

1. Start iterating over the array, take two elements from the beginning.

2. Check whether, they are in order or not. If not then swap them else leave them as they were

Repeat the above steps n-1 times where n is the number of elements in the array.

Visualisation of the algorithm is as follows :

The Bubble sort is one of the most basic sorts and it is not the fastest sort that we know off, but still works well for small uses.

Pseudo Code :

```
begin BubbleSort(list)

    for all elements of list
        if list[i] > list[i+1]
```

```
            swap(list[i], list[i+1])
        end if
    end for

    return list

 end BubbleSort
```

Complexity : O(n^2) in both worst and average cases.