

Bubble Sort:

Bubble sort is a basic algorithm for arranging a string of numbers or other elements in the correct order. Each pass in bubble sort, adjacent elements that are not in the correct order get swapped.

Given array -

12, 7, 9, 1, 3, 73, 11, 15, 62, 19, 4

1st iteration -

> 7, 12, 9, 1, 3, 73, 11, 15, 62, 19, 4

> 7, 9, 12, 1, 3, 73, 11, 15, 62, 19, 4

> 7, 9, 1, 12, 3, 73, 11, 15, 62, 19, 4

> 7, 9, 1, 3, 12, 73, 11, 15, 62, 19, 4

> 7, 9, 1, 3, 12, 11, 73, 15, 62, 19, 4

> 7, 9, 1, 3, 12, 11, 15, 73, 62, 19, 4

> 7, 9, 1, 3, 12, 11, 15, 62, 73, 19, 4

> 7, 9, 1, 3, 12, 11, 15, 62, 19, 73, 4

> 7, 9, 1, 3, 12, 11, 15, 62, 19, 4, 73

Total - 9 swaps done in 1st iteration and now the 1st largest value is in the sorted position.

Present Array: 7, 9, 1, 3, 12, 11, 15, 62, 19, 4, 73

2nd iteration -

> 7, 1, 9, 3, 12, 11, 15, 62, 19, 4, 73

> 7, 1, 3, 9, 12, 11, 15, 62, 19, 4, 73

> 7, 1, 3, 9, 11, 12, 15, 62, 19, 4, 73

> 7, 1, 3, 9, 11, 12, 15, 19, 62, 4, 73

> 7, 1, 3, 9, 11, 12, 15, 19, 4, 62, 73

Total - 5 swaps done in 2nd iteration and now the 2nd largest value is in the sorted position.

Present Array: 7, 1, 3, 9, 11, 12, 15, 19, 4, 62, 73

3rd iteration -

> 1, 7, 3, 9, 11, 12, 15, 19, 4, 62, 73

> 1, 3, 7, 9, 11, 12, 15, 19, 4, 62, 73

> 1, 3, 7, 9, 11, 12, 15, 4, 19, 62, 73

Total - 3 swaps done in 3rd iteration and now the 3rd largest value is in the sorted position.

Present Array: 1, 3, 7, 9, 11, 12, 15, 4, 19, 62, 73

4th iteration -

> 1, 3, 7, 9, 11, 12, 4, 15, 19, 62, 73

Total - 1 swap done in 4th iteration and now the 4th largest value is in the sorted position.

Present Array: 1, 3, 7, 9, 11, 12, 4, 15, 19, 62, 73

5th iteration -

> 1, 3, 7, 9, 11, 4, 12, 15, 19, 62, 73

Total - 1 swap done in 5th iteration and now the 5th largest value is in the sorted position.