Bubble Sort

Bubble sort is a sorting algorithm that compares each pair of adjacent elements and swap them if they are in wrong order.

steps :→

1) compare first two elements

2) compare the first and the second element

3) if the first element is greater than the second element then swapped it.

4) Now compare the second and the third elements. swap them if they are not in order

5) these process goes until the last element.

Note →

1) after each iteration at least one value moves at the end.

2) d at the first iteration. the largest element come to the end

3) for second iteration the second larget element at the 2nd from last inden.

4) third larget element in the third last inden.

5) It also known as sinking sort or Enchange sort.

→

[10, 1, 7, 6, 14, 9]

1 10 7 6 14 9

1 7 10 6 14 9

1 7 6 10 14 9

1 7 6 10 14 9

[1, 7, 6, 10, 9, 14] ← 1st iteration

after 1st iteration the largest element placed at last index of array.

2nd iteration → [1, 7, 6, 10, 9, 14]

1 7 6 10 9 14

1 6 7 10 9 14

1 6 7 10 9 14

1 6 7 9 10 14

[1 6 7 9 10 14] ← 2nd iteration

already sorted.

2nd largest element placed at 2nd last index.

3rd iteration → [1, 6, 7, 9, 10, 14]

↳ ignore because already sorted.

1 6 7 9

1 6 7 9

[1 6 7 9 10 14]

3rd largest element placed at 3rd last index

4th iteration → [1, 6, 7]

1 6 7

[1 6 7 9, 10, 14]

4th larget element placed at 4th last index.

5th iteration → [1, 6, 7, 9, 10, 14]

↳ ignored already sorted

[1, 6, 7, 9, 10, 14]

5th largest element placed at 5th last index

there is no need of 6th iteration because 5 element are placed in order its obivious that last element is also place in order