

OCR Computer Science AS Level

2.3.1 Sorting Algorithms

Flashcards

Which sorting algorithm makes comparisons and swaps between pairs of elements?

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Bubble sort

Which example shows bubble sort?

A

3	5	4	1	2
3	1	2	4	5
1	3	2	4	5
1	2	3	4	5

B

3	5	4	1	2
3	5	4	1	2
3	4	5	1	2
3	4	1	5	2
3	4	1	2	5

C

3	5	4	1	2
3	5	4	1	2
3	4	5	1	2
1	3	4	5	2
1	2	3	4	5

Which example showed bubble sort?

B

Which example shows insertion sort?

A

3	5	4	1	2
3	1	2	4	5
1	3	2	4	5
1	2	3	4	5

B

3	5	4	1	2
3	5	4	1	2
3	4	5	1	2
3	4	1	5	2
3	4	1	2	5

C

3	5	4	1	2
3	5	4	1	2
3	4	5	1	2
1	3	4	5	2
1	2	3	4	5

Which example showed bubble sort?

C

Perform the first pass of
bubble sort on the values:

4, 2, 3, 5, 1

Perform the first pass of bubble sort on the values 4, 2, 3, 5, 1.

4	2	3	5	1
2	4	3	5	1
2	3	4	5	1
2	3	4	5	1
2	3	4	1	5

Which sorting algorithm can be improved by adding a flag to record whether or not a swap has occurred?

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Bubble sort

Perform insertion sort on the values:

4, 2, 3, 5, 1

Perform insertion sort on the values 4, 2, 3, 5, 1

4	2	3	5	1
2	4	3	5	1
2	3	4	5	1
2	3	4	5	1
1	2	3	4	5

In which sorting algorithm is the largest element in place after the first pass?

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Bubble sort