Bubble Sort

MCQs

PW SKILLS

Q1. What will the following array look after one iteration of bubble sort [1,6,2,5,4,3]?

a) [1,3,2,4,5,6]
b) [1,2,3,4,5,6]
c) [1,2,5,4,3,6]
d) [1,2,4,5,3,6]

Q2. What is the time complexity of bubble sort when the elements are sorted in decreasing order?

a) O(1)
b) O(n*n)
c) O(n^n)
d) O(nlogn)

Q3. In which case does bubble sort work in the most efficient way?

a) When the array is sorted in increasing order
b) When the array is sorted partially
c) When the array is sorted in decreasing order
d) When the array is nearly sorted.

Q4. What is the best case time and space complexity of bubble sort?

a) O(1) & O(1)
b) O(n) & O(1)
c) O(n) & O(n)
d) O(logn) & O(1)

Q5. Which of the following is true about bubble sort?

a) It is stable sort
b) After each iteration, the greatest element is placed at the end of the array.
c) It involves swapping of adjacent elements
d) All of these

Q6. Given an array of 6 elements, what is the max number of swaps we need to sort the array?

a) 21
b) 15
c) 10
d) 28

ANSWERS:

1. c) [1,2,5,4,3,6]
2. b) O(n*n)
3. a) When the array is sorted in increasing order
4. b) O(n) & O(1)
5. d) All of these
6. b) 15