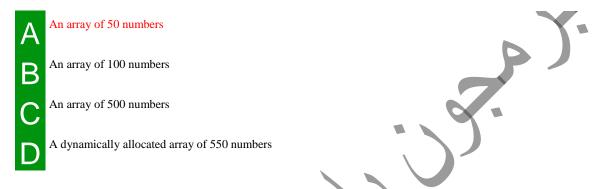
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Data Structures Array

Question 1

A program P reads in 500 integers in the range [0..100] exepresenting the scores of 500 students. It then prints the frequency of each score above 50. What would be the best way for P to store the frequencies? (GATE CS 2005)

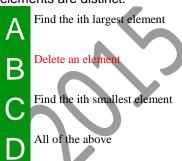


Question 1 Explanation:

See question 1 of http://www.geeksforgeeks.org/data-structures-and-algorithms-set-22/

Question 2

Which of the following operations is not O(1) for an array of sorted data. You may assume that array elements are distinct.



Question 2 Explanation:

The worst case time complexity for deleting an element from array can become O(n).

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Question 3

The minimum number of comparisons required to determine if an integer appears more than n/2 times in a sorted array of n integers is





Question 3 Explanation:

See Check for Majority Element in a sorted array

Question 4

Let A be a square matrix of size n x n. Consider the following program. What is the expected output?

```
C = 100
for i = 1 to n do
    for j = 1 to n do
    {
        Temp = A[i][j] + C
        A[i][j] = A[j][i]
        A[j][i] = Temp - C
}
for i = 1 to n do
    for j = 1 to n do
    Output(A[i][j]);
```



Transpose of matrix A

Adding 100 to the upper diagonal elements and subtracting 100 from diagonal elements of A

None of the above

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Question 4 Explanation:

See question 3 of http://www.geeksforgeeks.org/data-structures-algorithms-set-34/

مع تحيات مبرمجون بلا حدود 2015

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