

Quiz 5 - Results



Attempt 3 of 5

Written Sep 9, 2024 8:27 PM - Sep 9, 2024 8:29 PM

Released Sep 11, 2024 3:00 AM

Attempt Score **2.2 / 4 - 55 %**

Overall Grade (Highest Attempt) **2.4 / 4 - 60 %**

Question 1

0 / 1 point

Consider the array $A = [6, 4, 2, 0, 3, 5, 1, 4, 2, 1, 6, 3, 4, 3, 2]$. Assume $\text{Counting-Sort}(A, B, 6)$ is executed. Which of the following will hold for the counting array C just before the procedure returns? Select all that apply.

☐ $C[5] = 12$

☐ $C[1] = 1$

☐ $C[4] = 12$









☐ $C[6] = 13$

☐ $C[2] = 6$

Question 2

0.6 / 1 point









Assume that after the third loop in Counting-Sort (the one that accumulates C), you have $C = [2, 5, 7, 8, 11]$. Which of the following arrays might have been the input to be sorted?

-   ☐ [4, 4, 3, 2, 1, 0, 4, 2, 1, 0, 1]
 ☐ [4, 1, 4, 2, 3, 1, 0, 3, 4, 2, 1]
  ☐ [1, 0, 4, 3, 1, 2, 1, 0, 4, 2, 4]
 ☐ [1, 0, 4, 3, 0, 1, 1, 2, 0, 2, 4]
  ☐ [0, 4, 1, 2, 3, 0, 1, 2, 1, 4, 4]

Question 3

0.6 / 1 point

Assume the list 125, 245, 881, 671, 583, 792, 672, 422 is sorted using Radix-Sort. Which of the pairs X and Y shown below can X be ordered before Y after returning from one of the stable sort calls in the algorithm? Select all that apply.





-  ☐ X = 245, Y = 125
  ☐ X = 422, Y = 125
 ☐ X = 792, Y = 671
  ☐ X = 422, Y = 245
  ☐ X = 881, Y = 671

Question 4

1 / 1 point

We use Counting-Sort as a secondary sorting algorithm in Radix-Sort. Which of the following algorithms could replace Counting-Sort without causing Radix-Sort to be incorrect? Select all that apply.

For this problem, the focus is only on correctness. Runtime is not an issue here.

-  ☐ Merge-Sort
 ☐ Quicksort
 ☐ Insertion-Sort
 ☐ Heapsort

Done