CS23336-Introduction to Python Programming

Started on	Sunday, 17 November 2024, 6:55 PM
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Question **1**

Complete

Marked out of 1.00

⚑ Flag question

Which sorting algorithm is described as making multiple passes through a list, comparing elements, and swapping adjacent items that are out of order?

- ○ a. Merge Sort
- ⦿ b. Bubble Sort
- ○ c. Insertion Sort
- ○ d. Quick Sort

Question **2**

Complete

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What is one advantage of sorting a list before performing a search operation?

- ○ a. It makes the search operation slower
- ○ b. It increases the number of comparisons needed
- ○ c. It has no effect on the search operation
- ⦿ d. It allows for faster searching

Question **3**

Complete

Marked out of 1.00

Why is sorting important for selection operations?

- a. It makes the data unsorted
- ● b. It makes it easier to select items based on their relationship to the rest of the items
- c. It complicates the selection of items
- d. It slows down the process

Question **4**

Complete

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Which of the following best describes the process of Merge Sort?

- ● a. It divides the list into two halves, sorts each half, and then merges them
- b. It builds a sorted array one element at a time
- c. It repeatedly finds the minimum element and moves it to the sorted part of the list
- d. It compares adjacent elements and swaps them if necessary

Question **5**

Complete

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Which built-in Python function is used to sort data?

- a. order()
- b. arrange()
- c. sort()
- ● d. sorted()

Question **6**

Complete

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🏳 Flag question

_____ explain how an algorithm will perform when the input grows larger.

○ a.   Merging

◉ b.   Complexity

○ c.   Sorting

○ d.   Searching

Question **7**

Complete

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🏳 Flag question

In the context of sorting, what does the divide-and-conquer approach involve?

○ a.   Sorting data sequentially

○ b.   Sorting data in a single pass

◉ c.   Dividing the input into parts, solving each part, and combining the solutions

○ d.   Rearranging data without sorting

Question **8**

Complete

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🏳 Flag question

Which algorithm is efficient for analyzing the frequency distribution of items in a list?

○ a.   Quick Sort

◉ b.   Bubble Sort

○ c.   Merge Sort

○ d.   Linear Search

Which sorting algorithm involves comparing elements and swapping adjacent items that are out of order?

- ⦿ a. Bubble Sort
- ○ b. Merge Sort
- ○ c. Binary Search
- ○ d. Linear Search

Which of the following is a key reason for the importance of sorting algorithms?

- ○ a. Sorting makes it harder to search for items
- ○ b. Sorting is rarely used in programming
- ○ c. Sorting decreases the efficiency of selection operations
- ⦿ d. Sorting helps in finding duplicates quickly

Two-way merge sort algorithm is used to sort the following elements in ascending order.
200,470,150,80,90,40,400,300,120,70
What is the order of these elements after second pass of the merge sort algorithm?

- ○ a. 40,80,90,150,200,300,400,470,70,120

b. 200,470,80,150,40,90,300,400,70,120

c. 40,70,80,90,120,150,200,300,400,470

d. 80,150,200,470,40,90,300,400,70,120

In Merge Sort, what happens after the two halves of the list are sorted?

- a. They are compared element by element
- b. They are discarded
- c. They are combined to form a single sorted list
- d. They are split again into smaller sublists

Very slow way of sorting is_____

- a. Bubble sort

- b. Insertion sort

- c. Heap sort

- d. Quick sort

Which Python function would you use to sort a list in-place?

- a. sorted()
- b. order()
- c. sort()
- d. arrange()

Question **15**

Complete

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⚑ Flag question

Algorithm design technique used in merge sort algorithm is

- a. Dynamic programming
- b. Divide and conquer
- c. Backtracking
- d. Greedy method

Finish review