CS23336-Introduction to Python Programming

Started on	Monday, 11 November 2024, 8:15 PM
State	Finished
Completed on	Monday, 11 November 2024, 8:28 PM
Time taken	13 mins 20 secs

Question 1

Complete
Marked out of 1.00
Flag question

Question text

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

Question 1 Answer

a.
Rearranging data without sorting

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

c.
Sorting data sequentially

d.
Sorting data in a single pass

Question 2

Complete
Marked out of 1.00
Flag question

Question text

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

Question 2 Answer

a.
It builds a sorted array one element at a time

b.
It repeatedly finds the minimum element and moves it to the sorted part of the list

c.
It divides the list into two halves, sorts each half, and then merges them

d.
It compares adjacent elements and swaps them if necessary

Question 3

Complete
Marked out of 1.00
Flag question

Question text

Which algorithm typically follows a divide-and-conquer structure?

Question 3 Answer

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

Question 4

Complete
Marked out of 1.00
Flag question

Question text

Which of the following best describes the term "sorting" in computer science?

Question 4 Answer

○
a.
Merging two datasets
○
b.
Finding a specific element in a list
◉
c.
Arranging data in a specific order
○
d.
Removing duplicates from a list

Question 5

Complete
Marked out of 1.00
Flag question

Question text

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

Question 5 Answer

○
a.
Insertion Sort
○
b.
Quick Sort
◉
c.
Bubble Sort
○
d.
Merge Sort

Question 6

Complete
Marked out of 1.00
Flag question

Question text

What is a characteristic of the merge sort algorithm?

Question 6 Answer

○
a.
It is less efficient than bubble sort
◉
b.
It is based on the divide-and-conquer approach
○
c.
It does not require recursion
○
d.
It sorts data using a single pass

Question 7

Complete
Marked out of 1.00
Flag question

Question text

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

Question 7 Answer

○
a.
arrange()
○
b.
sort()
○
c.
order()
◉
d.
sorted()

Question 8

Complete
Marked out of 1.00
Flag question

Question text

How does Merge Sort achieve its efficiency?

Question 8 Answer

○
a.
By comparing elements sequentially
○
b.
By using the bubble-up method
◉
c.
By breaking the input into smaller parts and merging them
○
d.
By sorting data in a single pass

Question 9

Complete
Marked out of 1.00
Flag question

Question text

What is Bubble Sort known for?

Question 9 Answer

◉
a.
Bubbling up the largest element to its correct position with each pass

○
b.
Using the divide-and-conquer approach

○
c.
Sorting data in a non-sequential manner

○
d.
Being the most efficient sorting algorithm

Question 10

Complete
Marked out of 1.00
Flag question

Question text

Very slow way of sorting is_____

Question 10 Answer

○
a.

Heap sort

◉
b.

Bubble sort

○
c.

Insertion sort

○
d.

Quick sort

Question 11

Complete
Marked out of 1.00
Flag question

Question text

What is a significant characteristic of Bubble Sort?

Question 11 Answer

○
a.
It recursively sorts subproblems

◉
b.
It bubbles up the largest element in each pass

○
c.
It divides the list into sublists

○
d.
It uses the heap data structure

Question 12

Complete
Marked out of 1.00
Flag question

Question text

What does the Bubble Sort algorithm primarily focus on during each pass?

Question 12 Answer

○
a.
Sorting the entire list in one pass
○
b.
Dividing the list into halves
◉
c.
Bubbling up the largest element to its correct position
○
d.
Bubbling up the smallest element

Question 13

Complete
Marked out of 1.00
Flag question

Question text

What is one of the first steps in a divide-and-conquer algorithm like Merge Sort?

Question 13 Answer

○
a.
Combining sorted sublists
○
b.
Sorting the entire list sequentially
○
c.
Comparing each element with the others
◉
d.
Dividing the input into smaller subproblems

Question 14

Complete
Marked out of 1.00
Flag question

Question text

What is the primary benefit of using sorting algorithms in programming?

Question 14 Answer

○
a.
Makes data harder to manage
○
b.
Decreases the efficiency of algorithms
◉
c.
Provides a basis for other algorithms to work efficiently
○
d.
Makes code execution slower

Question 15

Complete
Marked out of 1.00
Flag question

Question text

What is the primary advantage of the divide-and-conquer approach in sorting algorithms?

Question 15 Answer

a.
It allows for efficient parallel processing and sorting of data

b.
It simplifies the sorting process by using only one pass

c.
It only works on small datasets

d.
It avoids the need for recursion

Finish review

Skip Quiz navigation

Quiz navigation

Question 1 This page Question 2 This page Question 3 This page Question 4 This page Question 5 This page Question 6 This page Question 7 This page Question 8 This page Question 9 This page Question 10 This page Question 11 This page Question 12 This page Question 13 This page Question 14 This page Question 15 This page

Show one page at a time Finish review