



CS23336-Introduction to Python Programming

Started on Sunday, 17 November 2024, 1:20 PM

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Completed on Sunday, 17 November 2024, 1:31 PM

Time taken 11 mins 1 sec

Question 1

Complete

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Question text

What is one of the key advantages of using the built-in sorted() function in Python?

Question 1 Answer

☐

a.

It is less efficient than custom sorting algorithms

☒

b.

It sorts data out of the box efficiently

☐

c.

It only works with integer arrays

☐

d.

It requires external libraries

Question 2

Complete

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Question text

Why is sorting important for selection operations?

Question 2 Answer

☒

a.

It makes it easier to select items based on their relationship to the rest of the items

☐

b.

It makes the data unsorted

☐

c.

It complicates the selection of items

☐

d.

It slows down the process

Question 3

Complete

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Question text


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

Question 3 Answer

- ☐ a. Merge Sort
- ☐ b. Binary Search
- ☒ c. Bubble Sort
- ☐ d. Linear Search

Question 4

Complete
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Question text


Which sorting algorithm is known for its simplicity and sequential comparison of elements?

Question 4 Answer

- ☐ a. Quick Sort
- ☐ b. Heap Sort
- ☐ c. Merge Sort
- ☒ d. Bubble Sort

Question 5

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Question text


In Merge Sort, what happens after dividing the input into smaller parts?

Question 5 Answer

- ☒ a. Each part is sorted independently
- ☐ b. The parts are ignored
- ☐ c. The parts are merged without sorting
- ☐ d. Each part is searched for a specific element

Question 6

Complete
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Question text

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

Question 6 Answer

☐

a.

Merging

☐

b.

Sorting

☒

c.

Complexity

☐


d.

Searching

Question 7

Complete

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Question text

Which of the following is not an in-place sorting algorithm?

Question 7 Answer

☐

a.

Quick sort

☒

b.

Merge sort

☐

c.

Selection sort

☐


d.

Heap sort

Question 8

Complete

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Question text

The process of placing or rearranging a collection of elements into a particular order is known as

Question 8 Answer


☐

a.

Rearranging

- ☐
- b.
Merging
- ☐
- c.
- Searching
- ☒
- d.
- Sorting

Question 9

Complete
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Question text

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

Question 9 Answer

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

Question 10

Complete
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Question text

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

Question 10 Answer

- ☐
- a.
Bubble Sort
- ☐
- b.
Binary Search
- ☒
- c.
Merge Sort
- ☐
- d.
Linear Search

Question 11

Complete
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Question text

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


Question 11 Answer

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

Question 12

Complete

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Question text

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


Question 12 Answer

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

Question 13

Complete

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Question text

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?

Question 13 Answer

- ☐ a. 200,470,80,150,40,90,300,400,70,120
- ☐ b. 80,150,200,470,40,90,300,400,70,120
- ☐ c. 40,70,80,90,120,150,200,300,400,470
- ☒ d. 40,80,90,150,200,300,400,470,70,120

Question 14

Complete
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Question text

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

Question 14 Answer

- ☐ 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 15

Complete
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Question text

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

Question 15 Answer

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

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