CS23336-Introduction to Python Programming

Started on	Tuesday, 12 November 2024, 7:04 AM
State	Finished
Completed on	Tuesday, 12 November 2024, 7:19 AM
Time taken	14 mins 45 secs

Question **1**

Complete

Marked out of 1.00

Flag question

Which of the following best describes the process of a linear search?

- a. Skipping every second element
- b. Dividing the list in half repeatedly
- c. Sorting the list before searching
- d. Checking each element sequentially

Question **2**

Complete

Marked out of 1.00

Flag question

In binary search, what happens if the middle element does not match the target element?

- a. The search continues from the beginning
- b. The search continues in the left or right sublist
- c. The list is sorted
- d. The search stops

Question **3**

Complete

Marked out of 1.00

Flag question

What is searching in the context of computer science?

- a. Inserting elements into a list
- b. Deleting elements from a list
- c. Sorting elements in a list
- d. Determining whether an element is present in a list

Question **4**

Complete

Marked out of 1.00

Flag question

What happens when the element is found in linear search?

- a. The search stops immediately
- b. The search backtracks to find duplicate elements
- c. The search continues until the end of the list
- d. The search starts over from the beginning

Question **5**

Complete

Marked out of 1.00

Flag question

What is the first step in binary search?

- a. Sort the list
- b. Compare the target element with the first element in the list
- c. Compare the target element with the middle element in the list
- d. Divide the list into two equal parts

Question **6**

Complete

Marked out of 1.00

Flag question

Which method of searching involves sequentially comparing each element until a match is found?

- a. Linear search
- b. Binary search
- c. Jump search
- d. Hashing

Question **7**

Complete

Marked out of 1.00

Flag question

The average case occurs in the linear search algorithm

- a. When the item is not the array at all
- b. When the item is the last element in the array
- c. Item is the last element in the array or item is not there at all
- d. When the item is somewhere in the middle of the array

Question **8**

Complete

Marked out of 1.00

Flag question

What is the key characteristic of binary search?

- a. It always starts from the beginning of the list
- b. It compares elements sequentially
- c. It can be applied only if the list is sorted
- d. It works on unsorted lists

Question **9**

Complete

Marked out of 1.00

Flag question

What is the advantage of binary search over linear search?

- a. Binary search does not require dividing the list
- b. Binary search works on unsorted lists
- c. Binary search has a lower time complexity on large, sorted lists
- d. Binary search can find multiple instances of the target element

Question **10**

Complete

Marked out of 1.00

Flag question

In which type of search is the list divided into smaller sublists during the search process?

- a. Hash search
- b. Binary search
- c. Sequential search
- d. Linear search

Question **11**

Complete

Marked out of 1.00

Flag question

Which of the following is a conventional searching technique?

- a. Hashing
- b. Binary search
- c. Linear search
- d. Dynamic search

Question **12**

Complete

Marked out of 1.00

Flag question

Given an array arr = {45,77,89,90,94,99,100} and key = 99; what are the mid values(corresponding array elements) in the first and second levels of recursion?

a. 89 and 99

b. 90 and 94

c. 90 and 99

d. 89 and 94

Question **13**

Complete

Marked out of 1.00

Flag question

What is the time complexity of binary search in the worst case?

a. O(1)

b. O(n)

c. O(n log n)

d. O(log n)

Question **14**

Complete

Marked out of 1.00

Flag question

Which of the following is not a limitation of binary search algorithm?

a. Requirement of sorted array is expensive when a lot of insertion and deletions are needed

b. Binary search algorithm is not efficient when the data elements more than 1500

c. Must use a sorted array

d. There must be a mechanism to access middle element directly

Question **15**

Complete

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Flag question

What is the best-case time complexity of linear search?

a. O(n)

b. O(log n)

c. O(n log n)

d. O(1)

Finish review