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CS23336-Introduction to Python Programming

Started on	Saturday, 9 November 2024, 3:40 PM
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Completed on	Saturday, 9 November 2024, 3:50 PM
Time taken	10 mins 50 secs

Question 1

Complete

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Question text

In the context of searching, what is a successful search?

Question 1 Answer

- (●) a. When the element is found in the list
- ( ) b. When the list contains duplicate elements
- ( ) c. When the search algorithm finishes
- ( ) d.

When the list is sorted

Question 2

Complete

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Question text

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

Question 2 Answer

- a. O(log n)
- b. O(n log n)
- c. O(1)
- d. O(n)

Question 3

Complete

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Question text

Which of the following statements about linear search is true?

Question 3 Answer

◉ a.
Linear search can be applied to both sorted and unsorted lists.

○ b.
Linear search is more efficient than binary search on large lists.

○ c.
Linear search requires the list to be sorted.

○ d.
Linear search divides the list into halves.

Question 4

Complete

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Question text

What type of search would be most appropriate for finding an element in a list that is frequently updated?

Question 4 Answer

○ a.
Interpolation search

○ b.
Binary search

◉ c.

Linear search

d.
Hash search

Question 5

Complete

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Flag question

Question text

Finding the location of a given item in a collection of items is called

Question 5 Answer

a.
Mining

b.
Searching

c.
Finding

d.
Discovering

Question 6

Complete

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Question text

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

Question 6 Answer

a. Hashing

b. Binary search

c. Linear search

d. Jump search

Question 7

Complete

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Flag question

Question text

In a linear search, how many comparisons are made in the worst-case scenario to find an element in a list of size n?

Question 7 Answer

a. n/2

b. log n

◉
c.
n

○
d.
1

Question 8

Complete

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Flag question

Question text

During a binary search, what happens if the target element matches the middle element?

Question 8 Answer

◉
a.
The search ends successfully

○
b.
The list is sorted

○
c.
The search continues in the right sublist

○
d.
The search continues in the left sublist

Question 9

Complete

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Flag question

Question text

In which situation is linear search more efficient than binary search?

Question 9 Answer

a. When the list is small and sorted

b. When the list is large and unsorted

c. When the list is small and unsorted

d. When the list is large and sorted

Question 10

Complete

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Flag question

Question text

Which of the following is a limitation of binary search?

Question 10 Answer

a. It requires the list to be sorted

b.

It can only be applied to large lists

c.
It is slower than linear search for small lists

d.
It does not work with negative numbers

Question 11

Complete

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Flag question

Question text

In linear search, how is the element searched?

Question 11 Answer

a.
By comparing each element in the list sequentially

b.
By sorting the list first

c.
By using a hash function

d.
By dividing the list into halves

Question 12

Complete

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Flag question

Question text

What happens in a binary search if the list has an even number of elements?

Question 12 Answer

a. The search stops

b. The lower middle element is chosen as the middle element

c. The higher middle element is chosen as the middle element

d. The middle element is chosen randomly

Question 13

Complete

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Flag question

Question text

Which of the following is a type of searching method?

Question 13 Answer

a. Linear search

b.

Merge search

c.
Quick search

d.
Bubble search

Question 14

Complete

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Flag question

Question text

In _____ checks the elements of a list, one at a time, without skipping any element.

Question 14 Answer

a.
Both (1) & (3)

b.
Binary search

c.
Linear search

d.
Hash search

Question 15

Complete

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Flag question

Question text

What happens when the element is found in linear search?

Question 15 Answer

a. The search continues until the end of the list

b. The search stops immediately

c. The search backtracks to find duplicate elements

d. The search starts over from the beginning

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