CS23336-Introduction to Python Programming

Started on Sunday, 10 November 2024, 6:06 PM

State Finished

Completed on Sunday, 10 November 2024, 6:13 PM

Time taken 6 mins 42 secs

Question 1

Complete
Marked out of 1.00

Flag question

Question text

In binary search, if the target element is less than the middle element, where does the search continue?

Quodion 1 Interior
a.
At the beginning of the list
b.
In the left sublist
\bigcirc
C.
In the right sublist
$\overset{\smile}{d}.$
In the entire list

Question 2

Complete
Marked out of 1.00

Flag question

Question text

During a linear search, what is the maximum number of comparisons needed to find an element in a list of size n?

estion 2 Answer	
n e e e e e e e e e e e e e e e e e e e	

Question 3

Complete
Marked out of 1.00

Flag question

Question text

Which of the following is a limitation of binary search?

☐ Question 3 Answer ————————————————————————————————————
a. It can only be applied to large lists
Can only be applied to large lists
b.
It requires the list to be sorted
c.
It is slower than linear search for small lists
d.
It does not work with negative numbers
Question 4
Complete Marked out of 1.00
Flag question
Overation tout
Question text
In checks the elements of a list, one at a time, without skipping any element.
Question 4 Answer—
a.
Both (1) & (3)
b.
Linear search
○ c.
Binary search
O O
d.
Hash search
Question 5
Complete
Marked out of 1.00
☑Flag question
Question text
What happens when the element is found in linear search?
Question 5 Answer
a. The search backtracks to find duplicate elements
b. The search continues until the end of the list
c. The search starts over from the beginning
d.
The search stops immediately

Question 6 Complete Marked out of 1.00 Flag question **Question text** What is the best-case time complexity of linear search? Question 6 Answer \bigcirc a. O(log n) \bigcirc b. O(n) \bigcirc c. O(n log n) d. O(1)**Question 7** Complete Marked out of 1.00 Flag question **Question text** In binary search, how is the middle element determined? -Question 7 Answer- \bigcirc By comparing each element sequentially b. By using a hash function By starting from the first element d. By dividing the list length by two **Question 8** Complete Marked out of 1.00 Flag guestion **Question text** search takes a sorted/ordered list and divides it in the middle. Question 8 Answer \bigcirc a. Hash b. Binary \bigcirc

Both (1) & (3)

d.			
Linear			
Question 9			
Complete Marked out of 1.00 Flag question			
Question text			
In linear search, if the target element is not found in the list, what is the result? —Question 9 Answer————————————————————————————————————			
a. The search is considered unsuccessful			
b. An error is raised			
c. The first element is returned			
d. The last element is not used.			
The last element is returned			
Question 10			
Complete Marked out of 1.00			
☑ Flag question			
Question text			
What happens in a binary search if the list has an even number of elements? —Question 10 Answer—			
The middle element is chosen randomly			
b. The higher middle element is chosen as the middle element			
C. The search stops			
The search stops			
d. The lower middle element is chosen as the middle element			

Question 11

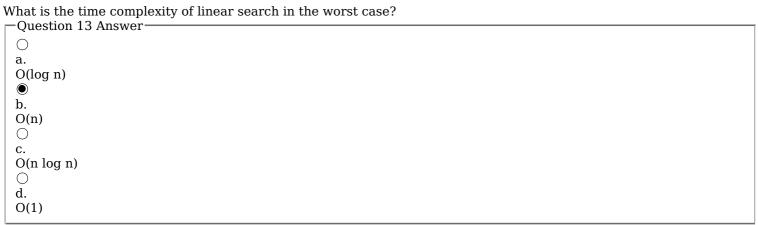
Complete Marked out of 1.00 Flag question

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 11 Answer		

C.
n/2
d.
log n
Question 12
Complete
Marked out of 1.00
Flag question
Question text
During a binary search, what happens if the target element matches the middle element?
Question 12 Answer
$\begin{vmatrix} \omega \\ \mathbf{a} \end{vmatrix}$
The list is sorted
$ \stackrel{\smile}{\mathrm{b.}}$
The search continues in the right sublist
C.
The search continues in the left sublist
d.
The search ends successfully
Question 13
Complete
Marked out of 1.00
☑Flag question
Question text



Question 14

Complete Marked out of 1.00

Flag question

Question text

Which of the following scenarios is best suited for applying binary search?

ı	Question 14 Answer		
	V		
	a.		
	When the list is sorted		
	b.		
	When the list is unsorted		

c. When the list contains duplicate elements	
d.	
When the list is very small	

Question 15

Complete

Marked out of 1.00

Flag question

Question text

What is the advantage of binary search over linear search?
—Question 15 Answer—

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

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