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CS23336-Introduction to Python Programming

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State	Finished
Completed on	Thursday, 7 November 2024, 8:09 PM
Time taken	13 mins 38 secs

Question 1

Complete
Marked out of 1.00
Flag question

Question text

What is the key characteristic of binary search?

Question 1 Answer

a.
It can be applied only if the list is sorted

b.
It works on unsorted lists

c.
It compares elements sequentially

d.
It always starts from the beginning of the list

Question 2

Complete
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Flag question

Question text

In linear search, how is the element searched?

Question 2 Answer

a.
By using a hash function

b.
By comparing each element in the list sequentially

c.
By sorting the list first

d.
By dividing the list into halves

Question 3

Complete
Marked out of 1.00
Flag question

Question text

If the target element is greater than the middle element in binary search, where does the search continue?

Question 3 Answer

a.
At the beginning of the list

b.
In the left sublist

c.
In the middle of the list

d.
In the right sublist

Question 4

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 4 Answer

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

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

c.
The search stops

d.
The middle element is chosen randomly

Question 5

Complete
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Flag question

Question text

In linear search, if the target element is not found in the list, what is the result?

Question 5 Answer

a.
The first element is returned

b.
The last element is returned

c.
The search is considered unsuccessful

d.
An error is raised

Question 6

Complete
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Flag question

Question text

What happens when the element is found in linear search?

Question 6 Answer

a.
The search continues until the end of the list

b.
The search backtracks to find duplicate elements

c.
The search starts over from the beginning

d.
The search stops immediately

Question 7

Complete
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Flag question

Question text

If a list contains 1000 elements, how many comparisons would a binary search typically make in the worst case?

Question 7 Answer

a.
10

b.
500

c.
100

d.
1000

Question 8

Complete
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Flag question

Question text

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

Question 8 Answer

a.

There must be a mechanism to access middle element directly

b.

Must use a sorted array

c.

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

d.

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

Question 9

Complete

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Flag question

Question text

What is the advantage of binary search over linear search?

Question 9 Answer

a.
Binary search works on unsorted lists

b.
Binary search has a lower time complexity on large, sorted lists

c.
Binary search does not require dividing the list

d.
Binary search can find multiple instances of the target element

Question 10

Complete
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Flag question

Question text

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

Question 10 Answer

a.
The search stops

b.
The search continues from the beginning

c.
The search continues in the left or right sublist

d.
The list is sorted

Question 11

Complete
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Flag question

Question text

Which of the following statements about linear search is true?

Question 11 Answer

a.
Linear search divides the list into halves.

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

c.
Linear search is more efficient than binary search on large lists.

d.
Linear search requires the list to be sorted.

Question 12

Complete
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Flag question

Question text

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

Question 12 Answer

a.
O(1)

b.
O(log n)

c.
O(n)

d.
O(n log n)

Question 13

Complete
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Flag question

Question text

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

Question 13 Answer

a.
When the list contains duplicate elements

b.
When the list is very small

c.
When the list is sorted

d.
When the list is unsorted

Question 14

Complete
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Flag question

Question text

_____ search takes a sorted/ordered list and divides it in the middle.

Question 14 Answer

a.

Linear

b.

Hash

c.

Binary

d.

Both (1) & (3)

Question 15

Complete
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Flag question

Question text

What is the first step in binary search?

Question 15 Answer

a.
Divide the list into two equal parts

b.
Sort the list

c.
Compare the target element with the middle element in the list

d.
Compare the target element with the first element in the list

Finish review