CS23336-Introduction to Python Programming

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Time taken	5 mins 29 secs

Question 1

Complete
Marked out of 1.00
Flag question

Question text

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

Question 1 Answer

○ a. Linear search
○ b. Hash search
○ c. Interpolation search
◉ d. Binary search

Question 2

Complete
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Question text

Which of the following is a limitation of binary search?

Question 2 Answer

◉ a. It requires the list to be sorted
○ b. It does not work with negative numbers
○ c. It can only be applied to large lists
○ d. It is slower than linear search for small lists

Question 3

Complete
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Question text

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?

Question 3 Answer

Question 3 Answer

○
a.

90 and 94

○
b.

89 and 94

○
c.

89 and 99

◉
d.

90 and 99

Question 4

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 4 Answer

◉
a.

Linear search

○
b.

Binary search

○
c.

Both (1) & (3)

○
d.

Hash search

Question 5

Complete
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Question text

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

Question 5 Answer

○
a.

Hash

○
b.

Linear

○
c.

Both (1) & (3)

◉
d.

Binary

Question 6

Complete
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Flag question

Question text

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

Question 6 Answer

○
a.
When the list contains duplicate elements
◉
b.
When the element is found in the list
○
c.
When the list is sorted
○
d.
When the search algorithm finishes

Question 7

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 7 Answer

○
a.
The search continues in the right sublist
○
b.
The list is sorted
◉
c.
The search ends successfully
○
d.
The search continues in the left sublist

Question 8

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 8 Answer

○

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

Question 9

Complete
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Flag question

Question text

In linear search, how is the element searched?

Question 9 Answer

○
a.
By dividing the list into halves
○
b.
By sorting the list first
○
c.
By using a hash function
◉
d.
By comparing each element in the list sequentially

Question 10

Complete
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Flag question

Question text

The average case occurs in the linear search algorithm

Question 10 Answer

○
a.

When the item is not the array at all

○
b.

Item is the last element in the array or item is not there at all

○
c.

When the item is the last element in the array

◉
d.

When the item is somewhere in the middle of the array

Question 11

Complete
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Flag question

Question text

Which of the following is not the required condition for a binary search algorithm?

Question 11 Answer

◉
a.

There should be direct access to the middle element in any sublist

○
b.

There must be a mechanism to delete and/or insert elements in the list

○
c.

The list must be sorted

○
d.

Number values should only be present

Number values should only be present

Question 12

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 12 Answer

○
a.
The last element is returned
○
b.
An error is raised
○
c.
The first element is returned
◉
d.
The search is considered unsuccessful

Question 13

Complete
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Flag question

Question text

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

Question 13 Answer

○
a.
Jump search
○
b.
Binary search
◉

c.
Linear search
○
d.
Hashing

Question 14

Complete
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Question text

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

Question 14 Answer

○
a.
When the list is unsorted
○
b.
When the list contains duplicate elements
○
c.
When the list is very small
◉
d.
When the list is sorted

Question 15

Complete
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Question text

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

Question 15 Answer

○
a.
1000
◉
b.
10
○
c.
500
○
d.
100

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