CS23336-Introduction to Python Programming

Started on	Wednesday, 6 November 2024, 8:40 PM
State	Finished
Completed on	Wednesday, 6 November 2024, 8:46 PM
Time taken	6 mins 16 secs

Question 1

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 1 Answer

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

Question 2

Complete
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Question text

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

Question 2 Answer

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

Question 3

Complete
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Question text

In binary search, how is the middle element determined?

Question 3 Answer

○
a.
By starting from the first element
◉
b.
By dividing the list length by two
○
c.
By comparing each element sequentially
○
d.
By using a hash function

Question 4

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 4 Answer

◉
a.
n
○
b.
log n
○
c.
n/2
○
d.
1

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.

Searching

○
b.

Discovering

○
c.

Finding

○
d.

Mining

Question 6

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 6 Answer

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

Question 7

Complete
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Question text

What is the key characteristic of binary search?

Question 7 Answer

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

Question 8

Complete
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Flag question

Question text

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

Question 8 Answer

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

Question 9

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 9 Answer

○
a.
The middle element is chosen randomly
○
b.
The search stops
◉
c.
The lower middle element is chosen as the middle element
○
d.
The higher middle element is chosen as the middle element

Question 10

Complete
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Flag question

Question text

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

Question 10 Answer

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

Question 11

Complete
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Flag question

Question text

Which of the following is a type of searching method?

Question 11 Answer

○
a.
Merge search
○
b.
Quick search
○
c.
Bubble search
◉
d.
Linear search

Question 12

Complete
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Flag question

Question text

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

Question 12 Answer

◉
a.
When the list is small and unsorted
○
b.
When the list is large and sorted
○
c.
When the list is small and sorted
○
d.
When the list is large and unsorted

Question 13

Complete
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Flag question

Question text

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

Question 13 Answer

○
a.

Hash

○
b.

Both (1) & (3)

○
c.

Linear

◉
d.

Binary

Question 14

Complete
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Flag question

Question text

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

Question 14 Answer

○
a.
In the entire list
○
b.
In the right sublist
◉
c.

In the left sublist
◯
d.
At the beginning of the list

Question 15

Complete
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Flag question

Question text

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

Question 15 Answer

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

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