

# CS23336-Introduction to Python Programming

**Started on** Wednesday, 30 October 2024, 6:13 PM

**State** Finished

**Completed on** Wednesday, 30 October 2024, 6:27 PM

**Time taken** 13 mins 50 secs

## Question 1

Complete

Marked out of 1.00



Flag question

### Question text

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

Question 1 Answer

☐

a.

There must be a mechanism to access middle element directly

☒

b.

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

☐

c.

Must use a sorted array

☐

d.

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

## 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?

Question 2 Answer

☐

a.

n-1

☐

b.

n/2

☒

c.

n

☐


d.

log n

## Question 3

Complete

Marked out of 1.00

 Flag question

### Question text


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

Question 3 Answer

- ☐
- a.  
500
- ☒
- b.  
10
- ☐
- c.  
1000
- ☐
- d.  
100

### Question 4

Complete  
Marked out of 1.00

 Flag question

### Question text


Which of the following is a type of searching method?

Question 4 Answer

- ☒
- a.  
Linear search
- ☐
- b.  
Merge search
- ☐
- c.  
Quick search
- ☐
- d.  
Bubble search

### Question 5

Complete  
Marked out of 1.00

 Flag question

### 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  
Marked out of 1.00

 Flag question

### Question text


In binary search, how is the middle element determined?

Question 6 Answer

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

## Question 7

Complete  
Marked out of 1.00

 Flag question

### Question text


What is searching in the context of computer science?

Question 7 Answer

- ☐
- a.  
Deleting elements from a list
- ☐
- b.  
Sorting elements in a list
- ☐
- c.  
Inserting elements into a list
- ☒
- d.  
Determining whether an element is present in a list

## Question 8

Complete  
Marked out of 1.00

 Flag question

### Question text

In linear search, how is the element searched?


Question 8 Answer

- ☒
- a.  
By comparing each element in the list sequentially
- ☐
- b.  
By dividing the list into halves
- ☐
- c.  
By sorting the list first
- ☐

- d.  
By using a hash function

## Question 9

Complete  
Marked out of 1.00

 Flag question

### Question text


Which of the following is a limitation of binary search?

Question 9 Answer

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

## Question 10

Complete  
Marked out of 1.00

 Flag question

### Question text


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

Question 10 Answer

- ☐
- a.  
 $O(n)$
- ☒
- b.  
 $O(\log n)$
- ☐
- c.  
 $O(n \log n)$
- ☐
- d.  
 $O(1)$

## Question 11

Complete  
Marked out of 1.00

 Flag question

### Question text

The average case occurs in the linear search algorithm

Question 11 Answer

- ☒
- a.  
When the item is somewhere in the middle of the array
- ☐
- b.  
Item is the last element in the array or item is not there at all

☐

c.

When the item is not the array at all

☐

d.

When the item is the last element in the array

## Question 12

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 12 Answer

☐

a.

At the beginning of the list

☐

b.

In the left sublist

☒

c.

In the right sublist

☐

d.

In the middle of the list

## Question 13

Complete

Marked out of 1.00



Flag question

### 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 13 Answer

☐

a.

89 and 99

☐

b.

89 and 94

☒

c.

90 and 99

☐

d.

90 and 94

## Question 14

Complete

Marked out of 1.00



Flag question

### Question text

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

Question 14 Answer



a.

When the list is small and unsorted



b.

When the list is small and sorted



c.

When the list is large and unsorted



d.

When the list is large and sorted

### Question 15

Complete

Marked out of 1.00



Flag question

### Question text

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

Question 15 Answer



a.

The search stops



b.

The search continues in the left or right sublist



c.

The search continues from the beginning



d.

The list is sorted

Finish review

[Skip Quiz navigation](#)

### Quiz navigation

[Question 1 This page](#) [Question 2 This page](#) [Question 3 This page](#) [Question 4 This page](#) [Question 5 This page](#) [Question 6 This page](#) [Question 7 This page](#) [Question 8 This page](#) [Question 9 This page](#) [Question 10 This page](#) [Question 11 This page](#) [Question 12 This page](#) [Question 13 This page](#) [Question 14 This page](#) [Question 15 This page](#)

[Show one page at a time](#) Finish review