

# ADA Quiz

## ADA Quiz

\* Indicates required question

1. Email \*

2. Which of the following standard algorithms is not a Greedy algorithm? \*

1 point

Mark only one oval.

- Prim's algorithm
- Bellmen Ford Shortest path algorithm
- Kruskal algorithm
- Dijkstra's shortest path algorithm

3. What is the other name of Dijkstra algorithm? \*

1 point

Mark only one oval.

- multiple-destination shortest path problem
- single-destination shortest path problem
- single-source shortest path problem
- multiple-source shortest path problem



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4. We use dynamic programming approach when \*

1 point

Mark only one oval.

- The given problem can be reduced to the 3-SAT problem
- We need an optimal solution
- The solution has optimal substructure
- It's faster than Greedy

5. Which of the given statement is true? \*

1 point

Mark only one oval.


- All Directed Graphs have topological sortings
- All the cyclic directed graphs have non topological sorting
- All the Acyclic Directed Graphs have topological sortings
- All the Cyclic Directed Graphs have topological sorting

6. Which of these are not types of decrease and conquer. \*

1 point

Mark only one oval.

- decrease by a constant
- variable size decrease
- decrease by a constant factor
- decrease by one/half

  
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7. The topological sorting of any DAG can be done in \_\_\_\_\_ time. \* 1 point

Mark only one oval.

- quadratic  
 logarithmic  
 cubic  
 linear

8. What is the worst case complexity of Quick Sort? \* 1 point

Mark only one oval.

- $O(\log n)$   
  $O(n^2)$   
  $O(n \log n)$   
  $O(n)$

9. Assume that we use Bubble Sort to sort  $n$  distinct elements in ascending order. When does the best case of Bubble Sort occur? \* 1 point

Mark only one oval.

- When elements are sorted in ascending order  
 There is no best case for Bubble Sort. It always takes  $O(n^2)$  time  
 When elements are sorted in descending order  
 When elements are not sorted by any order



10. Consider the following array. Which algorithm out of the following options uses the least number of comparisons (among the array elements) to sort the above array in ascending order? 1 point

Mark only one oval.

- Selection sort
- Insertion sort
- Quicksort using the last element as pivot
- Merge-sort

11. Which of the following algorithm design technique is used in merge sort? \* 1 point


Mark only one oval.

- Greedy Method
- Back Tracking
- Divide and Conquer
- Decrease and Conquer

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67 responses

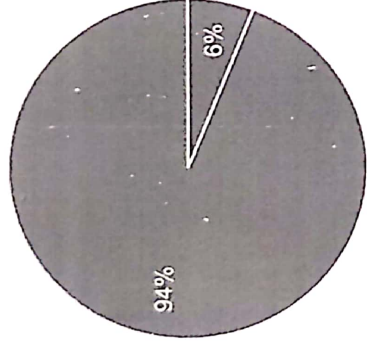
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Which of the following standard algorithms is not a Greedy algorithm?

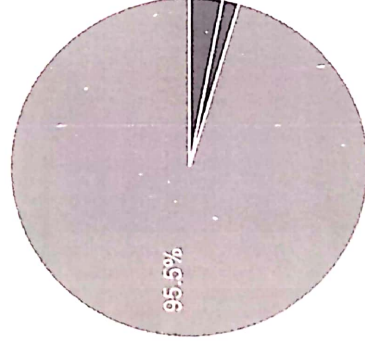
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- Prim's algorithm
- Bellmen Ford Shortest path algorithm
- Kruskal algorithm
- Dijkstra's shortest path algorithm

What is the other name of Dijkstra algorithm?

67 responses

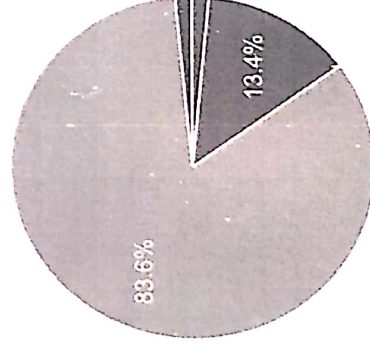


- multiple-destination shortest path problem
- single-destination shortest path problem
- single-source shortest path problem
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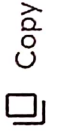


We use dynamic programming approach when

67 responses



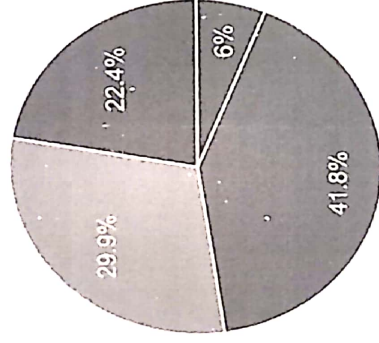
- The given problem can be reduced to the 3-SAT problem
- We need an optimal solution
- The solution has optimal substructure
- It's faster than Greedy





Which of the given statement is true?

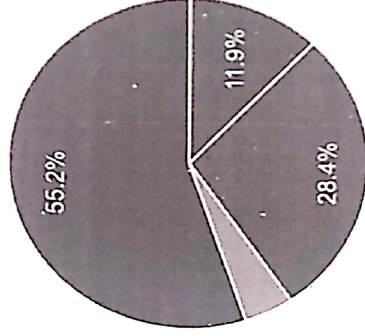
67 responses



- All Directed Graphs have topological sortings
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Which of these are not types of decrease and conquer.

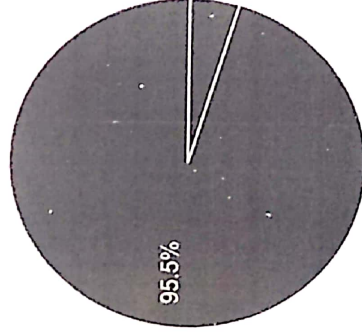
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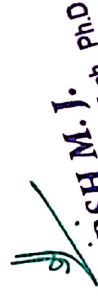
- decrease by a constant
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The topological sorting of any DAG can be done in \_\_\_\_\_ time.

67 responses



- quadratic
- logarithmic
- cubic
- linear



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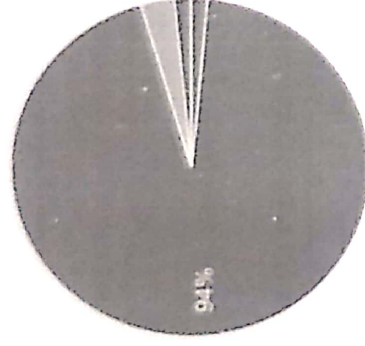
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What is the worst case complexity of Quick Sort?

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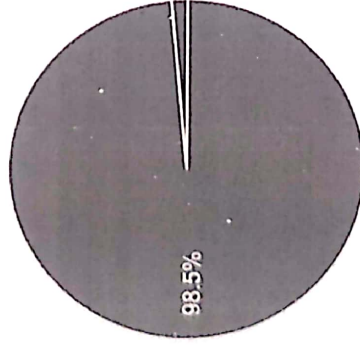


- $O(\log n)$
- $O(n^2)$
- $O(n \log n)$
- $O(n)$



Assume that we use Bubble Sort to sort  $n$  distinct elements in ascending order. When does the best case of Bubble Sort occur?

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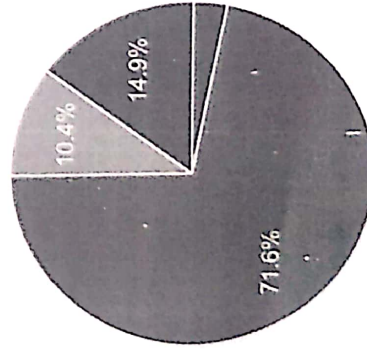


- When elements are sorted in ascending order
- There is no best case for Bubble Sort. It always takes  $O(n^2)$  time
- When elements are sorted in descending order
- When elements are not sorted by any order



Consider the following array. Which algorithm out of the following options uses the least number of comparisons (among the array elements) to sort the above array in ascending order?

67 responses



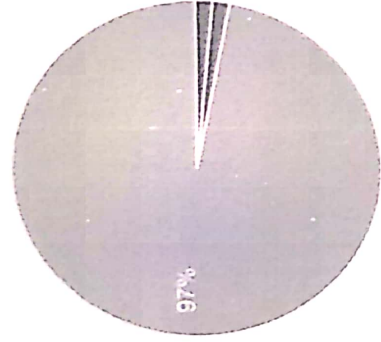
- Selection sort
- Insertion sort
- Quicksort using the last element as pivot
- Mergesort



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Which of the following algorithm design technique is used in merge sort? Copy


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