Grand Quiz Spring 2021

Subject Code CS502 lecture 1 to 22

Solved By Riz Mughal

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I'm providing 100% correct quiz solution. You can visit my YouTube channel and get more information about all other subjects' quizzes and final year project (CS619).

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RIZ MUGHAL (SQA ENGINEER)

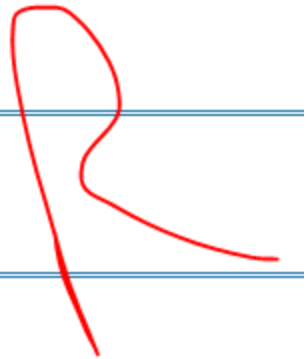
CS502:Grand Quiz

Question # 1 of 30 (Start time: 09:17:38 AM, 27 June 2021)

In Heap Sort algorithm, the total running time for Heapify procedure is _____.

Select the correct option

- (●) Big-oh(log n)
- ( ) O (1) i.e. Constant time
- ( ) Theta (log n)
- ( ) Omega (log n)



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Question # 2 of 30 (Start time: 09:18:08 AM, 27 June 2021)

Quick sort Algorithm is required a lot of comparisons in the _____ condition.

Select the correct option

- (●) Worse case
- ( ) Best and Average case
- ( ) Average case
- ( ) Best case

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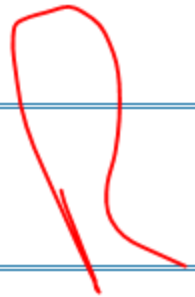
Question # 3 of 30 (Start time: 09:18:30 AM, 27 June 2021)

In Heap Sort algorithm (using max heap), when every time maximum element is removed from top _____.

Select the correct option

- ○ Divide and Conquer strategy helps us
- ● We are left with a hole
- ○ We call merge Sort algorithm
- ○ It becomes Order n2 Algorithm



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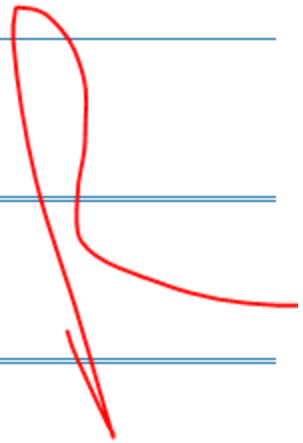
Question # 4 of 30 (Start time: 09:19:12 AM, 27 June 2021)

In average-case time analysis of quick sort algorithm, the most balanced case for partition is when we divide the list of elements into _____.

Select the correct option

- ○ Three nearly equal pieces
- ○ Single piece exactly
- ● Two nearly equal pieces
- ○ Equal no. of pieces as of input elements



CS502:Grand Quiz **Quiz Start Time: 09**

Question # 5 of 30 (Start time: 09:20:28 AM, 27 June 2021)

Consider three matrices X, Y, Z of dimensions 1 x 2 , 2 x 3 , 3 x 4 respectively. The number of multiplications of (XY)Z is:

Select the correct option

- ○ 32
- ○ 30
- ○ 24
- ● 18

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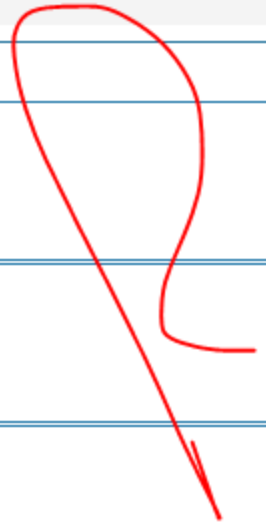
Question # 6 of 30 (Start time: 09:21:09 AM, 27 June 2021)

Quicksort is a/an _____ and _____ sorting algorithm.

Select the correct option

- (●) In-place, not stable one
- ( ) Not in-place, stable one
- ( ) In-place, stable one
- ( ) Not in-place, not stable one



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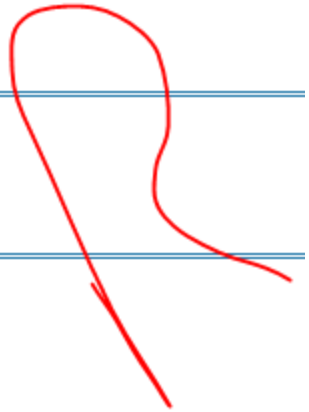
Question # 7 of 30 (Start time: 09:21:47 AM, 27 June 2021)

_____ items are not allowed in the 0/1 knapsack.

Select the correct option

- ○ Lighter
- ○ Whole
- ○ Weighty
- ● Fractional



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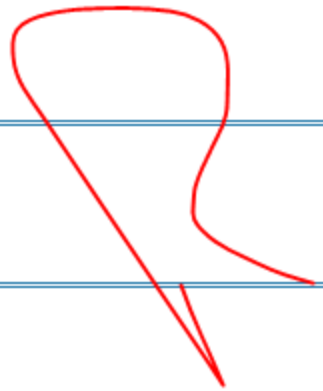
Question # 8 of 30 (Start time: 09:22:12 AM, 27 June 2021)

The main purpose of mathematical analysis is measuring the _____required by the algorithm.

Select the correct option

- ○ Space
- ● Execution time and memory
- ○ Inputs & outputs
- ○ Execution time



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Question # 9 of 30 (Start time: 09:22:27 AM, 27 June 2021)

Execution time of an algorithm can be measured by _____.

Select the correct option

- ○ Divide and conquer approach
- ○ both brute force and divide and conqure approach
- ● Mathematical analysis
- ○ Brute force approach

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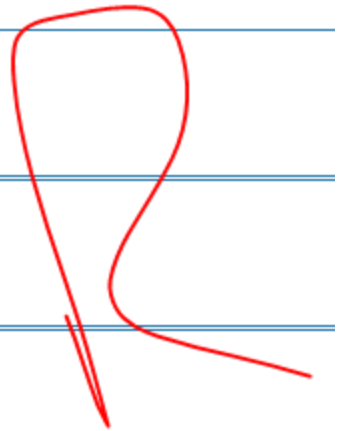
Question # 10 of 30 (Start time: 09:22:42 AM, 27 June 2021)

Quick sort is based on _____ strategy.

Select the correct option

- ○ Graph Theory
- ● Divide-and-Conquer
- ○ Dynamic programming
- ○ Greedy approach



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Question # 11 of 30 (Start time: 09:23:00 AM, 27 June 2021)

A sorting algorithm is called as _____ if duplicate elements remain in the same relative position after sorting.

Select the correct option

- ○ O(n) algorithm
- ● Stable
- ○ Parallel
- ○ Complex

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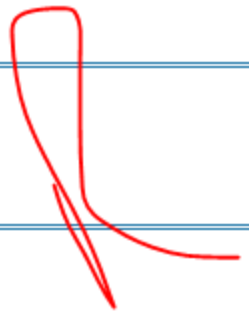
Question # 12 of 30 (Start time: 09:23:15 AM, 27 June 2021)

Which one sorting algorithm is best suited to sort an array of 2 million elements?

Select the correct option

- ○ Insert sort
- ● Quick sort
- ○ Merge sort
- ○ Bubble sort



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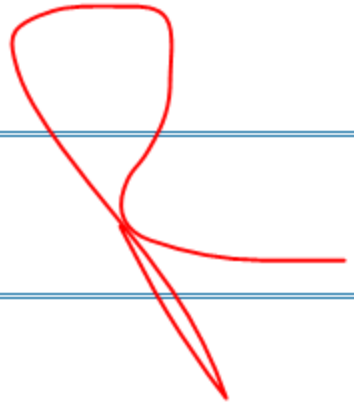
Question # 13 of 30 (Start time: 09:23:31 AM, 27 June 2021)

We can use the _____ property to devise a recursive formulation of the edit distance problem.

Select the correct option

- ○ algorithmic
- ○ small substructure
- ● optimal substructure
- ○ real



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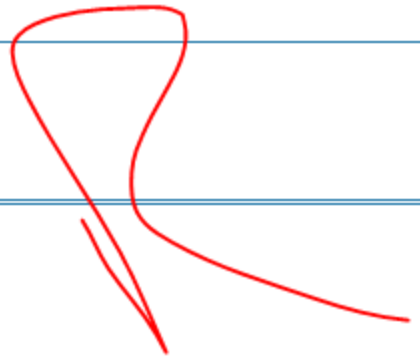
Question # 14 of 30 (Start time: 09:23:56 AM, 27 June 2021)

While Sorting, the ordered domain means for any two input elements x and y _____ satisfies only.

Select the correct option

- (●) All of the above
- ( ) x > y
- ( ) x < y
- ( ) x = y



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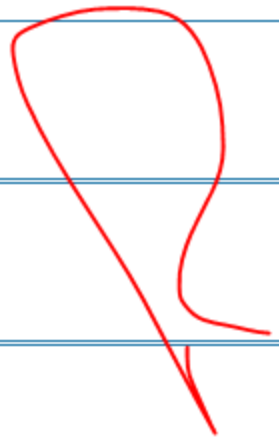
Question # 15 of 30 (Start time: 09:24:15 AM, 27 June 2021)

8n2 + 2n - 3 will eventually exceed c2*(n) no matter how large we make _____.

Select the correct option

- ○ 2n
- ○ n
- ○ this equation
- ● c2



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Quiz Start Time: 09:17 AM

Question # 16 of 30 (Start time: 09:24:30 AM, 27 June 2021)

_____ is a method of solving a problem in which we check all possible solutions to the problem to find the solution we need.

Select the correct option

- ○ Sorting Algorithm
- ○ Greedy approach
- ○ Plane-Sweep Algorithm
- ● Brute-Force Algorithm

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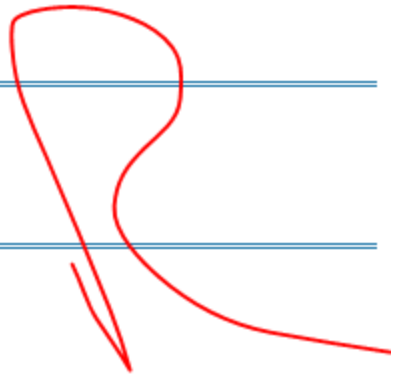
Question # 17 of 30 (Start time: 09:24:48 AM, 27 June 2021)

In quick sort algorithm, pivots form _____.

Select the correct option

- ○ Graph
- ○ Stack
- ● Binary Search Tree
- ○ Queue



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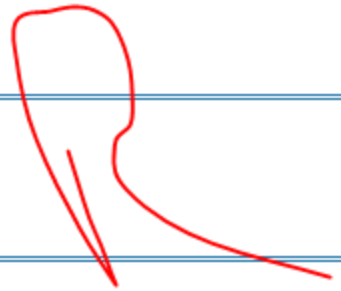
Quiz Start Time: 09:17 A

Question # 18 of 30 (Start time: 09:25:04 AM, 27 June 2021)

In asymptotical analysis of n(n - 3) and 4n*n, as n becomes large, the dominant (fastest growing) term is some constant times_____

Select the correct option

- ○ n+1
- ● n*n
- ○ n
- ○ n-1



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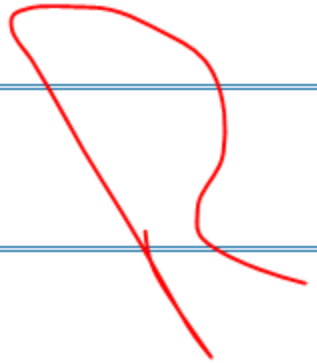
Quiz Start Time: 09:17 AM, 27 June 2021

Question # 19 of 30 (Start time: 09:25:24 AM, 27 June 2021) **Total Marks:** 1

If Matrix-A has dimensions "3x2" and Matrix-B has dimensions "2x3", then multiplication of Matrix-A and Matrix-B will result a new Matrix-C having dimensions

Select the correct option

- ○ 2x3
- ○ 2x2
- ○ 3x2
- ● 3x3



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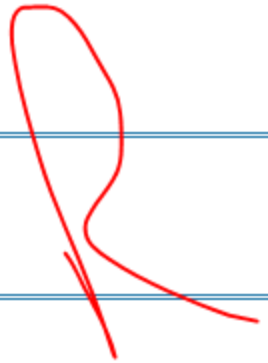
Question # 20 of 30 (Start time: 09:25:40 AM, 27 June 2021)

Boolean operation is a _____ operation on an idealized RAM model of computation.

Select the correct option

- ○ Advance
- ○ Normal
- ● Basic
- ○ Starting



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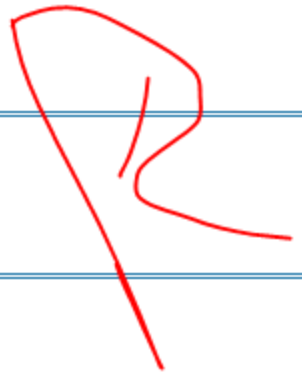
Question # 21 of 30 (Start time: 09:26:44 AM, 27 June 2021)

There are _____ entries in the Edit Distance Matrix.

Select the correct option

- ● Θ (n^2)
- ○ Θ (n + 100)
- ○ Θ (n)
- ○ Θ (n+2)



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Question # 22 of 30 (Start time: 09:27:02 AM, 27 June 2021)

Counting sort is suitable for sorting the elements within range 1 to P, where _____

Select the correct option

- ○ P is undetermined
- ● P is small
- ○ P is very large
- ○ P is large

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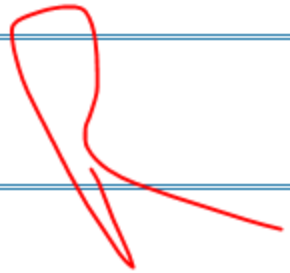
Question # 23 of 30 (Start time: 09:27:18 AM, 27 June 2021)

Suppose we have 4 matrices A, B , C, D . What is correct expansion of m[1,2] in chain matrix multiplication?

Select the correct option

- ○ m[1, 2] = m[1, 1] +m[2, 2] + p0 · p1 · p3
- ● m[1, 2] = m[1, 1] +m[2, 2] + p0 · p1 · p2
- ○ m[1, 2] = m[1, 2] +m[2, 2] + p0 · p1 · p2
- ○ m[1, 2] = m[1, 1] +m[1, 2] + p0 · p1 · p2



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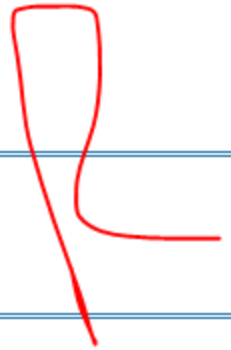
Question # 24 of 30 (Start time: 09:27:34 AM, 27 June 2021)

Which one is not passed as parameter in Quick sort algorithm?

Select the correct option

- ○ Array (containing input elements)
- ● Middle of the array
- ○ Start of the array
- ○ End of the array



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Quiz Start Time: 09:17

Question # 25 of 30 (Start time: 09:28:35 AM, 27 June 2021)

In asymptotical analysis of n*(5 + 2) - 3 , as n becomes large, the dominant (fastest growing) term is some constant times _____

Select the correct option

- ○ n+1
- ○ n*n
- ● n
- ○ n_1

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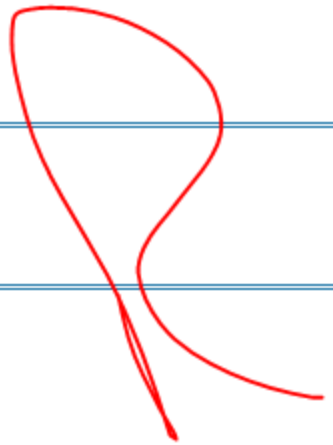
Question # 26 of 30 (Start time: 09:28:51 AM, 27 June 2021)

For _____ values of n, any algorithm is fast enough.

Select the correct option

- ○ Medium
- ● Small
- ○ Infinity
- ○ Large



CS502:Grand Quiz **Quiz Start Time: 0**

Question # 27 of 30 (Start time: 09:29:19 AM, 27 June 2021)

Dynamic Programming algorithms often use some kind of _____ to store the results of intermediate sub-problems.

Select the correct option

- ○ stack
- ○ loop
- ● table
- ○ variable

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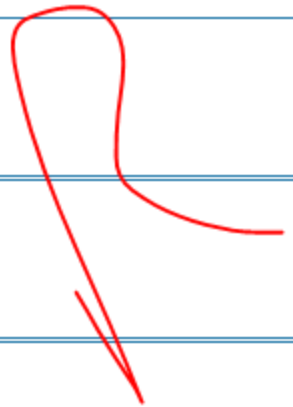
Question # 28 of 30 (Start time: 09:29:34 AM, 27 June 2021)

In Selection problem, the Sieve technique works in _____

Select the correct option

- ○ One complete go
- ○ Constant time
- ○ Non-recursive manner
- ● Phases



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Question # 29 of 30 (Start time: 09:29:55 AM, 27 June 2021)

In Heap Sort algorithm, the maximum levels an element can move upward is _____.

Select the correct option

- (●) Theta (log n)
- ( ) O (1) i.e. Constant time
- ( ) Omega (log n)
- ( ) Big-oh(log n)

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Question # 30 of 30 (Start time: 09:30:11 AM, 27 June 2021)

While analysis of the brute-force maxima algorithm, an array sorted in the reverse order is the type of _____ case input.

Select the correct option

- (●) Worst
- ( ) Best
- ( ) Somewhat bad
- ( ) Average

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Thank you for watching

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