Assignment soot the following elements using meage soot divide and conquex stage by [38,27,43,3,9,82,10,15,88,52, wis] using and analyze time complexity of algorithm Given assay & mexge sost 38/27/43/3/9/82/10/15/88/52/60/5 10/15/88/25/60/2 38/27/43/39/82 10/15/88 52/60/5 38/51/1/3 3H/85 10/15 52/88 5/60 27/38/43 3/9/82 5/52/60/88 3/51/38/13 0/10/12/87 3/5/9/10/15/27/38/41/82 3/5/9/10/15/27/38/43/52/69/82/88 saxted list 13,5,9,10,15,27,38,43,52,60,82,88) Time complexity= O(n). sort the array by 64 34 25 12 22 11 90 using bubble soat what is the time complexity of selection soat in best, woost and average case. Given assay = 64 34 25 12 22 11 90 In bubble sout we boing from smallest element in there correct position continue this until each element reach

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17.

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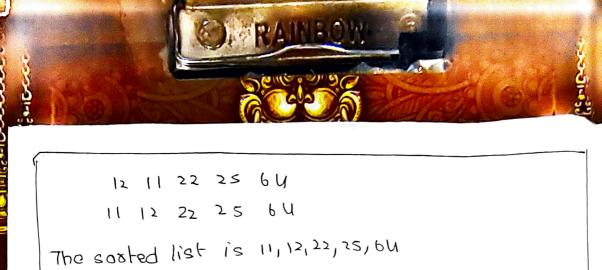
is sout the away 64,25,12,22,11 using selection sout in the sout wast is time complexity of selection sout in the best worst and aucoage case.

4. 64 25 17 25 11

in the selection we will fix that from largest elements in there correct position first so

25 64 12 22 11 25 12 64 22 11 25 12 22 64 11 25 12 22 11 64 12 25 22 11 64 12 22 25 11 64

12 22 11 25 64



Time complexity: - selection soxt is another simple companison soxted algorithm. best case = 0 (n2) Average case = worst case = O(R2)

19. Given an array of [4,-2,-5,3,10,-5,2,8,-3,6,7,4,1,9,-1,0 -6,11,-9] integers sort the following elements using insertion sort using Brute Force algorithm strategy analyze time complexity.

Given array is 4,-2,5,3,10,-5,2,8,-3,6,7,-4,1,9,-1,0,6 insext -3 insext 4,-2 -5 -3 -2 2 3 4 5 8 10 214 insext s insext 6

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-2,4,5

-S -2 2 2 4 5 10

-s -3 -2 2 3 4 5 6 8 1 0 insext 3 insect 7 -5 -3 -2 23 45 67 8 10 -2 3 4 S

insext -10 insext 1 -> 3 4 5 10 -5 -4-3-201234567861C insext -3 insext 9 -5 -4 -3-20123US 678910 -5-23 45 10 insext -1 inscot 2 -5-4-3-2-112345678910



Prosent 0 -5 -U -3 -2-1012315678910 insest 6 -6-5-4-3-2-1012345678910 insext & -8-6-5-4-3-2-1012345678910 inseat 11 -8-6-5-4-3-2-101234267891011 insext -9 -9-8-7-6-5-U-3-2-101234567891011 20. sout the following elements using insention sout using Boute Fosce approach [38,27,43,3,9,18,21015 80] and analyze complexity of algorithm insext 38,27 27 38 27 38 U3 insext 43 insext 3 3 & 27 38 43 insext 9 3 9 27 38 43

insextic 3 a 10 27 28 43 82 insext 1s 3 a 10 15 27 28 43 82 insext 88 2 9 10 15 27 38 43 82 88 insext 52 3 9 (0 15 27 38 43 52 82 88

insext 82 > 9 27 38 43 82

Time complexity? - Bestase? - O(n)

Auczage-cose= woost case = O(n2)