

3 GOOR [j+1] = Kgy; Recursión Disortión sod: (notre fin (C) sur this) sensetraine spison is (n<=1) coturn; insertional arr /n-1); int last = ara [n-1];

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	Other contine sorting
. 1.	Znsertkon sort - V
2.	Norgo wort - X
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· S.	Radix sort - OX
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)	Bullo sout . O(US) O(US) O(US)
2)	solution sort $O(n^2)$ $O(n^2)$ $O(n^2)$ $O(1)$
3)	Zisostion sort O(n) O(n2) O(n2) O(1)
4)	Court sort O(n) O(n+k) O(n+k)
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9)	Hoop sort O(n Logn) O(n Logn) O(n)
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Recursive Burary Search

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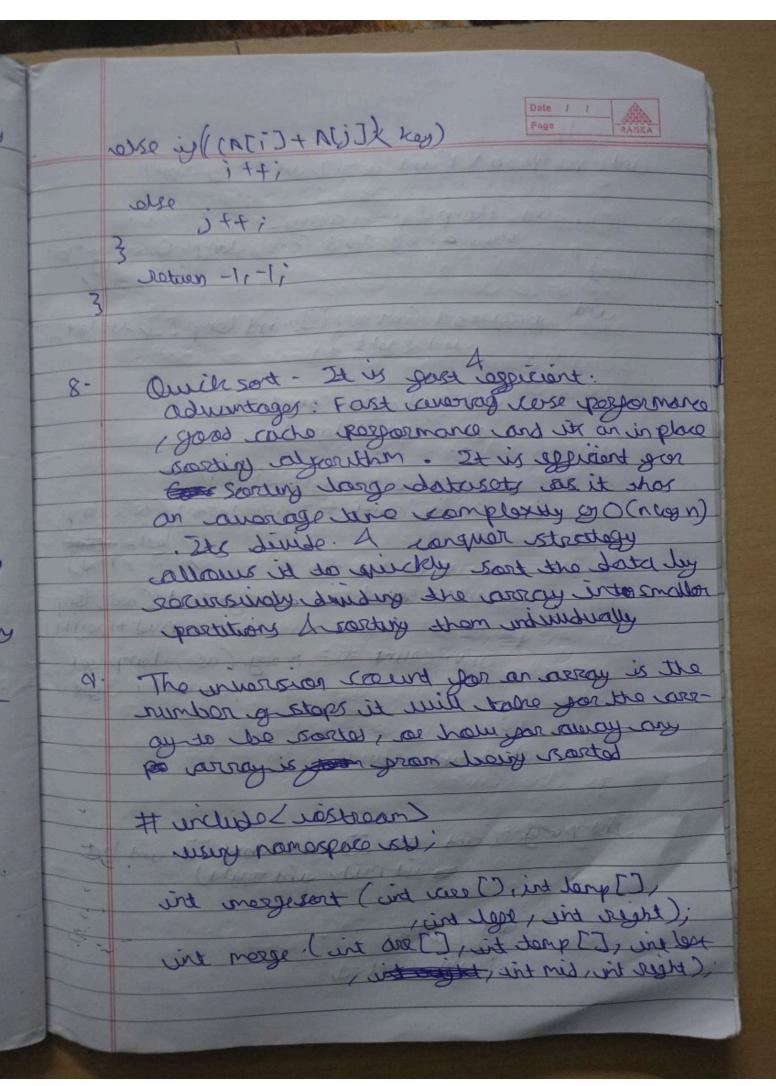
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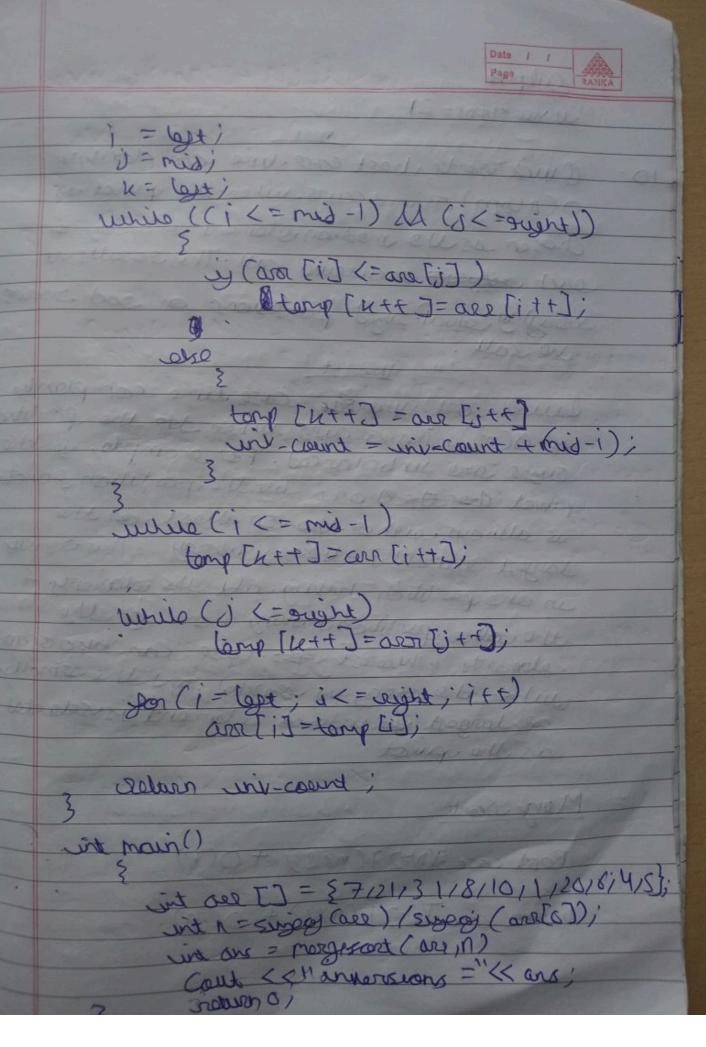
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Quick gost worsts cose time complexity is  $O(n^2)$ . This coccurs when the facilities is  $O(n^2)$ . This coccurs when the partition of the super are showned. For example, is the super alter the smallest for the swing alter that the salmant is always after the substant of the colonary. It is a partition having when you all the colonary of the allow partition having when you all the salmant is so accum when the corresponding is so that and the semaller our largest at induced alament is vidented as the spiral of the course when the private the semantal is so that the course of the course

## 11. Mergy seart

Best case: TM=27(n/2) +0(n)

Worst case - (n/2) + O(n)

Outh sort:

Bost case 12 T (n/2) + 0(n)

Worse case: TA (n-1) +0 T(n)=T(n-1)+0(n)

Similiarity:

1. Printe A conjust approach

Both morg of Dwith yort Journal thospinish

and conquer pardigin. The tracuratively broak

Journ a problem into smaller subproblem

A combine the solutions to the subproble
ms to resolve the arginnal problem.

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some tracurrence relation

T(n) = 27(h/2) + O(h)

Bost case T-C= O(Nogn)

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Employity. Margo sort hos work work (n2)

Quich sort relier heavily on the conse Chaice of pinot element. In unorist case poor privat solection consend to Bundraly Quadratic time complexity (50 O( p2), Marge

sort con the rather hand duides the Co making soulahoust obil years input distribution (n brier) Co trus) eldota bear Jon(i=0; i<n-1; if+) - litric S 1- Ain tow (1= rim tru Aon (and i = i + 1 ; i < n ; i + +) yo (a Emin J Labid)
min = i) int Kay = a [min], k) for (K = min; K \ i; K - -)
a[n] = a[n-i]//Shystrog aloners a[i]=a[rey]; // story boy at right position

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