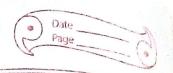
Average case is if half the elements need to be swapped, so;  $O(n(n-1), 1) = O(n^2)$ 



$c\rangle$	Insertion sort is stable, as elements are in order & 20:11 not be ourgood.
	not be ourged.
and the second second	Bubble sort is  Stabb because if they are ordered, they will not be
	Stabb because if they
	Swapped.
	Heap out is whotable as even if elements an order they might be swapped.
	might be swapped.
	Merge sort is ortable muchan we use Laft = Right.
	Insertion ext is adaptive as best case $O(n)$ .  Bubble out is adaptive as best case $O(n)$
	Bubble out is adaptive as best case (n)
	Morge & Heap Sort are not adaptive as booth word best is 8 (nlgn
	Best is O(nlgn
d	had in Heap 92. cpp
	/ 3 - 1/3 -
	As seen in graph time prog , Bottomup takes loss time, but they have some complexity.
	but they have some complexity.