

Stable sorting

Spread sheet

Name	Marks	
D	20	
B	40	
A	40	
C	10	

→ Sort data base acc to names

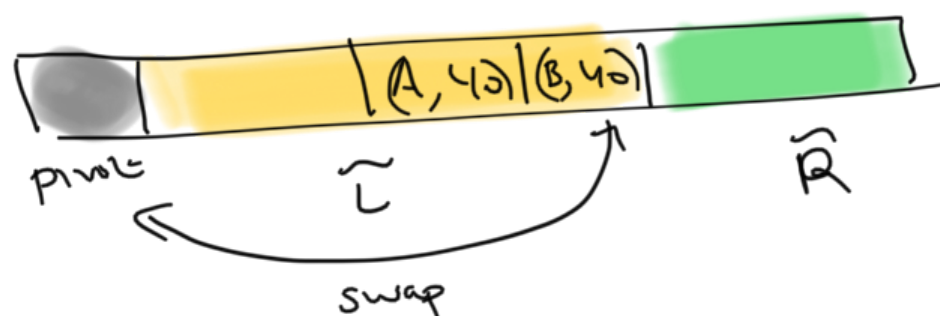
Name	Marks	
A	40	
B	40	
C	10	
D	20	

→ then sort acc to marks

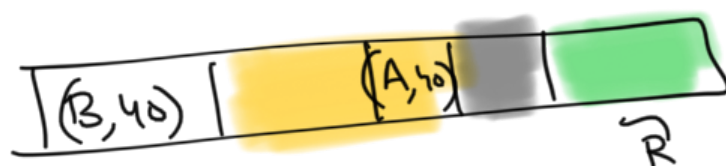
Name	Marks	
C	10	
D	20	
A	40	
B	40	

want to preserve order in which it was sorted earlier ... "stable sorting"

① Quick sort: is not stable (way we have implemented)



(swapping pivot with last yellow -- disturbs stability)



② Merge sort: stable if merge carefully
 [if tie, favour left list
 Don't let right cross over to left!]