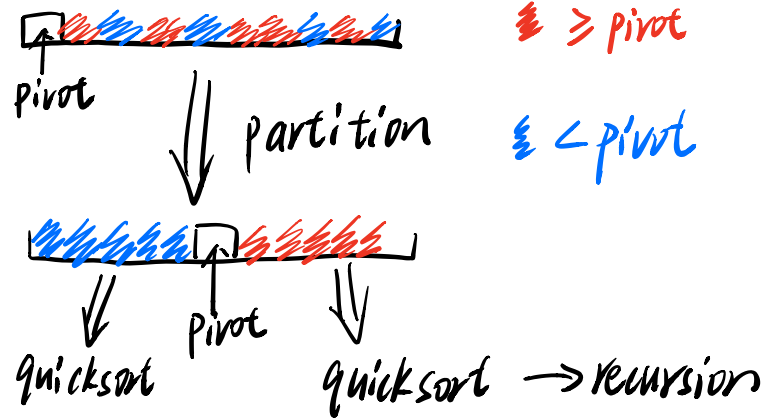


EX 1. (36)

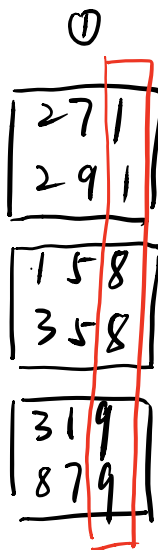
quicksort:



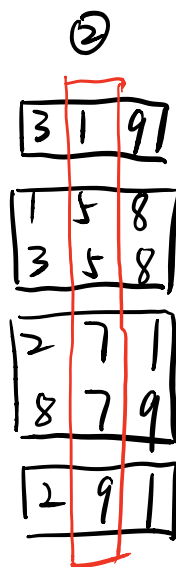
radix sort:

158
319
271
291
879
358

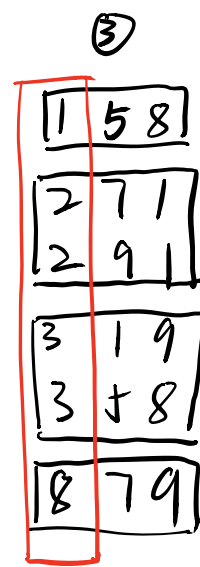
\Rightarrow



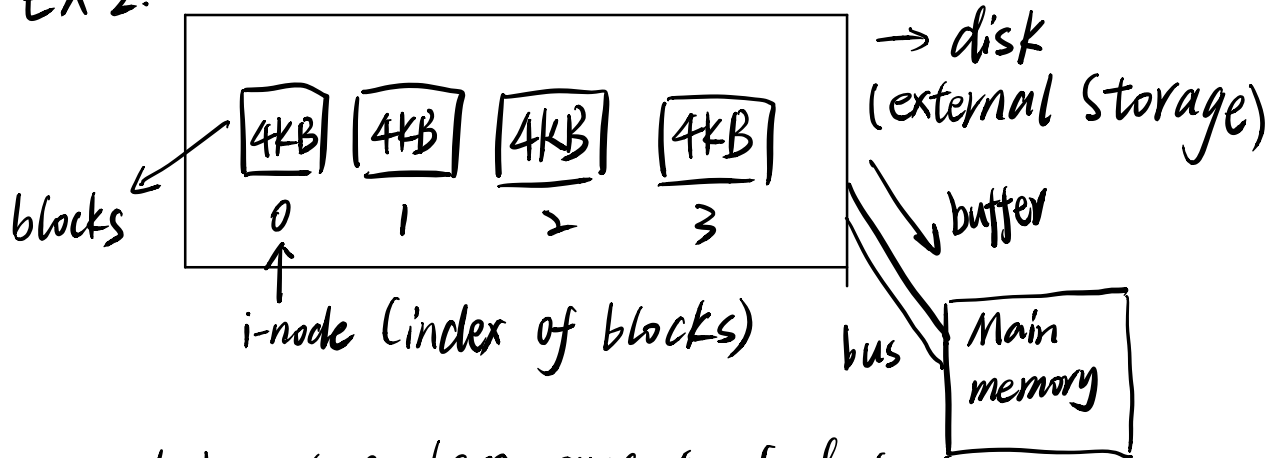
\Rightarrow



\Rightarrow

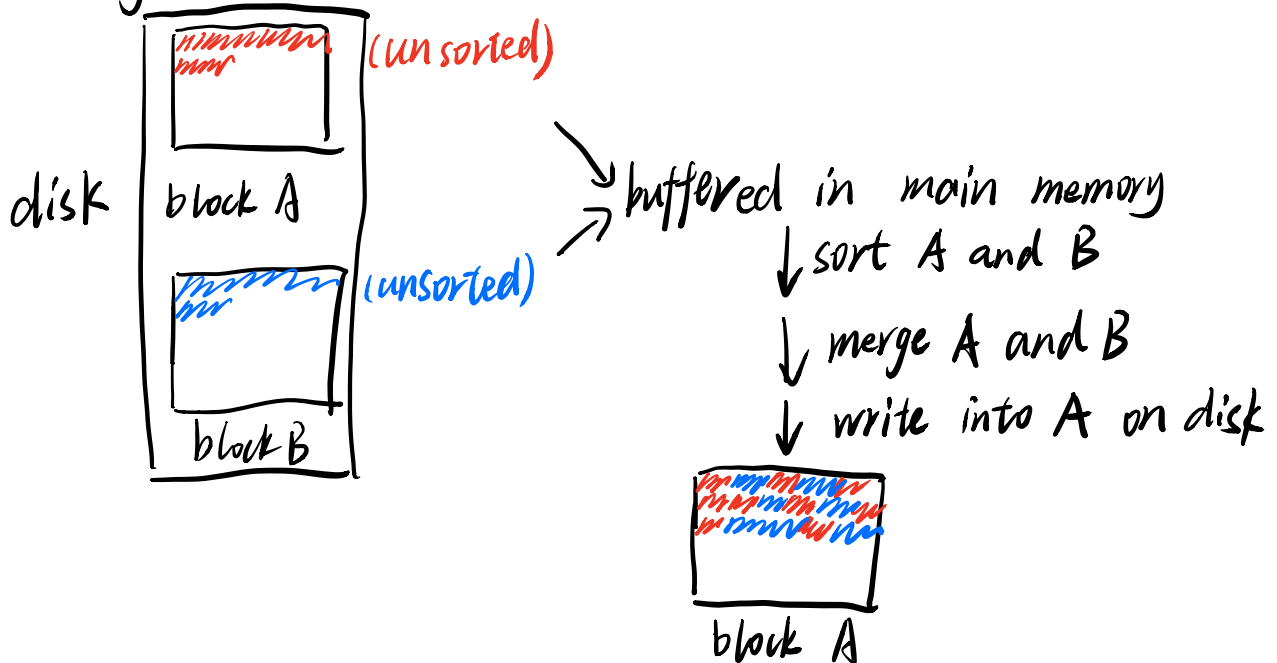


EX 2.

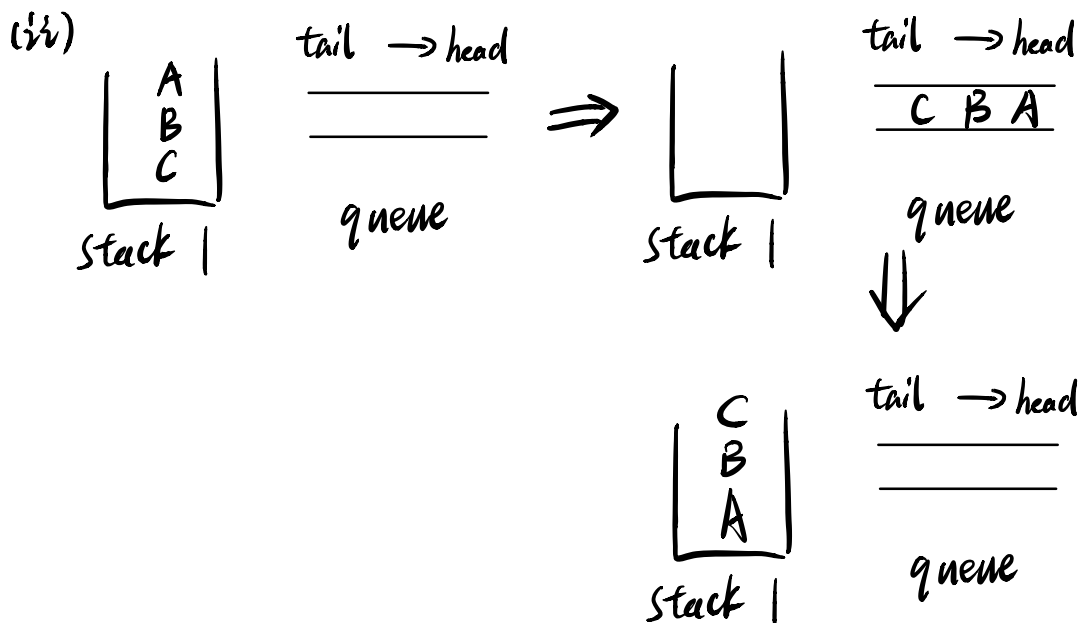
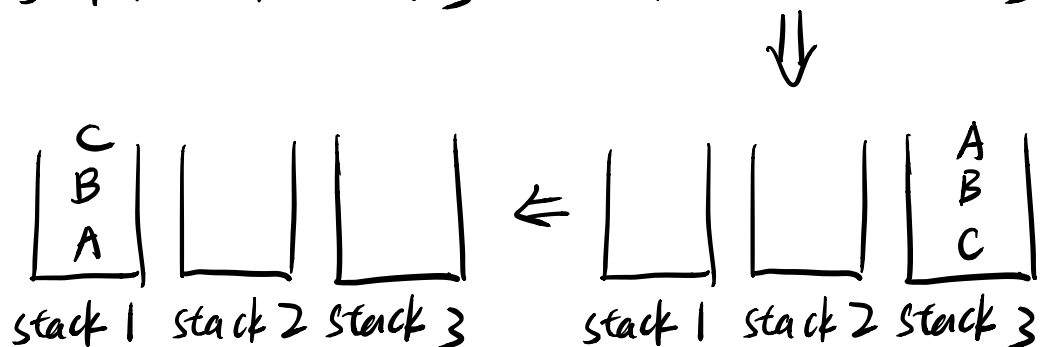
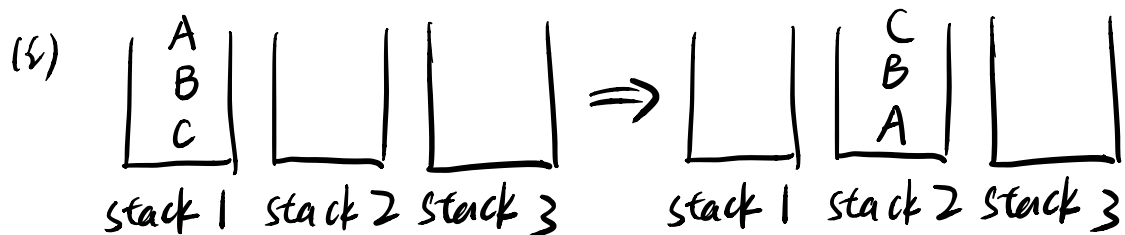


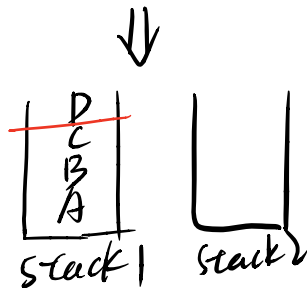
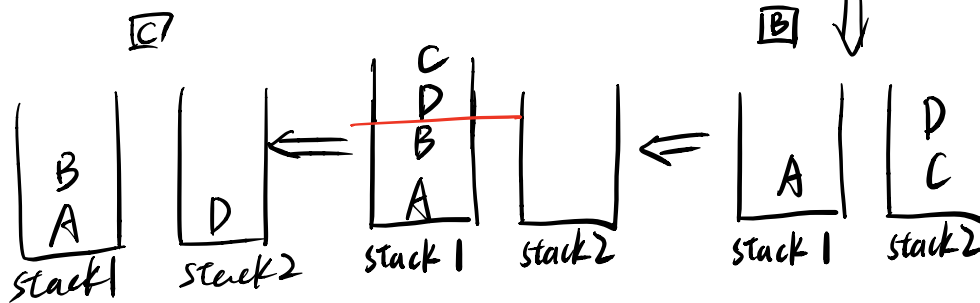
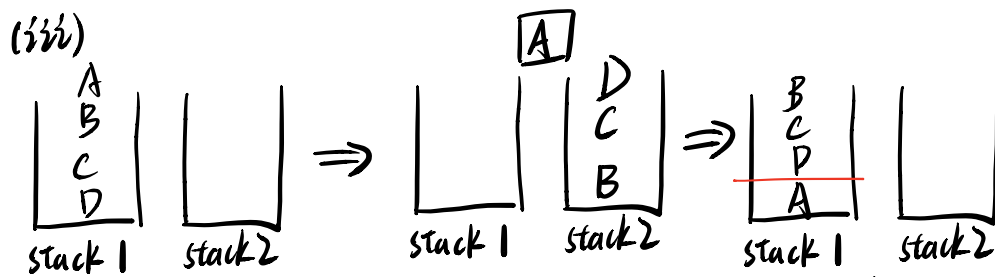
disk: store large amount of data
main memory: limited storage, accessible for processing

merge sort:

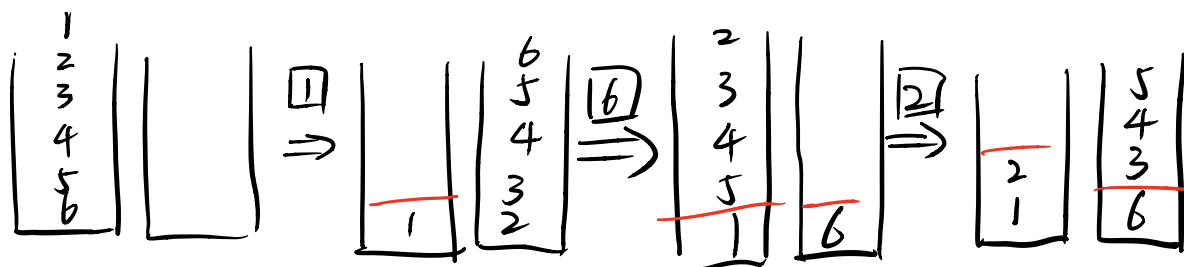


E.X. 3

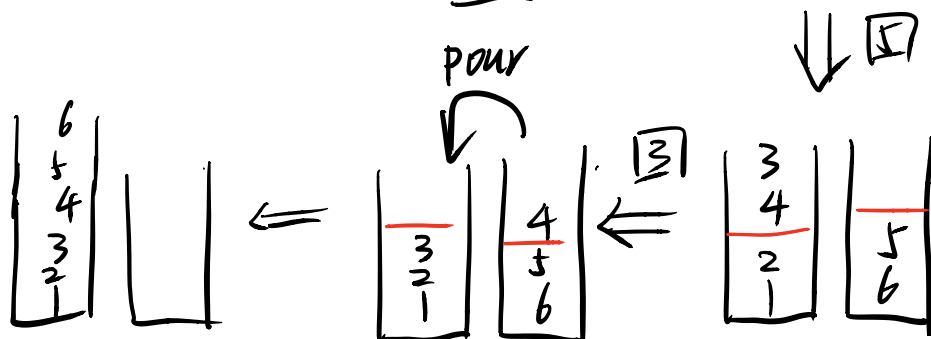




Can also adjust two stacks at the same time.

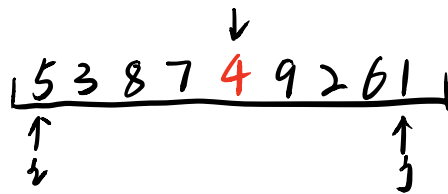


More efficient



EX. 4. $q_{\text{sort-ref}}$ (in-place swap)

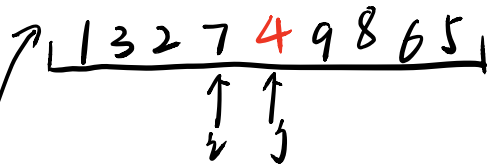
pivot



⇒ 1 3 8 7 4 9 2 6 5

⇒ 1 3 8 7 4 9 2 6 5

⇒ 1 3 2 7 4 9 8 6 5



⇒ 1 3 2 4 7 9 8 6 5

⇒ 1 3 2 4 7 9 8 6 5

$t = j+1$, done!