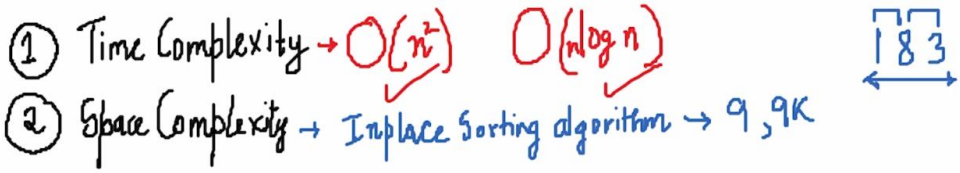
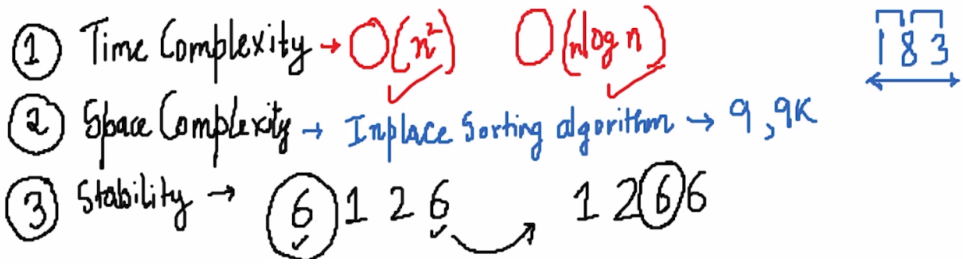
Analysis Criteria For Sorting Algorithm

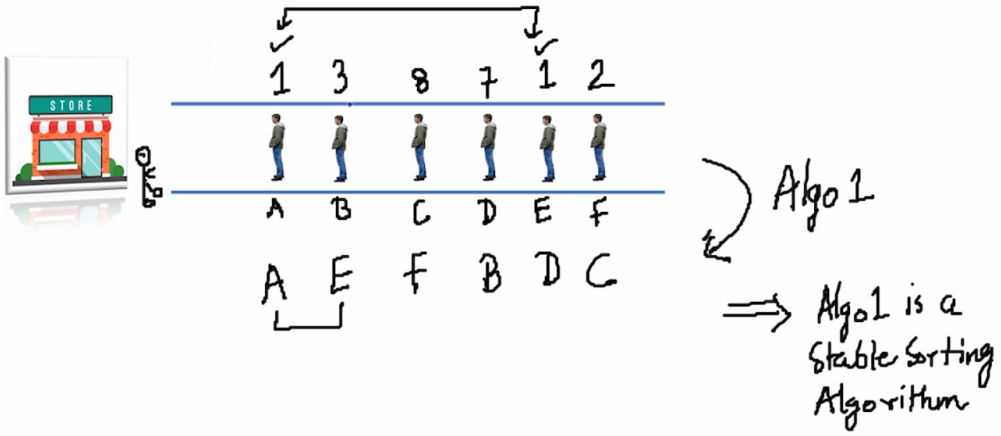


Inplace sorting algorithm → same memory usage without regarding to size of input data

Analysis Criteria For Sorting Algorithm

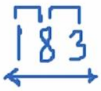


If the first 6 is placed firstly and the second 6 at later, then it is stable. Otherwise, in vice versa case it is not stable



Analysis Criteria For Sorting Algorithm

1. Time Complexity → $O(n^2)$ $O(n \log n)$



2. Space Complexity → Inplace Sorting algorithm → 9, 9K

3. Stability → 6 1 2 6 → 1 2 6 6

Input Array — Stable Sorting Algo — Output Array

4. Internal SA → All the data is loaded into the memory
   External SA → All the " " not loaded " " "

5. Adaptive → Already sorted data takes less time

6. Recursive / Non Recursive SA → Recursive if it uses recursion.