Lab Assignment- Sorting
Week-5 Lab A

1. Given a string S. The task is to print all unique permutations of the given string in lexicographically sorted order.

Input: ABC
Output:
ABC ACB BAC BCA CAB CBA

2. Given an array of integers. Find the Inversion Count in the array.

Inversion Count: For an array, inversion count indicates how far (or close) the array is from being sorted. If array is already sorted then the inversion count is 0. If an array is sorted in the reverse order then the inversion count is the maximum.

Formally, two elements a[i] and a[j] form an inversion if a[i] > a[j] and i < j.

3. Given an array arr[] and an integer K where K is smaller than size of array, the task is to find the Kth smallest element in the given array. It is given that all array elements are distinct.
4. Given an array of n distinct elements. Find the minimum number of swaps required to sort the array in strictly increasing order.