## C++ Assignments | Problems on sorting | Week 9

1. What is an in-place sorting algorithm?
   a) It needs O(1) or O(logn) memory to create auxiliary locations
   b) The input is already sorted and in-place
   c) It requires additional storage
   d) It requires additional space
2. In the following scenarios, when will you use selection sort?
   a) The input is already sorted
   b) A large file has to be sorted
   c) Large values need to be sorted with small keys
   d) Small values need to be sorted with large keys
3. Given an integer array and an integer k where k<=size of array, We need to return the kth smallest element of the array.
4. Find the minimum operations required to sort the array in increasing order. In one operation , you can set each occurrence of one element to 0.
5. Given an array, arr[] containing n integers, the task is to find an integer (say K) such that after replacing each and every index of the array by |ai – K| where ( i ∈ [1, n]), results in a sorted array. If no such integer exists that satisfies the above condition then return -1.

*Note:- Please try to invest time doing the assignments which are necessary to build a strong foundation. Do not directly Copy Paste using Google or ChatGPT. Please use your brain*😀.

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