



C++ Assignments | Problems on sorting | Week 9

1. What is an in-place sorting algorithm?
 - ☒ a) It needs $O(1)$ or $O(\log n)$ 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 $k \leq \text{size of array}$, We need to return the k th 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 $|a_i - K|$ where ($i \in [1, n]$), 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 😊.
