

Data Structures and Algorithms - Assignment 4

1. Write a linear search algorithm to return index of last occurrence of key.
2. Implement linear search algorithm to find the nth occurrence of the given element. If nth occurrence is not found, return -1.
3. Count occurrences of each word in a line/file.
4. Calculate the mode of an array. The mode is the element occurred maximum time in the array.

Optional

5. Implement binary search algorithm if array is sorted in descending order
6. find the first non-repeating element: Input: { 1, 2, 3, -1, 2, 1, 0, 4, -1, 7, 8 } Output: 3
7. to find rank of an element in a stream of integers. rank: rank of a given integer "x", in stream is "total no. of ele's less than or equal to x (including x)."
 - Input: { 10, 20, 15, 3, 4, 4, 1 }
 - Output: Rank of 4 is: 4
8. <https://leetcode.com/problems/remove-all-occurrences-of-a-substring>
9. <https://leetcode.com/problems/missing-number>
10. <https://leetcode.com/problems/remove-element>
11. <https://leetcode.com/problems/two-sum> (solve using hashMap)
12. <https://leetcode.com/problems/contains-duplicate>