

# CSE 221 - Assignment 01 - Explanation

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## Task 1 (a)

To solve this problem, took data from "input1a.txt" and wrote the output in "output1a.txt". For the first time used bitwise operation in any problem to solve it.

## Task 1 (b)

To solved this problem used split method to split the ~~array~~ sentence into an array. Then compared the sign to do the rest of the calculation.

## Task 2

As, It was ~~int~~ instructed to create one input file and one output file for each problem. I put two given input in one file and have them as test case. In bubble sort if the code is inside inner loop doesn't occur for one occurrence of the outer loop, that means the array is sorted. That's how I gain  $O(n)$  in best case.

### Task 3

In my knowledge, selection sort use minimum number of swaps. As a result selection sort is the right swapping algorithm in the scenario.

### Task 4

To solve this problem I took the bubble sort algorithm. Here I had to sort this data set based on three criteria. But As Bubble sort is a stable sorting algorithm, it eliminates one of the criteria by default.