Assignment 1

1. You are given a string of 2N characters consisting of N ‘[‘ brackets and N ‘]’ brackets. A string is considered balanced if it can be represented in the for S2[S1] where S1 and S2 are balanced strings. We can make an unbalanced string balanced by swapping adjacent characters. Calculate the minimum number of swaps necessary to make a string balanced.

2. Given an sorted array of positive integers, count number of occurrences for each element in the array. Assume all elements in the array are less than some constant M.
Do this without traversing the complete array. i.e. expected time complexity is less than O(n).