PROBLEM SET 1

1. Given an integer array and a particular index, rotate the array around that index.

For example, Input: Array -> {1,2,3,4,5,6} , Index -> 2 , Output : 456123

Input2 : {1,2,3,4,5,6} , Index : 4 , Output : {6,1,2,3,4,5}

**CONSTRAINT:** Can you do this problem in-place (i.e. without using an extra data structure)?

2. Write a function to display the compressed version of a string.

For example,

Input : aaabbcccdddee, Output : a3b2c3d3e2

Input2: abcde, Output : a1b1c1d1e1

If the output were the total character count instead of consecutive character count, which data structure will you use?

3. Given a 2-d array where all rows are sorted and all columns are sorted, write a function which displays the row and column of a given element in the array. In other words write a function to find an element in the array.

4. Given an array with both positive and negative integers, find the largest sum of any sub-sequence.

Input: {1,-2,3,-4,5}; Output : Max Sum : 5 (subsequence : {5})

Input2: {2,3,-1,2,6,-9,7,-2,9}; Output : Max Sum : 17(subsequence : entire array}

5. Find the number of trailing zeros in n! (n factorial) given ‘n’ as an input.

Example , Input : 5 output = 1 ( 5! = 120)

Input : 29 , output = 6

6. Chocolate Brain Teaser. To be solved on the spot!

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