Top-20 Training Program
(Adhoc Thinking-II)

Apply the solution building strategies discussed in class to solve following problems.

Group1: Array Based Problems
Rotate String: http://www.lintcode.com/en/problem/rotate-string/
Student Attendance Record-I: https://leetcode.com/problems/student-attendance-record-i/description/
Increasing Triplet Subsequence: https://leetcode.com/problems/increasing-triplet-subsequence/description/

Contiguous Subarray Sum: https://leetcode.com/problems/continuous-subarray-sum/description/

Group2: Miscellaneous Problems
Remove Mystery Length:
Given an array of alpha-numeric characters with the length appended to the string, write an efficient function to remove the length part of it.
Function Prototype:
    void removeLength(char[ ] s)
Example:
    Input: JamesBond00712 where, 12 is length of string JamesBond007
    Output: JamesBond007
Merge Arrays:
Given an array of size M+N in which first M numbers are sorted in non-decreasing order and last N slots are empty. Also given an another array of size N which is sorted in nondecreasing order. Write an efficient function to merge these two arrays without using any extra space so that the array of M+N size is sorted.
Function Prototype:
        void merge(int[ ] a1, int[ ] a2, int m, int n) // array a1 is of size m+n
Polynomial Evalution:
Given a real number x, and a sequence of real numbers c0, c1, …cn, write an efficient function to find out the value of following polynomial of degree 'n':
$p_n(x) = c_nx_n + c_{n-1}x_{n-1} + … + c_2x_2 + c_1x + c_0$
Function Prototype:
        double evalPolynom(int[ ] coef, int x, int n)

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Group3: 2-D Array/Matrix Problems
Spiral Matrix-I https://leetcode.com/problems/spiral-matrix/description/
Spiral Matrix-II: https://leetcode.com/problems/spiral-matrix-ii/description/
Set Matrix Zeroes: https://leetcode.com/problems/set-matrix-zeroes/description/