11/29/2018 Prutor

Practice Arena

Practice problems aimed to improve your coding skills.

- PRACTICE-02 SCAN-PRINT
- PRACTICE-03 TYPES
- LAB-PRAC-02 SCAN-PRINT
- LAB-PRAC-01
- PRACTICE-04 COND
- BONUS-PRAC-02
- LAB-PRAC-03 TYPES
- PRACTICE-05 COND-LOOPS
- LAB-PRAC-04 COND
- LAB-PRAC-05 CONDLOOPS
- PRACTICE-07_LOOPS-ARR
- LAB-PRAC-06 LOOPS
- LAB-PRAC-07_LOOPS-ARR
- LABEXAM-PRAC-01 MIDSEM
- PRACTICE-09_PTR-MAT
- LAB-PRAC-08 ARR-STR
- PRACTICE-10_MAT-FUN
 - Super Getline
 - Tailor-made Tabs
 - 2 De-Duplicate
 - Matrix Mania
- LAB-PRAC-09_PTR-MAT
- LAB-PRAC-10_MAT-FUN
- PRACTICE-11_FUN-PTR
- LAB-PRAC-11_FUN-PTR
- LAB-PRAC-12_FUN-STRUC
- LABEXAM-PRAC-02 ENDSEM
- LAB-PRAC-13_STRUC-NUM
- LAB-PRAC-14_SORT-MISC

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Matrix Mania

PRACTICE-10_MAT-FUN

You will be given a strictly positive integer n in the first line of the input followed by an n x n matrix of integers in the following n lines, each line containing one row of the matrix. In the last line of the input, you will see a list of characters all of which will be capital letters from the set {L,R,H,V,D,A,X}. The list will be terminated by the letter X.

L: rotate the matrix counterclockwise 90 degrees

R: rotate the matrix clockwise 90 degrees

H: flip the matrix horizontally

V: flip the matrix vertically

D: flip the matrix along its diagonal (i.e. take its transpose)

A: flip the matrix along its anti-diagonal (lets call it the anti-transpose operation)

Do the operations in sequence and give the matrix after performing all the operations.

Hint: Your code for this question can get very messy if you do not use functions. Define and implement six functions, one for each of the operations, to make your code cleaner and easier to debug.

You should be able to solve this problem nicely even without using functions. Functions will be covered in class next week. Functions allow you to write cleaner code and allow you to think about the problem in an organized manner. However, although it is perfectly possible to solve most problems in a reasonable manner without using functions at all, code (especially if it is long and complex) written without functions, tends to be more error prone and hard to debug.

¥¶ Start Solving! (/editor/practice/6181)