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
- LAB-PRAC-09_PTR-MAT
  - Mr C writes a Story
  - Matrix Arithmetic
  - Spin the Matrix
  - Crony Capitalization
  - Matrix Mirroring
  - Sodoku
  - The Last Line
  - Singular Value Decomposition
  - Matrix Flip
  - Now we are in Rome
  - Search for the Submatrix
  - Convoluted Convolutions
- 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

Matrix Mirroring

LAB-PRAC-09_PTR-MAT

Matrix Mirroring [20 marks]

Problem Statement
In the first line of the input you will be given two strictly positive integers n and m. In the next n lines you will be given the n rows of an n x m integer matrix, one row in each line, with a single space separating two entries in a row. You have to perform two mirroring operations on the matrix which will enlarge the matrix, and print the final output. See below for an example.

Caution

1. Print each row of your output matrix on a separate line. There should be a single space between two entries in a row.
2. Be careful not to have any trailing spaces at the end of any line or else have any trailing new lines at the end of the output.

Code to manipulate matrices

```
int m, n;
scanf("%d %d", &m, &n);
int num[m][n], i, j;
for(i = 0; i < m; i++)
        for(j = 0; j < n; j++)
                scanf("%d", &num[i][j]);
                printf("%d", num[i][j]);
```

EXAMPLE:
INPUT
2 2
10 20
30 40

Explanation First mirror the matrix vertically to get the following enlarged matrix
10 20
30 40
30 40
10 20

Now mirror this enlarged matrix horizontally to get an even larger matrix.
10 20 20 10
30 40 40 30
30 40 40 30
10 20 20 10

OUTPUT:
10 20 20 10
30 40 40 30
30 40 40 30

10 20 20 10

Grading Scheme:
Total marks: **[20 Points]**

There will be partial grading in this question. There are several lines in your output. Printing each line correctly, in the correct order, carries equal weightage. Each visible test case is worth 2 points and each hidden test case is worth 4 points. There are 2 visible and 4 hidden test cases.

Please remember, however, that when you press Submit/Evaluate, you will get a green bar only if all parts of your answer are correct. Thus, if your answer is only partly correct, Prutor will say that you have not passed that test case completely, but when we do autograding afterwards, you will get partial marks.

Start Solving! (/editor/practice/6186)