UEE1303 (1072): Homework 2

Due Day: 2018/4/03

[INSTRUCTION]

Please submit your code to OnlineJudge system. TA will record your score on the platform.

[PROBLEM 1] MATRIX OPERATIONS

[DESCRIPTION]

Please implement a program for matrix operations. The detail of the input is as follows:

The first line is the number of matrices. Each matrix is labeled by an uppercase letter. The following two integers, n and m, are the dimensions of the matrix. Then, matrix elements are shown in the format of n rows and m columns. After all matrices are displayed, a line with only an integer K represents the number of operations, which are shown in the following K lines.

Take the sample input as example. Line 1 shows there are total 3 matrices. Line 2 indicates that the first matrix A is a 2*2 matrix. The third and the fourth line show the elements of A. Matrix B and C also follow the same format. Line 11 shows there are 3 formulas to be calculated. Line 12 to Line 14 display these operations are A+B, A–B and B*C.

Your program has to do the operations on the given matrices. Please show the result of each operation as the output format.

[INPUT / OUTPUT FORMAT]

Input:

```
3 // number of matrices
A 2 2 // dimension of A is 2*2
1 2
3 4
B 2 2 // dimension of B is 2*2
5 6
7 8
C 2 3 // dimension of C is 2*3
1 2 1
2 3 4
3 // number of formulas
A + B
A – B
```

```
B * C
```

Output:

```
6 8
10 12
-4 -4
-4 -4
17 28 29
23 38 39
```

[NOTE]

1. All formulas compute only two matrices.