Lab5. Operator Overloading

For this problem, you need to know how to implement operator overloading of a class.
You must implement the two operators, and two constructor as follows:

- matrix + matrix: addition of two matrices.
  - Ex:
    [1.1 , 2.2 [5.2 , 6.1 [6.3 , 8.3
    3.1 , 4.3] + 7.1 , 8.3] = 10.2 , 12.6]
- matrix * matrix: multiplication of two matrices.
  - Ex:
    [5.3 , 6.4 [1.2 , 2.1 [26.84 , 37.37
    7.5 , 8.2] * 3.2 , 4.1] = 35.24 , 49.37]
- ostream << matrix (print): print the matrix in a specific format.
  - Ex:
    If matrix = [5.0 , 6.4 , cout << matrix will print [5.0 6.4 7.3 8.5]
    7.3 , 8.5]
- ifstream >> matrix (read): read the matrix from .txt file in a specific format.
  - Ex:
    Input is “num1 num2 num3 num4”, which is a 2-dimension matrix and the type of number is float, file >> matrix will read the input and store the elements sequentially.
    1.2 3.4 5.6 7.8 => [1.2 , 3.4
    5.6 , 7.8]

You must use **operator overloading** to implement.
You must use the template to do this lab.
Do not use std::vector.

Input Format

Please implement the file I/O part.
You MUST read the input data from the input file.

All operators have three lines:
The first line contains an operator.
The second and third line are the operands, which are two 2-dimension matrices.

Output Format

You must output the result after doing each calculation.

See more detail from Sample output.

Sample Input & Output.

Input:

```
+
-1.3 -1.4 0.1 1.7
-4.2 2.0 -4.4 -5.0
+
3.0 2.9 4.8 2.8
0.2 -1.8 0.1 -2.8
+
2.5 -5.5 -2.3 4.3
4.3 1.8 -0.5 -2.1
*
4.6 -5.5 -2.9 4.7
4.5 3.2 3.6 -3.7
*
4.4 6.0 -4.1 -5.9
5.7 4.8 0.4 -0.7
*
-2.3 -2.4 -5.7 5.0
-1.9 -2.8 2.0 -5.5
+
3.8 -0.5 -2.8 -4.9
-4.1 -1.9 3.6 -0.8
```

Output: