Programming Language Lab. 3 (A 반)

3.1 Program to compute matrix addition and multiplication

1) Design an algorithm in pseudo code for computations of 3 x 3 matrix addition and multiplication.

2) Write a C++ program that inputs two 3 x 3 matrices, A and B, from input data file ("input.dat"), computes the addition of the two matrices, **C = A + B**, and multiplication of the two matrices, **D = A x B**, and prints out the 3 x 3 matrices A, B, C and D.

   File input and output will be explained in Lab. (and read Section 12.1)

   The input data file has a format of matrix size (number_row, number_column) and data elements in order, as show below.

```
3   3
1   2   3
6   5   4
7   9   8

3   3
99  102  103
55  106  104
107  109  98
```

3.2 Program debugging in Visual Studio.

1) Using the debugging function of Visual studio, show and explain how to **trace** a program.

2) Using the debugging function of Visual studio, how to set **breakpoints** and check the intermediate operational status (such as checking the values of variables) of the program.

3) Using the debugging function of Visual studio, how to check the address of local variables and global variables.