**矩阵实验报告**

Class:计科201 Student ID 1: 20401180118 Name 1:申宝龙

Student ID 2：20403070214 Name 2：王镓玮

## One. Experimental purpose

1 - implement specific operations using the basic operation matrix:

2 - master the application of file operation:

Improve the understanding of linked storage structure and data structure, and gradually cultivate the programming ability to solve practical problems.

## Two. Experimental environment

**Visual Studio 2019**

## Three. Experiment content

A and B are known to be two n × N-order symmetric matrix, write a program to realize:

（1） The lower triangular elements are stored in one-dimensional arrays a and B and output.

Tip: the program can use int a [4] [4] and B [4] [4] two-dimensional arrays to represent the original matrices A and B.

（2） Let C = a + B and output C in matrix mode.

（3） Let d = a × B. Output D in matrix mode.

## Four. Important data structures

Two two-dimensional arrays A[4][4],B[4][4].

## Five. Implementation analysis

(1) . first read the data in the two matrices from the file

(2) . process the data as required

(3) . output the processed results

## Six. Debugging problem analysis

## When reading a file, I read it directly from a file. An error occurred and I chose. Read file data from two files separately.

## Seven. Summary

Through this experiment, we master the application of file operations, Improve the understanding of the data structure of linked storage structure, and gradually cultivate the programming ability to solve practical problems.

## Eight. Crew Division

|  |  |  |
| --- | --- | --- |
| **Group division** | | |
| **Member name** | **Work done** | **Completion situation** |
| **申宝龙** | **As team leader，Finish reading data from the file, store its lower triangular elements in one-dimensional arrays a and B, and output.** | **complete** |
| **王镓玮** | **Complete the addition and multiplication of the two matrices and output them in matrix mode** | **complete** |
|  |  |  |