

# Programming Assignment 6: Linear Equation System Solver

- **How I develop my assignment solution**

1. The process

When I first saw the assignment, I found that the program is similar to the programming practice that the teacher provides. Therefore, before starting the program I studied the practice first. After that, I began to complete my assignment and I found that it can be divided into several parts. Firstly, I completed the file of the matrix since both the smatrix and the vector were inherited from the matrix. In the second step, I worked on the smatrix file and found that the most difficult part was getting the determinant value of the matrix. The third step was to finish the vector file. During this part, I spent some time trying to understand what should be included in the function of replacing the vector. Finally, it came to the main file, which was also the most difficult section I thought of in this assignment. While solving the linear equation, I kept finding mistakes in other files that led to error messages when operating the main file. The same problem occurred when doing the verifying part.

2. Problems I encountered

The most difficult part I think in this program is solving the linear equation. When I first ran my code, it always showed that the matrix was empty and after looking through my code, I found that the mistake happened in the determinant function. Another problem I faced was when verifying the solution of the linear equation, my code couldn't operate properly and ended up incorrectly. Initially, I thought that the mistake was in multiplication or subtraction, however, it turned out that I wrongly set the value of the column and row in the set size function.