

## **lab2**

### **\*How My code is organized ?**

- I check whether the user entered the input and output files or I will go to the default names of the files.
- read the data at the files and store them into pointer of pointer of int .
- calculate the output matrix with two methods :first method that create a threads that calculate elements in output matrix ,the second that create a threads that calculate row in output matrix
- write the output matrixes that calculate with those two method in different output files.
- Calculate the time execution by the two methods and the number of threads.

### **\*The main function:**

- read\_line(): take two parameter ,first number of argument , second array of char of argument.
- read\_matrix() :read the data from the file and store it in array 2D .
- Multiply\_By\_Elements(): create thread equal to number of elements in matrix output as each thread calculate single element.

Multiply\_By\_Row():create thread equal to number of Rows in matrix output as each thread calculate single Row.

write\_output():write the output matrix in a file .

print():calculate the number of threads in the two method and the execution time and print them in the terminal .

## How to compile The code?

- open terminal
- go to directory that contain the file.c
- enter make &
- Enter ./out OR ./out mat1 mat2 matout