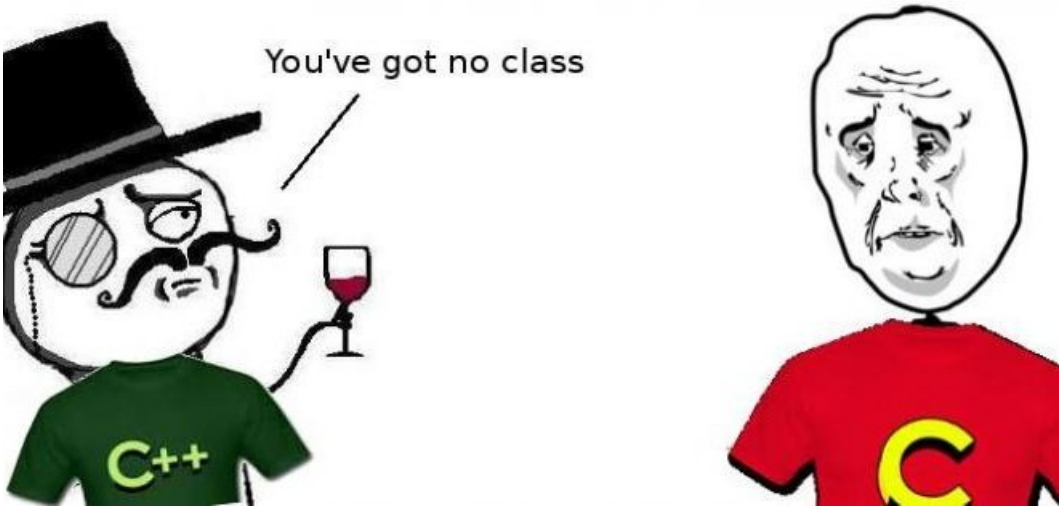
Homework01 for Architecture.



Files:

- **main.cpp(2KB)**: main function which reads, writes, etc...
- **container.cpp(1KB)/.h(629B)**: container with all the functions.
- **baseMatrix.cpp(2KB)/.h(689B)**: basic matrix structure with all the functions.
- **matrix.cpp(1KB)/.h(472B)**: usual matrix structure with all the functions.
- **diagonalMatrix.cpp(1KB)/.h(509B)**: diagonal matrix structure with all the functions.
- **lowerTriangularMatrix.cpp(1KB)/.h(603KB)**: lower-triangular matrix structure with all the functions.

Command line input guide:

1. Write ***./task01 -f [inputFileName].txt [outputFileName].txt [sortedOutputFileName].txt*** for file input.
2. Write ***./task01 -n [number] [outputFileName].txt [sortedOutputFileName].txt*** for random input.

File input guide:

You need to input a couple of matrices according to this template:

1. Input type: 1 for usual matrix, 2 for diagonal matrix, 3 for lower-triangular matrix.
2. Input size: ***N*** for ***NxN*** matrix.
3. Input N^2 real numbers for usual matrix, ***N*** real numbers for diagonal matrix and ***N * (N + 1) / 2*** real numbers for lower-triangular matrix.

Tests:

For your conviniece I created a set of 11 tests via python *FillingScript.py* with input00.txt as an empty file.