Lab 06

Simplified LC-3 Simulator

Your job

Write a LC-3 Simulator in c/c++ language that can execute a LC-3 program and give out the result. Assume that the LC-3 program starts at location x3000, so the input of your simulator is a file which contains the memory context addressed from x3000 to x3999. Your simulator should carry out the execution and output a file which contains the memory context addressed from x3000 to x3999 as the result.

Note

- You can only implement the simulator in c/c++ language.
- You should implement the whole LC-3 ISA. But to simply your work, you only need simulate one *trap* instruction, *trap x25* which marks the end of the input LC3 program.
- Input and output file format: each line is a number in hexadecimal which is comprised 4 ASCII characters(i.e. A12F). The number of lines of the input file and the output file is x1000(from x3000 to x3999). We will provie a file which is exactly in the only vaild format. Note that this file is not comprehensive and you are responsible to test your program using other test cases.
- Input and output file should be in the same path with your simulator program.The name of input file is lab06input and the name of output file is lab06output.
- You must provide a Readme file which tell us how to compile and run your program. If we failed in these, you will get a 0 on this assignment. (We will very appreciate it if you provie a Makefile or any other tools to help us compile you simulator easily).

Submit your Program: The program you are to submit is the **source file, README(Makefile and any other necessary files except the executable file), and report**. Give your report the name **ID_Name_Lab06.pdf**. Put your other files in a directory named **ID_Name_Lab06_src**.