ICS LAB S

Introduction

In this Lab, you'll need to implement a LC-3 simulator.

If you choose to use the framework we provide:

- You should learn how to use `cmake` and `CMakeList.txt`.
- You should read the code and understand the framework of the program.
- You should replace all `TO BE DONE` in the code with the correct code.

Otherwise, you can also write the simulator from scratch by yourself.

Framework

Assignment

- The correct code will get 95% of the marks for this experiment.
- Report accounts for 5% of the score.

You only need to hand in your report renamed PB22xxxxxx_姓名_labS.pdf.

（本实验线下验收）

cmake

```
cd yourlabSdir
mkdir build
cd build
cmake ..
make
```

the cmake command will generate Makefile, and you should have learned how to use Makefile in labA.

Test

The output of the labA will be the input of labS.

Requirements

- your program should support SingleStep mode in which your simulator execute one cycle of instruction.
- The values of your registers and memory should be easy to check.
- Take care of illegal opcodes, access control violation, privilege mode violation, and something else.
- The more the merrier.