

CSE100 – Introduction to Computer Engineering Project (Due 28/12/2016 23:59)

In this project, you will work on the instructions of LC-3 computer.

The input for your program will be a set of strings of 16 characters (only 0s and 1s should be accepted). The set of strings will be read from a text file. Each 16-character string will be in a separate line of the input file.

Your program will read the strings from the file line by line and examine the string as if it is an LC-3 instruction.

The output of your program will include the name of the instruction (e.g., ADD, AND, ...), and the operands in a similar format with the assembler code. The operand can be a register (e.g., R1), an immediate number or offset (e.g., #10), or a PC-offset given in hexadecimal format (e.g. x0D9). You can find the assembler formats of the LC-3 instructions in Appendix A.3 in the book.

Please study the following example!

Example:

If the input file is like below:

```
1110001011111111
0101011011100000
0101010010100000
0001010010101100
0000010000000101
0110100001000000
0001011011000100
0001001001100001
0001010010111111
000011111111010
```

The output will be:

```
LD R1 xOFF
AND R3 R3 #0
AND R2 R2 #0
ADD R2 R2 #12
BRz x005
LDR R4 R1 #0
ADD R3 R3 R4
ADD R1 R1 #1
ADD R2 R2 #-1
BRnzp xFFA
```

This is an individual project! In case of any form of copying and cheating, all parties will get a FAILING grade for the project (maybe for the entire course). You should submit your own work.

You should submit your code to the e-mail address cse1100.intro@gmail.com by the due date. Before submitting, please name your source code like *NameSurname_studentid.java*