

Reading:  
Patt & Patel

Chp 6.1.2-6.1.3 (control constructs and mechanisms)

Chp 6.2.1-6.2.1 up through Example 1. (Debugging, using the simulator/debugger.

Chp. 7.1-7.4 (LC-3 Assembly language: instruction syntax, labels, comments, assembler directives, 2-pass assembly, object files and linking, executable images).

Also see in docs/:

LC3-assemblySyntax.html  
LC3-InstructionsSummary.html  
README-LC3tools.html  
README-lc3sim-unix.html  
README-lc3sim-WinGuide\_PP.pdf  
LC3-assemblyCheatSheet.asm  
LC3-AssemblyManualAndExamples.pdf

Problems:

P&P, Chp. 6

6.10 (conditional, odd?)

6.12a (char echo)

6.13 (Rshift)

6.15 (figure out instruction)

P&P, Chp. 7

7.1 (hand assemble) NB--Assume we mean "the location in the object file that will get loaded to memory location x3025" for the text's "location x3025 of the object file."

7.2 (hand assembly, symbol table entry)

7.3 (labels)

7.4 (hand assembly, symbol table)

7.7 (prog. to count 1s)

7.8 (hand assembly, program trace)

7.14 (debugging asm)

7.17 (labels and linking .obj files)

7.18 (complete the string compare prog.) ERRATA: for a match, R5 = 1, not 0.

7.24 (looping control)

7.25 (too large constant in .FILL)

NB--Using a simulator/debugger in conjunction with an assembler can be helpful for these problems. For unix/linux/OS X, your option for an assembler is lc3as; for a simulator/debugger, lc3sim or lc3sim-tk or PennSim.jar. For MS Windows/cygwin, your options for an assembler are src/PattPatel/LC3edit.exe or lc3as; for a simulator/debugger, src/PattPatel/Simulate.exe or lc3sim or lc3sim-tk or PennSim.jar. NB--There can be problems when crossing boundaries between MS Windows and unix/linux/cygwin in that MS uses one ASCII code for end-of-line and the others use a different one. This can cause files produced in one environment to be confusing to programs expecting a file from another environment. Ask me if you run into this, or perhaps try using src/unix2msEOLN.c. Recall that lc3as, lc3sim, and lc3sim-tk are found in src/lc3tools\_v12.zip. See Makefile for building and check that you have the latest version of src.