

ELEC 2220 Computer Systems
Homework #5
Due: Friday, 6-4-2010

Read textbook Chapter 4, sections 4.1-4.6, and Chapter 5, up to section "Assembly Control" on Pg. 88.

Part 1. (Not to be turned in) As a chapter reading review, ensure that you can answer questions 5.1 through 5.10 at the end of Chapter 5.

Part 2. For the following program, sketch the defined array of memory bytes (similar to the example shown in class) and then label the address of each byte, the data value stored in that byte (if defined), and any symbolic label associated with each byte.

Write all addresses and data in hexadecimal.

```
RAM1      equ   $0800
RAM2      equ   $0816

          org   RAM1
Bob:      ds.b  4
Sue:      ds.w  2
Jim:      dc.b  17,-13,%01010101,$A3
Ed:       dc.w  3000,-300

          org   RAM2
Ben:      ds.w  2
Bill:     dc.b  "HIJK"
          end
```

Part 3. Compare your solution to the above to the actual information generated by the *CodeWarrior* assembler.

1. Create a CodeWarrior Project, using the instructions in the ELEC 3040/3050 Lab 1 writeup.
2. Enter the above assembly language instructions in place of the "sample code" created by CodeWarrior.
3. Run the assembler to assemble the program.
4. Enter the debugger, and in the "Memory" window, examine the addresses containing the information from Part 2, comparing that to your solution.