Machine Organization and Assembly Language Programming

Problem Set #1

Due: Wednesday, January 14

1. By the end of the first week, you should have read Chapter 1, Chapter 4 (Sections 4.1 to 4.3) and Chapter 3 (Sections 3.1 to 3.4)
2. In Chapter 1, do, but do not hand-in, Exercises 1.1 to 1.26
3. In Chapter 4 do the following exercises
   - Ex. 4.1 and 4.2. Give the results in binary and in hexadecimal
   - Ex. 4.4, 4.5 and 4.6. If you find it convenient you can use a notation like $2^x + y$.
   - Ex. 4.11
4. Assume a 4-bit register and a 2's complement representation of integers. Give examples of adding two positive numbers with and without overflow and of of subtracting a negative number from a positive number with and without overflow. Show the 2's complement representation of the operands and the result in a manner similar to what is done in the book pp 220-221.