Homework 1
CDA 3104 Computer Organization and Assembly Language Programming
Due date: September 4, 2013 11:59pm

Requirements:

1. Please submit on Canvas.
2. Only MS-WORD or PDF format is acceptable.
3. Please show your steps. It will cost you 50% credits if you only give final answers.

Assignments:

- Chapter 2
  1. In real-address mode, please calculate a 20-bit address from two 16-bit numbers: 2345h and 3456h, where 2345h is the base address and 3456h is the offset.

  2. Instruction MOV copies data from one place to another. The format of this instruction is MOV *target, source*. Please tell if the following two programs are equivalent in regards to BX's value. Please explain in detail.
     a. mov bx, 34h
     b. mov bh, 0
        mov bl, 34h

  3. Please write a short program that uses the MOV instruction to exchange values in AH and AL. Suppose AX contains ABCDh prior to running your program. You program should change the value to CDABh. Feel free to use other registers, introduced in the class.

  4. Please explain what "instruction pointer register" and "flag register" mean in detail.