Gebze Technical University
Department of Computer Engineering
CSE 101 – Introduction to Computer Engineering
HW #1

Due date: 20/10/2018 – 09:00

1. Convert the following hexadecimal numbers to binary and binary numbers to hexadecimal. Separate each 4 bit from each other with a space character when converting to binary.
   a) 8A9
   b) EF3
   c) 0001 1110 0001
   d) 1111 1110 1101 1011

2. Below is a mesage first coded in ASCII and then converted to hexadecimal. Decode the message and show your steps.
   436F6D7075746572

3. Perform the mathematical operations below by converting each decimal into a 5-bit two's complement format. Check your results by doing the same operations in decimal format. Specify which of the operations causes an overflow.
   a) 5 – 1
   b) 5 – 11

4. Perform the following operations.
   a) 01001011 AND 10101011
   b) 01001011 OR 10101011
   c) 01001011 XOR 10101011

5. The followings are the instructions according to the machine language given in the appendix of your text book (Appendix C). Find the corresponding assembly commands.
   a) 7123
   b) 2BCD

6. Write an assembly program which obtains a 16 bit value by combining the first and last 8 bits of the memory cellss addressed with A0 and A1, respectively and writes this 16 bit value into the memory address A2.

Submission: Submit your homework through moodle systsem as a pdf file named with your student number. Example: 123456789.pdf