IT 209: Lab Manual

Lab 1

General Instructions:

- Students are required to maintain a lab notebook for this course.
- At the end of each lab, the students will be graded on the scale of 10.
- Take home assignments has to be submitted to the following e-mail id day before the next lab session.

  it209.co@gmail.com

- Keep subject as <student_id>, Lab#<lab_number>. Write all program codes in one text file with proper indentation and order. Name text file same as subject of your mail.

Target Device: NXP LH75400

Tasks:

Familiarization with Keil followed by the following programs:

1. Perform subtraction of the number stored at memory location 0x4000 from the number sotred at memory location 0x4004 and place the result in memory location 0x4008.
2. Write a program to check whether the number stored at memory location is even or odd.
3. Write a program to perform sum of two 64-bit number. Use DCD for the same.

Take-home Assignment

4. Store a number 0xBDA35D12 at location 0x4020. Use DCD for the same.
5. Swap the numbers stored at memory locations 0x4000 and 0x4004. (Hint: Use XOR instruction)
6. Write a program to perform below operation on number stored at location 0x4000. Perform each operation on consecutive two bytes of number. Store result at memory location 0x4004.
   a. selective-clear (on 1st and 2nd byte)
   b. selective-set (on 3rd and 4th byte)
   c. selective-complement (on 5th and 6th byte)
   d. selective-set operation (on 7th and 8th byte)
7. Can we use MOV instruction to load 0xFFAC into register R0? If not, give proper reason.