IT 209: Lab Manual

Lab 2

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:

1. Perform the following operations to see the change in the flag values
   a) Addition of -1, -2
   b) Addition of 0xA1234567 & 0xB0000000
   c) Addition of 0x7B000000 & 0xF0000000
   d) Create a loop that subtract 1 each time until all the bits become zero.

2. Write an assembly language program for storing the sum of first ‘n=6’ terms of the series 1,4,9,16,25...

3. Write an assembly language program for counting the total occurrences of a given ‘n=3’-bit pattern '110' in a 32 bit value

4. Write an assembly language program to count the total factors of a number.

Take-home Assignment

5. Write an assembly language program to find maximum and minimum values in an array.

6. Write an assembly language program to find the average of first n natural numbers. (Hint: For division use repetitive subtraction)

7. Write an assembly language program to find maximum of 3 numbers and store it at location 0x5000.