CS 232 - Assignment 9

General Rules:

1) For all questions, ARM assembly language is to be used.

Problem_1:

Write assembly language program to evaluate 'expression tree'.

Assume:

1)Expression is available in the memory as series of ASCII characters. For example ((X+3)-(Y*Z)+5)#

2)The expression is terminated using '#'(ASCII pound symbol)

3)The operator precedence is resolved by the round brackets.

4)Assume operation in integer domain (Fraction part to be truncated)

5)Store the final result in the register.

Problem_2:

Write a assembly language program to convert number represented as 32-bit single-precision floating-point format to decimal equivalent and store result as ASCII.

Assume:

1) Standard 'single precision' IEEE-754 floating point format. (ref:https://en.wikipedia.org/wiki/IEEE_754)

2) Considering precision to be 6 decimal places.

3) Convert result as series of ASCII representation of decimal number and store it in memory array as string.

Things required in Submission:

1. Entire keil project along with .asm file, assembled with 0 errors.
2. Screenshot of result in debug mode.
3. A report explaining how your program works (pdf format).

Submission rules:

1. Create a folder named **lab9** (all small letters and no spaces).
2. Inside the above-mentioned folder create 2 more folders named **Problem_1**, and **Problem_2**.
3. Inside the folder, **Problem_1** put all the relevant project files of including .asm source code file. Also, in the same folder put the related screenshots of result in debug mode and pdf report related **Problem_1**. Do the same thing for **Problem_2.**

4. Finally, before you submit the **lab8** folder on Moodle you will be zipping it. The zip file should have your id number as the name. For eg: if your id is 184070026 then your zip file will be 184070026.zip