Assembly Project for CMPE 310

Assigned: Thursday, Feb 25
Due: Tuesday, March 5th (midnight)

Project Description:
Write an 80x86 assembly program using nasm that performs the following functions:

- Reads a set of floating point numbers as ASCII charaters from a file, converts them to single percision IEEE floating point representation (see text for the definition of the standard), saves the floating point values into an array and outputs the sum. The numbers will be given in standard floating point representation as, e.g. (-)9.999999E+/-99, i.e. (-) is optional, the number of digits to the right of the decimal point is variable, E is always followed by a + or a - and two digits where 09 is used for single digit exponents such as 1.
- NOTE: You can NOT use fscanf or any other C library function to do the conversion to floating point. You may want to use the floating point assembly instructions to help with the conversion. We'll cover the floating point assembly notes this Friday.
- As before, the data file name is to be read from the command line. You are welcome to use my code examples and macros to do this project.
- You may assume the number of values in the data file never exceeds 1,000,000 elements. Therefore, you may statically declare 1 million 32-bit double words in your data segment.
- Format of the data file: Assume the file gives the number of data points on the first line. Every line following the first line contains exactly one floating point value.

You must use the submit program to submit your code. You are also required to turn in a hardcopy. The breakdown of the points are as follows:

- Correctness 50%
- Modularity 30%
- Documentation (description, etc.) 10%
- Code Comments 10%

You can construct your own data files for this in the format described above. We will test your code on our own examples. The submitted program is due by midnight on Tuesday. You must turn in the hardcopy during class on Wednesday and it must be identical to the code that you submitted.