CMPE 310 Assembly Language Project 2
for CMPE 310

Assigned: Friday, Feb 15

Due: Tuesday, March 4

Project Description:

Write an 80x86 assembly program that performs the following functions:

- Reads a set of integers (16 bit) from a file into an array. The data file name is to be read from the command line. You are welcome to use the code examples and macros to do this project.
- 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 value. The maximum number of integers in the file will be 1000.
- Sort the integers that you have read and print out the sorted array on the screen and also an output file.
- Read a second input file (same format) into another array, sort it and merge the two arrays into one sorted array. Print the resulting array out in a second output file. (Max size of the output array will be 2000)

You must use the submit program to submit your code. The class name is cmpe310 and the project name is proj2. You are also required to turn in a hardcopy. Follow all the instructions given in project 1 section Turning in your project. Make sure your code is modular i.e. you have subroutines for opening the file, reading integers and populating your array, doing your calculations, printing your output etc. The breakdown of the points will also be similar as project 1. Submit the project (project2.asm) file and (common_code.asm). Any code that you use from our examples should be in (common_code.asm) and this file should be included in your main project file. Properly format your code using the enscript command before printing out the hardcopy.

You can construct your own data files for this in the format described above. We will test your code on our own examples. Both the program and hardcopy are due at the beginning of class on Tuesday.

NOTE: You may use the C library functions for this project. The relevant functions are fopen, fscanf and printf. You will need to use gcc to link your source code if you use the C library functions.

THE LABS ARE INDIVIDUAL EFFORTS: INSTANCES OF CHEATING WILL RESULT IN YOU FAILING THE COURSE.