

# COE 205 Computer Organization & Assembly Language – Fall 2006

## **Assignment 4:** Libraries and Procedures

**Professor:** Muhamed Mudawar

**Due Date:** Saturday, November 11, 2006

**Objectives:** Using the book's library of procedures  
Writing simple procedures

- Q1.** (6 pts) Write an assembly language program that clears the screen, locates the cursor near the middle of the screen, prompts the user for three signed integers, adds the integers, and displays their sum. Let this program repeat the same steps three times, using a loop, waiting for the user to press [ENTER] before it continues. Clear the screen after each loop iteration.
- Q2.** (7 pts) Write an assembly language program that generates and displays 20 random strings, each consisting of 10 capital letters {A .. Z}.
- Q3.** (7 pts) Write an assembly language program that displays the string "COE 205 is Fun" near the middle of the screen, in all possible combinations of foreground and background colors (16×16). The colors are numbered from 0 to 15, so you can use a nested loop to generate all possible color combinations. Pause for 500 milliseconds before looping back and changing colors. Make sure to clear the screen after changing the background color.

## **Documentation and Grading**

Document your code and make it as readable as possible. Two marks of each program will go to documentation and readability and the rest will go to correctness. Write your name, your id, the date, the objective of the program, the input, and the output at the beginning of each program. Also make sure to document procedures properly.

## **Submitting Programming Assignments**

Submit **the source and executable files** of all programs in one ZIP file. Name it as A4.zip. **All submissions should be made through Email** on the due date by **11 pm**. Send to:

[mudawar@kfupm.edu.sa](mailto:mudawar@kfupm.edu.sa) ; [s.azab@ieee.org](mailto:s.azab@ieee.org)

Late programming assignments will be accepted, but 5% of the grade will be deducted for each late day for a maximum of 5 late days.

## **Note on Academic Honesty**

All programs must be done individually and must be **your own work**. Copying a program in whole or in parts is a violation of academic honesty. Also, you must refrain from giving your code to other students, especially if they were your friends. Allowing your friends to copy your program will not help them, but will put you in trouble. Detected copies are given zeros to all involved students including those who did the original work.