

COE 205 Computer Organization & Assembly Language – Spring 2008

Programming Assignment 1: Libraries and Procedures

Due Date: Wednesday, April 9, 2008

Objectives: Using the book's library of procedures, writing simple procedures

- Q1.** (10 pts) Write an assembly language program that generates and displays N random strings, each consisting of L capital letters $\{A \dots Z\}$. Ask the user to input the values of N and L . Write a procedure to generate and display a random string consisting of L capital letters (where L is passed as an input parameter) and call this procedure N times.
- Q2.** (10 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 loop to generate all possible color combinations from 0 to 255. Write a procedure that pauses for 500 milliseconds, clears the screen, and displays the string near the middle of the screen. You can pass the foreground and background colors, and the address of the string to be displayed as parameters to the procedure. Write a loop that will call the procedure repeatedly for each combination of foreground and background colors.

Documentation and Grading

Document your code and make it as readable as possible. Three marks of each program will go to documentation, readability, and proper use of procedures. 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 the executable files** of all programs in one ZIP file. **All submissions should be made through WebCT** on the due date by **11 pm**.

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.