COE 205, Term 101

Computer Organization & Assembly Programming

Programming Assignment# 2
Due date: Saturday, Nov. 27, 2010

Q.1. Write a procedure, DisplayChar, that receives an integer corresponding to a character to be displayed and an (x, y) coordinate of the top left corner of the character and then displays a large shape of the character. For example the letter c can be defined as:

```
LC Byte "  cccccc ", 10, 13,
        " c      ", 10, 13,
        " c      ", 10, 13,
        " c      ", 10, 13,
        "  cccccc ",10, 13, 0
```

Assume that the procedure will receive an integer from 0 to 5 and will display the character corresponding to the number as follows:

Number	0	1	2	3	4	5
character	C	O	E	2	0	5

Q.2. Write an assembly program that does the following:

(i) Ask the user to enter the number of letters to be displayed and reads it.

(ii) Randomly generate a number between [0, 5] corresponding to a character, a color for a letter, and an (x, y) coordinate within the maximum window size. Then, Display the letter, wait for 2 s and delete the displayed letter. Display the number of letters as selected by the user. Make sure that the randomly generated color is not black (i.e. 0)

The solution should be well organized and your program should be well documented. Submit a soft copy of your solution in a zip file. Your solution should be submitted in a word file that contains the following items:

i)   Your name and ID

ii)   Assignment number

iii)   Problem statement

iv)   Your solution along with the code

v)   Discussion of what worked and what did not work in your program. Include snapshots that demonstrate the working parts of your program. If things did not work and you attempted to solve them, mention that and write about the difficulty that you have faced.

The soft copy should also contain both source code file (i.e. .asm) and the executable file (i.e. .exe).