COE 205, Term 101

Computer Organization & Assembly Programming

Programming Assignment# 1
Due date: Wednesday, Nov. 10, 2010

Q.1. Write an assembly program that does the following:

(i) Ask the user to enter the number of rows, N, and read it.

(ii) Ask the user to enter the number of columns, M, and read it.

(iii) Ask the user to enter an NxM matrix of integers. Assume that integers will be stored as double word numbers.

(iv) Print the entered matrix.

(v) Print the transpose of the matrix

(vi) Print the sum of elements in each row.

(vii) Print the sum of elements in each column.

A sample execution of the program is shown below:

Enter number of rows: 2
Enter number of columns: 3
Enter a matrix of 2x3 integers:
1
2
3
4
5
6
Your entered 2x3 matrix is:
1 2 3
4 5 6
The Transpose of the matrix is:
1 4
2 5
3 6
The sum of elements in each row:
Row#0:6
Row#1:15
The sum of elements in each column:
Col#0: 5
Col#1: 7
Col#2: 9

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).