

COE 205, Term 043

Computer Organization & Assembly Programming

Programming Assignment# 2

Due date: Saturday, July 30, 2005

- Q.1.** Write an assembly program that does the following:
- (i) Ask the user to enter the number of rows R and read it. Assume that the maximum value of R is 9.
 - (ii) Ask the user to enter the number of columns C and read it. Assume that the maximum value of C is 9.
 - (iii) Ask the user to enter a two-dimensional array of RxC digits (i.e. 0-9). Elements of a single row should be separated by a single space and each row is read in a new line.
 - (iv) Print the entered array in a new line printing also its entered dimensions.
 - (v) Ask the user to enter a row number or column number by specifying the character R for a row and the character C for a column followed by the number. For example, for the user to select row number 2, he will enter R2. Assume that row numbers and column numbers start from 0.
 - (vi) Print the selected row or column.
 - (vii) Print the sum of the elements of the selected row or column.

A sample execution of the program is shown below:

```
Enter number of rows in the array (1-9): 3
Enter number of columns in the array (1-9): 5
Enter the array:
0 1 2 3 4
5 6 7 8 9
0 1 2 3 4
The entered 3x5 array is:
0 1 2 3 4
5 6 7 8 9
0 1 2 3 4
Enter a row number or column number (R# or C#): R1
The elements of Row 1 are: 5 6 7 8 9
The sum of Row 1 = 35
```

The solution should be well organized and your program should be well documented. Submit a soft copy of your solution in a zip file. The soft copy should include a Readme file indicating the file names containing the solution and whether it works or not. The Readme file should also contain your name and ID. Submit both source code file (i.e. .asm) and the executable file (i.e. .exe).