

## COE 205, Term 042

### Computer Organization & Assembly Programming

#### Programming Assignment# 2 Due date: Tuesday, April 5, 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 select two rows or two columns. Then, exchange the two rows or two columns and print the array after the exchange

*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 9 7 8 1*

*The entered 3x5 array is:  
0 1 2 3 4  
5 6 7 8 9  
0 9 7 8 1*

*Enter your choice (0- exchange rows, 1- exchange columns, 2-stop the program): 0  
Enter the first row number: 0  
Enter the second row number:1  
Array after exchanging row 0 and row 1 is:  
5 6 7 8 9  
0 1 2 3 4  
0 9 7 8 1*

*Enter your choice (0- exchange rows, 1- exchange columns, 2-stop the program): 1*

*Enter the first column number: 1*

*Enter the second column number: 2*

*Array after exchanging column 1 and column 2 is:*

*5 7 6 8 9*

*0 2 1 3 4*

*0 7 9 8 1*

*Enter your choice (0- exchange rows, 1- exchange columns, 2-stop the program): 2*

*Program is terminating ...*

***Include both a hard and soft copy of your program in an envelope that contains your name and ID. The solution should be well organized and your program should be well documented. The soft copy should be submitted in a floppy including 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.***