CSA02 C Programming -Cycle-2

The transpose of a matrix is found by interchanging its rows into columns or columns into rows. Write a program to find the Transpose of a given Matrix.

Sample input:
1 2
5 3
Output:
1 5
2 3

1. Write a program to reverse an array
   Sample Input;
   Array of elements = {16, 18, 27, 16, 23, 21, 19}
   Sample Output:
   Reverse Array elements = {19, 21 23, 16, 27, 18, 16}
   Test cases:
   1.Array of elements = {26, 28, 37, 26, 33, 31, 29}
   2. Array of elements = {1.6, 1.8, 2.7, 1.6, 2.3, 2.1, .19}
   3. Array of elements = {0, 160, 180, 270, 160, 230, 210, 190, 0}
   4. Array of elements = {200, 180, 180, 270, 270, 270, 190, 200}
   5. Array of elements = {100, 100, 100, 100, 100, 100, 100, 100}

2. Compile and Execute the C program to print the multiplication table of number m up to n.
   Sample Input:
        M = 4
        N = 5
   Sample Output:
        1x4=4
        2x4=8
        3x4=12
        4x4=16
        5x4=20

3. Write a program to print the below pattern.

   Sample Input:

   Number of line: 4

   Sample output:

   Enter the number of rows: 4
   1
   2 3
   4 5 6
   7 8 9 10

4. Write a program for matrix Multiplication?
    Sample Input:
    Mat1 = 1 2
           5 3
    Mat2 = 2 3
           4 11
    Sample Output:
    Mat Mul =   10   25
                 22   48

5. Write a program to find the sum and average of the elements in an array
    Sample Input;
    Array of elements = {16, 18, 27, 16, 23, 21, 19}
    Sample Output:
    Sum = 140
    Average = 20

6. Write a program to reverse a number using function?(Get the input from user)
    Sample Input:
    Number: 14567
    Sample Output:
    Reverse Number: 76541

7. Write a program in C to swap elements using call by reference.

    Test Data :

    Input the value of 1st element : 5

    Input the value of 2nd element : 6

    Input the value of 3rd element : 7

    Expected Output :
    The value before swapping are :
    element 1 = 5
    element 2 = 6
    element 3 = 7

    The value after swapping are :
    element 1 = 7
    element 2 = 5
    element 3 = 6