# **Assignment 2**

**CSE115L**

Marks: 10   
Submission date: 11:59 PM, 4 Jan

1. Write a program in C to count the number of vowels and consonants in a string using a pointer.
2. Write a program in C to find the factorial of a given number using pointers.
3. Write a recursive function to reverse a string. Write a recursive function to reverse the words in a string.  
    i.e., "cat is running" becomes "running is cat".
4. Create a structure named **Countries** with the following components and appropriate data types: Name, Population, Currency, and Capital.  
   1. Create an Array of **Countries** of size 5 and take the inputs (from console) to fill the array.
   2. Now take the final input from the user via that **input.txt** file to scan/read a Population.
   3. Search the whole array and print all the countries information of those countries which have greater than the inputted amount of population in another .txt file named **output.txt** if any country is **Found**. Print **Not Found** in that .txt file otherwise.
5. Write a C program to multiply two numbers, where the both numbers are positive integers, but you can only use the + or – operators using recursion.
6. Create a structure named Students with the following components and appropriate data types: Name, Id, Department, CGPA, Gender.

**Female\_students.txt**Create an Array of Students of size 5 and take the inputs (from console/user to fill the array and write it in a text file called **Student.txt**

* 1. Now write a function which will print the list of students with CGPA more than **3.5**
  2. Write a function which will read the student.txt file and create two new text file, one for male students, and another for female students.

**Students.txt**  
Khalil Gibran 1621062 ECE 3.60 M  
Sylvia Plath 1821045 ENV 3.75 F  
Charles Bukowski 1721082 ENG 3.42 M  
Allen Ginsberg 1521022 BBA 3.37 M  
Rabia Balkhi 1731011 ECO 3.95 F

**Male\_students.txt**Khalil Gibran 1621062 ECE 3.57 M  
Charles Bukowski 1721082 ENG 3.42 M  
Allen Ginsberg 1521022 BBA 3.57 MSylvia Plath 1821045 ENV 3.75 F  
Rabia Balkhi 1731011 ECO 3.15 F