MCA Lab Assignment 4

Topics :-- Functions and pointers

1.Write a function to take one 10 elements 1-D integer array and find the third maximum, the fifth minimum & the middle element of the array (in any order). Special credit will be given if you can do it without sorting the array.

2. Write a only one function Vowel_Cons_Count() to count the number of vowels & consonants of a line of text. Do not print anything from inside the function. Write a program to read a line of text more than 80 characters terminated by "#" and use Vowel_Cons_Count() in main() and print the number of vowels & consonants of a line of text.

3. Write a function to take one string then print it in the reverse order. Write a recursive and non-recursive versions both.

4.Write a function to take a line of text then convert all the alphabets of it to uppercase.

5. Write a function that will convert the first part of the array into descending order and the last part of the array into ascending order, then print the final array.

6. Write a function to read a matrix, transpose a matrix, multiply two matrices and use these functions in main() to check whether an input matrix is symmetric or not.

7. Write a function to take two 2-D arrays, sort those two arrays, then store the sum of them into a third array that will also be sorted.

8. Write a menu driven program, consisting of following functions (on string). For each of the following write your own function. Do not use any library functions :--

Strlen()

Strcpy()

Strcat()

Strrev()

Strcmp()

9.write a recursive function for each of the following problems

a)to generate Fibonacci number.

b)to find the GCD of two numbers.

c)to find the factorial of any number.

d)to find the reverse of any number.

e)to find the sum of the digits of any number.

f)to find the divisors of any given number.

10.Write a function to convert a decimal number to any other base given by the user.

11. Write a program to find average and median of a list of numbers. Use dynamic memory allocation for storing the numbers.

12. Write a function which will accept two strings and check whether the second string is present in the first one. If it is, it returns the starting position else returns 0. Write a program which dynamically allocates memory for two strings taken from keyboard and uses the above function for searching one string into another.