

North South University
CSE115, Assignment 2,
Due: December 28th, 2021.

Pointer:

1) Implement the following function which finds the largest element in an array (use pointer)

int max (int *p, int size);

2) Implement the following function which finds the length of a string using pointer operation.

int length (char *s);

Structure:

3) Create a structure called **Patient** with the following members:

Registration_Number, Name, Age, Gender, Contact Number, Address, Corona_status (Had corona in the past or not. You may implement this member as flag variable).

Assume that there will not be more than **50 patients** in the hospital on a single day. Since people who had corona in the past might have complications, so in order to visit a physician, each patient need to inform whether he/she had corona in the past or not. **Populate** the array with information of **n** number of patients (the number **n** is provided by user).

[You may write a menu driven program or you may make function calls from main (). Use of global variable is not recommended for this question].

a) Write a function to **display** names and registration number of all patients (who had corona in the past) in the **n** number of patients in the array.

b) Write a function to **delete** patient information given a name by the user. [Consider all names are unique].

c) Write a function to **modify** contact number and address member of a record given the registration number of a patient.

File:

```
4) typedef struct {  
    char name[50];  
    int id;  
    char dept[20];  
    double cgpa;  
} student;
```

a) Write a function void saveByDept(char *fileName, char *deptName , student allStudents[], int size) that will save the information of all students who belong to the department with name pointed to by deptName into a text file. The name of the file is given as an input parameter, filename.

b) Write another function to delete the students of the department with a CGPA greater than or equal to 3 from the file you have created in part (a).

5) Create a file named countline.txt.

Insert the lines:

test line 1

test line 2

test line 3

test line 4

Write a program in C to display the content of the file and number of lines in a Text File.

[Hint: Consider that the lines in your file has fixed length and your buffer size is big enough to accommodate each line]

Test Data:

Input the file name to be opened: countline.txt

Expected Output:

The content of the file test.txt are:

test line 1

test line 2

test line 3

test line 4

The lines in the file are: 4