

**North South University CSE115, Assignment 2,
Due: 14th December, 2025**

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

int max (int *p, int size);

2) Write a code to arrange elements of array in ascending order (use pointers).

3) Implement the following functions which finds the length of a string.

a) int findlength (char s[]);

b) int findlength (char *s);

4) Write code for a function that uses an array to store the elements of another array in reverse order. Use the following function prototype: a)**void rev_arr(int arr1[], int rev_arr1[], int size);**

b) void rev_arr(int *arr1, int *rev_arr1, int size);

5) Consider a 2D array, take input from the user. Then, find a) sum of main diagonal element, b) sum of border elements, c) maximum row sum, d) maximum column sum, e) display upper right triangle, f) display lower right triangle . Sample Input:

Consider the following 2D array: 13 3 4

5 6 7
10 8 9

Sample output:

Sum of main diagonal element: 28 (13+6+9)

Sum of border element: 59 (13+3+4+5+7+10+8+9)

Row0 sum: 20 (13+3+4)

Row1 sum: 18 (5+6+7)

Row2 sum: 27 (10+8+9)

Maximum row sum: 27

Column0 sum: 28 (13+5+10)

Column1 sum: 17 (3+6+8)

Column2 sum: 20 (4+7+9)

Maximum column sum: 28

[NB: You need not display the elements that are being added (shown in first bracket in sample output), just display the sum and maximum]

6) Write a full code that will contain all the following measures. Suppose, you are running a book shop. You can have a maximum of 100 books there. Design a structure name Book_info to store all the books' Name, Id, publish year, author, present price and any other information that is needed. Take input from user on the number of books that must be existent in the record system initially.

a) Populate the record system.

b) Save the information in a file input.txt

c) Read information from the file input.txt and display the name of books, author and Id of all books available in the record system.

d) Read information from file input.txt and create a new file that will contain book names written by the author Charles Dickens

e) Read information from file input.txt and create a new file that will contain book names not written by the author Charles Dickens