

Department of Computer Science and Engineering
University of Liberal Arts Bangladesh
Mid Term Examination
Semester – Fall 2019
Course Title: Data Structure Lab
Course Code : CSE 208 (Sec: 1)
Duration : 1:00 Hours

PLEASE ANSWER ALL QUESTIONS.

Total 20 Marks

Name: _____ ID: _____

QUESTION 1

8 marks

Write a C program that uses a linked list to store n integers and prints the linked list in reverse order.

Input Description:

The input set contains two lines of input.

The first line of input is an integer n . The next line contains n space separated integers denoting the elements of the list.

Output Description:

Output should be one line containing the n integers in reverse order separated by a space.

Sample Input:

5
10 40 8 50 45

Expected Output:

45 50 8 40 10

QUESTION 2

4 marks

Write a program in C to copy the elements of one array into another array in reverse order using pointer.

Input Description:

The input set contains two lines of input.

The first line of input is an integer n . The next line contains n space separated integers denoting the elements of the list.

Sample Input:

5
10 40 8 50 45

Expected Output:

The elements stored in the first array are:

10 40 8 50 45

The elements copied into the second array are:

45 50 8 40 10

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QUESTION 3

4 marks

Write a C program that takes an $R \times C$ grid as input and then calculates the sum of each row. Afterwards, it displays the maximum of the sums.

Input Description:

The first line of input contains two integers R, C . The next R lines contain C space separated integers denoting the elements of the row.

Sample Input:

```
3 2
10 40
8 50
45 20
```

Expected Output:

```
The sum of Row 1: 50
The sum of Row 2: 58
The sum of Row 3: 65
Row 3 has the largest sum with 65.
```

QUESTION 4

4 marks

Write a C program that finds the first repeating integer in a list and returns the index of it. If no such elements exist then it will return "- 1" (without quotes).

Input Description:

The input set contains two lines of input.

The first line of input is an integer n . The next line contains n space separated integers denoting the elements of the list.

Output Description:

Output should be one line denoting the index of the first repeated integer in the list. If no such element is present in the list, "- 1" (without quotes) should be displayed.

Sample Input:

```
6
10 40 8 50 40 20
```

Expected Output:

```
4
```

****END OF QUESTIONS****