

CL2001 – Data Structure Lab

Lab Task # 02

Note:

- Plagiarism will not be **tolerated!!**
- Variable names should be meaningful.
- Use comments wherever applicable.
- Submit a cpp file and pdf file containing all of your C++ code with all possible screenshots of every task output on Google Classroom. The name of file should be your roll no followed by your name (roll-no-name.pdf) i.e., (24P-1234-Ali.pdf).

Problem: 1

Write a C++ program to find the most repeated value in the array and also print the number of times the value appears in the array.

For example: {4,5,3,3,4,3,4,5,6,5,5,5}

Output: The most repeated value is 5 and it appears 5 times.

Problem: 2

Write a C++ program to remove duplicate values from an array. The program should take an array of integers as input, remove all duplicate elements, and then display the updated array containing only unique values.

For example: {3,4,5,4,5,2,1}

Output: {3,4,5,2,1}

Problem: 3

Write a C++ program that takes a 2D array (square matrix) as input and then finds:

The sum of the main diagonal elements.

The sum of the secondary diagonal elements.

e.g :

```
1 2 3
4 5 6
7 8 9
```

Main diagonal elements: 1, 5, 9 \rightarrow Sum = 15

Secondary diagonal elements: 3, 5, 7 \rightarrow Sum = 15