



Topic	Array	Batch	CAGE -
Name		Date	24/03/2025

Total Marks: 20

1. Write a C program that reads **n** integers from the user and stores them in a 1D array. Then, calculate and print the sum of all the elements in the array.

Sample Input: Enter number of elements: 5

Enter elements: 1 2 3 4 5

Expected Output: Sum of elements: 15

2. Write a C program to reverse a 1D array of integers. The program should first take the size of the array and then the array elements as input, reverse the array, and display the reversed array.

Sample Input: Enter number of elements: 4

Enter elements: 10 20 30 40

Expected Output: Reversed array: 40 30 20 10

3. Write a C program to find the largest and smallest elements in a 1D array of integers. You should handle cases where all elements are the same or the array contains only one element.

Sample Input: Enter number of elements: 6

Enter elements: 23 45 12 78 34 56

Expected Output: **Largest element: 78**

Smallest element: 12

4. Write a C program to count how many times a given element appears in a 1D array. The program should take the array elements and the search element as input and return the count of that element.

Sample Input: **Enter number of elements: 5**

Enter elements: 5 3 7 5 9

Enter element to search: 5

Expected Output: **Element 5 appears 2 times in the array.**

5. Write a C program to merge two sorted 1D arrays of integers into a single sorted array. The arrays may have different sizes, and the resulting array should be sorted.

Sample Input: **Enter number of elements in first array: 4**

Enter elements of first array: 1 3 5 7

Enter number of elements in second array: 3

Enter elements of second array: 2 4 6

Expected Output: **Merged sorted array: 1 2 3 4 5 6 7**