**Tasks:**Task 1: Write a program that calculates the sum of all the elements in array using pointers

(Note: Generate the array via user in the main function use argv)

Task 2: You are required to pass a single dimension array to a function (type of the array can be your choice) and perform add operations to each element. Return the array to the main function after completion. One small catch is that the arguments and the return type should be void\*. (Create an array via the main arguments)

Task 3:

Write a program that can resize a single dimension int array if the elements exceed the total size. Consider an int array of size 5 (uninitialized), you start adding items to the array and if the quantity of the elements exceeds double the array size. Once finished resizing the array again to the max quantity of the elements present in the array.

Task 4:

Consider there are two structures Employee (depended structure) and another structure called Organisation(Outer structure). The structure Organization has the data members like organisation\_name,organisation\_number. The Employee structure is nested inside the structure Organization and it has the data members like

employee\_id, name, salary.

org.emp.employee\_id;

org.emp.name;

org.emp.salary;

org.organisation\_name;

org.organisation\_number;

Here, org is the structure variable of the outer structure Organisation and emp is the structure variable of the inner structure Employee.

Output the following data using above structure

The size of structure organisation : 123

Organisation Name : NU-Fast

Organisation Number : NUFAST123ABC

Employee id : 127

Employee name : Linus Sebastian

Employee Salary : 400000

Task 5:

Write a program that creates N structures. Inside each struct are two entities, id and name. You are required to first sort this structure first via ID then via the first character of the name in ascending order. Print all the struct data in both formations.

Task 6:

Write a program that creates a dynamic array of not values but structures. Each struct would contain another struct and in that struct a variable of subject should exist. The outer structure should be an ID and an array (Fixed) for subjects. (Note you can utilize vectors for this question)