Assignment No. 4

AIM: a. Write a C++ program to sort a list of numbers in ascending order.
b. Write a C++ Program to illustrate New and Delete Keywords for dynamic memory allocation

OBJECTIVE:

1. Develop critical thinking and problem-solving ability by using the characteristics of an Object-oriented approach.
2. Build the programming skills using C++
3. Apply the appropriate Object-Oriented features for various applications.
6. Teach the student to implement object oriented paradigm.

OUTCOME:

CO1. Identify the technical aspects of the problem statement with a comprehensive and systematic approach.
CO2. Apply various object-oriented features for problem solving.

***NOTE:**

- ***Students are expected to explore the following points for completing the write up.***
- ***Don't write questions, you are expected to explore only answers.***

- What is memory allocation? What are different ways of allocating memory? Discuss in detail
- How is memory allocated/deallocated in C++?
- Difference between Static and Dynamic Memory Allocation
- Illustrate new and delete operators with syntax and example.
- new vs malloc() and free() vs delete in C++

ALGORITHM :

- Algorithm to "generate all the prime numbers between 1 and n, where n is a value supplied by the user"

- Algorithm to "find both the largest and smallest number in a list of integers"

CONCLUSION:

Thus, we have successfully implemented C++ programs 'to sort a list of numbers in ascending order and 'to sort a list of numbers in ascending order'.