

“Develop C program to perform all sorting method by giving choice to sort with help of switch statement”

	Enrollment No	Exam Seat	Name of Student
Details of Student(s)	1910020362	240630	Savant Omkar Vitthal
	1910020360	240628	Raut Atharva Satish
	1610020163	240586	Wani Pushpak Shrikant
Project Guide(s)	Prof.G.N.Handge		
Name of Industry (If Sponsored)	NA		
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Abstract: This paper is scrutinizes the use of different Data Structures in C programming language, enabling viewer to get the complete concept of different aspects of C programming. Sorting is one of the most fundamental problems in computer science, as it is used in most software applications To satisfy this we created a simple menu-driven program displaying various sorting programs. We'll look at two searching algorithms and four sorting algorithms here in detail, and go through examples of each algorithm and determine the performance of each algorithm, in terms of how “quickly” each algorithm completes its task.

Introduction (In brief): The process of Sorting can be explained as a technique of rearranging the elements in any particular order, which can be set ready for further processing by the program logic. In C programming language, there are multiple sorting algorithms available, which can be incorporated inside the code. The various types of sorting methods possible in the C language are Bubble sort, Selection sort, Quick sort, Merge sort, Heap sort and Insertion sort. Sorting can be performed in various ways based on the sorting algorithm. In C programming language we do have several approaches to sort the list. The term sorting states arranging of data in a particular manner usually in ascending order. Though the way to sort the data is different in all of the sorting algorithms, the outcome of all of them is the same.

```
How many number you want to input?
7
Please enter 7 integers that has to be sorted
5
3
68
14
1
2
645
Below is the list of elements sorted in ascending order:
1
2
3
5
14
68
645
```

Fig.1.Bubble Sort

```
Please enter the total count of the elements that you want to sort:
6
Please input the elements that has to be sorted:
35
24
68
95
62
3
Output generated after using insertion sort
3 24 35 62 68 95
```

Fig.2.Selection Sort

```
Please enter the count of elements you want to sort: 6
Please enter 6 Elements: 25
83
86
85
96
45
Here is the sorted List of elements: 25 36 45 65 85 96
```

Fig.3.Insertion Sort