Ex. No:11.B.1 **BUBBLE SORT**

AIM:

To write a C program to implement the concept of bubble sort

DESCRIPTION:

- Bubble sort is one of the simplest internal sorting algorithms.
- Bubble sort works by comparing two consecutive elements and the largest elementamong these two bubbles towards right at the end of the first pass the largest element gets sorted and placed at the end of the sorted list.
- This process is repeated for all pairs of elements until it moves the largest element to the end of the list in that iteration.
- Bubble sort consists of (n-1) passes, where n is the number of elements to be sorted.
- In 1^{st} pass the largest element will be placed in the n^{th} position.
- In 2^{nd} pass the second largest element will be placed in the $(n-1)^{th}$ position.

pass only the first two elements are compared.

ALGORITHM:

1: Start.
2: Repeat Steps 3 and 4 for i=1 to 10
3: Set j=1
4: Repeat while j<=n

(A) if a[i] < a[j]

Then interchange a[i] and a[j]

[End of if]

(B) Set j = j+1

[End of Inner Loop]

[End of Step 1 Outer Loop]

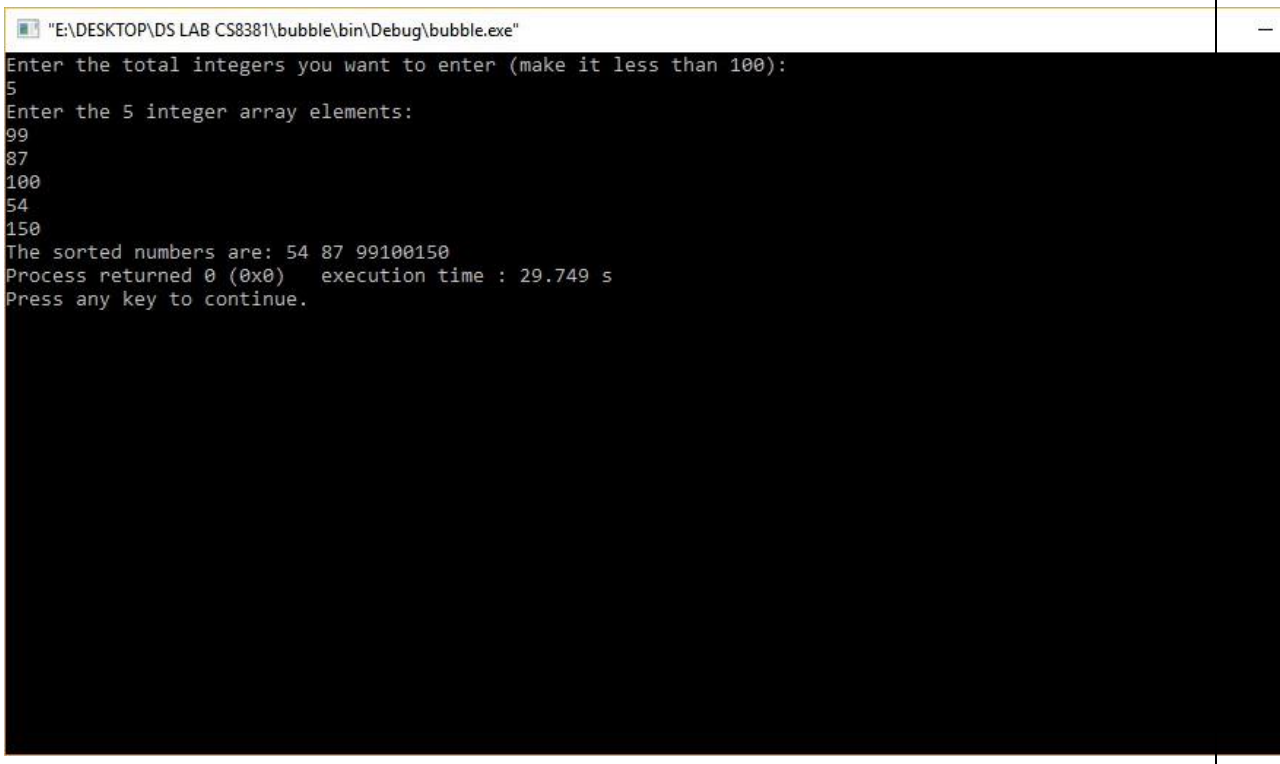
5: Stop.

PROGRAM:

```
#include<stdio.h> #include<conio.h> void main(){ int n, i, j, temp ,
a[100]; printf("Enter the total integers you want to enter (make it less
than 100):\n"); scanf("%d",&n); printf("Enter the %d integer array
elements:\n",n); for(i=0;i<n;i++){ scanf("%d",&a[i]);
} for(i=0;i<n-
1;i++){
for(j=0;j<n-i-
1;j++){
if(a[j+1]<a[j]){
temp = a[j];
a[j] = a[j+1];
a[j+1] = temp;
}}} printf("The sorted
numbers are:");
for(i=0;i<n;i++){
printf("%3d",a[i]);
}getch();
```

```
}
```

OUTPUT



RESULT:

Thus a C program for the concept of bubble sort was implemented successfull