S.No: 20	Exp. Name: ***Write a C program to sort the list of numbers using bubble sort and functions***	Date:2023-04-03

Aim:

Write a program to sort the elements in descending order with bubble sort technique using functions.

At the time of execution, the program should print the message on the console as:

```
Enter n value :
```

For example, if the user gives the input as:

```
Enter n value : 3
```

Next, the program should print the message on the console as:

```
Enter 3 elements :
```

if the user gives the input as:

```
Enter 3 elements : 45 67 34
```

then the program should print the result as:

```
Elements before sorting : 45 67 34
Elements after sorting : 67 45 34
```

Note: Write the functions read(), bubbleSort() and display() in sorta.c.

Source Code:

sort.c

```
#include <stdio.h>
#include "sorta.c"
void main() {
   int a[20], n, i;
   printf("Enter n value : ");
   scanf("%d", &n);
   printf("Enter %d elements : ",n);
   read(a, n);
   printf("Elements before sorting : ");
   display(a, n);
   bubbleSort(a, n);
   printf("Elements after sorting : ");
   display(a, n);
}
```

sorta.c

```
int i;
void read(int a[],int n)
{
   for(i=0;i<n;i++)
   {
```

```
      scanf("%d",&a[i]);
   }
}
void display(int a[],int n)
{
   for(i=0;i<n;i++)
   {
      printf("%d ",a[i]);
   }
   printf("\n");
}
void bubbleSort(int a[],int n)
{
   int j,temp;
   for(i=0;i<n-1;i++)
   {
      for(j=i+1;j<n;j++)
      {
         if(a[j]>a[i])
         {
            temp=a[i];
            a[i]=a[j];
            a[j]=temp;
         }
      }
   }
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter n value : 3
Enter 3 elements : 4 6 8
Elements before sorting : 4 6 8
Elements after sorting : 8 6 4

Test Case - 2
User Output
Enter n value : 5
Enter 5 elements : 34 56 71 26 17
Elements before sorting : 34 56 71 26 17
Elements after sorting : 71 56 34 26 17

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Srinivasa Ramanujan Institute of Technology