S.No: 20	Exp. Name: ***Write a C program to interchange the Largest and Smallest numbers in the array***	Date:2023-01-17

Aim:

Write a **C** program to **interchange** the `largest` and `smallest` numbers in the array.

Sample Input and Output:

```
Enter the size of array : 5
Enter 5 integers: 11 44 66 22 99
Interchanging largest value 99 and smallest value 11
After interchange, array elements are: 99 44 66 22 11
```

Source Code:

interchange.c

```
#include<stdio.h>
int main()
{
   int a[100],size,max,min,maxpos,minpos,i,temp;
   printf("Enter the size of array : ");
   scanf("%d",&size);
   printf("Enter %d integers: ",size);
   for(i=0;i<size;i++)
   scanf("%d",&a[i]);
   max=a[0];
   min=a[0];
   maxpos=0;
   minpos=0;
   for(i=1;i<size;i++)
   {
      if(a[i]>max)
      {
         max=a[i];
         maxpos=i;
  }
      if(a[i]<min)
      {
         min=a[i];
         minpos=i;
  }
 }
   printf("Interchanging largest value %d and smallest value %d",a[maxpos],a[m
inpos]);
   temp=a[maxpos];
   a[maxpos]=a[minpos];
   a[minpos]=temp;
   printf("\nAfter interchange, array elements are: ");
   for(i=0;i<size;i++)
   printf("%d " ,a[i]);

   printf("\n");
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter the size of array : 5
Enter 5 integers: 11 44 66 22 99
Interchanging largest value 99 and smallest value 11
After interchange, array elements are: 99 44 66 22 11

Test Case - 2
User Output
Enter the size of array : 3
Enter 3 integers: 215 315 4
Interchanging largest value 315 and smallest value 4
After interchange, array elements are: 215 4 315

Test Case - 3
User Output
Enter the size of array : 2
Enter 2 integers: 99 999
Interchanging largest value 999 and smallest value 99
After interchange, array elements are: 999 99

Test Case - 4
User Output
Enter the size of array : 4
Enter 4 integers: 101 99 201 401
Interchanging largest value 401 and smallest value 99
After interchange, array elements are: 101 401 201 99