

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>
void 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[minpos]);
    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 |