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

```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