

Aim:

Write a program to sort the given array elements using selection sort largest element method.

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

Enter value of n :

For example, if the user gives the input as:

Enter value of n : 3

Next, the program should print the messages one by one on the console as:

Enter element for a[0] :
Enter element for a[1] :
Enter element for a[2] :

if the user gives the input as:

Enter element for a[0] : 22
Enter element for a[1] : 33
Enter element for a[2] : 12

then the program should print the result as:

Before sorting the elements in the array are
Value of a[0] = 22
Value of a[1] = 33
Value of a[2] = 12
After sorting the elements in the array are
Value of a[0] = 12
Value of a[1] = 22
Value of a[2] = 33

Fill in the missing code so that it produces the desired result.

Source Code:

array.c

```
#include<stdio.h>
int main()
{
    int a[20],i,n,j,max,temp=0;
    printf("Enter value of n : ");
    scanf("%d",&n);
    for(i=0;i<n;i++)
    {
        printf("Enter element for a[%d] : ",i);
        scanf("%d",&a[i]);
    }
    printf("Before sorting the elements in the array are\n");
    for(i=0;i<n;i++)
    {
```

```

        printf("Value of a[%d] = %d\n",i,a[i]);
    }
    for(i=n-1;i>0;i--)
    {
        max=1;
        for(j=i;j>=0;j--)
        {
            if(a[j]>=a[max])
                max=j;
        }
        temp=a[i];
        a[i]=a[max];
        a[max]=temp;
    }
    printf("After sorting the elements in the array are\n");
    for(i=0;i<n;i++)
    {
        printf("Value of a[%d] = %d\n",i,a[i]);
    }
}

```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter value of n : 3
Enter element for a[0] : 15 68 48
Enter element for a[1] : Enter element for a[2] : Before sorting the elements in the array
Value of a[0] = 15
Value of a[1] = 68
Value of a[2] = 48
After sorting the elements in the array are
Value of a[0] = 15
Value of a[1] = 48
Value of a[2] = 68