S.No: 21	Exp. Name: ***Write a C program to sort the elements using selection sort - largest element method technique***	Date:2023-04-01

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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>
void main()
{
   int a[20],i,j,n,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

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