

## EXPERIMENT NO-8

Input:

```
1 #include<stdio.h>
2 #include<stdlib.h>
3
4 int smallest(int arr[],int k,int n);
5
6 void selectionSort(int arr[],int n);
7 void main(int argc, char *argv[])
8 {
9     int arr[10],i,n;
10    printf("\n Enter the number of elements in the array: ");
11    scanf("%d",&n);
12    printf("\n Enter the elements of the array: ");
13    for(i=0;i<n;i++)
14    {
15        scanf("%d",&arr[i]);
16    }
17    selectionSort(arr,n);
18    printf("\n The sorted array is: \n");
19    for(i=0;i<n;i++)
20    {
21        printf(" %d\t",arr[i]);
22    }
23    printf("\n");
24 }
25
26 int smallest(int arr[],int k,int n)
27 {
28     int pos = k, small = arr[k],i;
29     for(i=k+1;i<n;i++)
30     {
31         if(arr[i] < small)
32         {
33             small=arr[i];
34             pos=i;
35         }
36     }
37     return pos;
38 }
39
```

```
void selectionSort(int arr[],int n)
{
    int k,pos,temp;
    for(k=0;k<n;k++)
    {
        pos = smallest(arr,k,n);
        temp = arr[k];
        arr[k] = arr[pos];
        arr[pos] = temp;
    }
}
```

Output:

```
student@dl405-HP-ProDesk-400-G7-Microtower-PC:~$ gedit Exp_9.c
student@dl405-HP-ProDesk-400-G7-Microtower-PC:~$ gcc Exp_9.c
student@dl405-HP-ProDesk-400-G7-Microtower-PC:~$ ./a.out
```

Enter the number of elements in the array: 6

Enter the elements of the array: 99 88 22 44 55 11

The sorted array is:

11      22      44      55      88      99