

Name: Siddhesh Vinay Rane
Class: SY-IT
Batch: S3
Roll no: 47

EXPERIMENT 07

Program:

```
#include <stdio.h>
#include <stdlib.h>
int smallest(int arr[], int k, int n);
void selection_sort(int arr[], int n);
void main(int argc, char *argv[])
{ int arr[10],i,n;
  printf("\nEnter the number of the elements in array:");
  scanf("%d", &n);
  printf("\n Enter the elements of the array: ");
  for(i=0;i<n;i++) { scanf("%d", &arr[i]); }
  selection_sort(arr, n);
  printf("\n The sorted array is: \n");
  for(i=0;i<n;i++) printf(" %d\t", arr[i]);
}
int smallest(int arr[], int k, int n)
{ int pos = k, small=arr[k], i;
  for(i=k+1;i<n;i++)
  { if(arr[i]< small)
    { small = arr[i]; pos = i;
    }
  }
  return pos;
}
void selection_sort(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:

```
Activities Terminal
Sep 25 14:52
dl0418@itadmin: ~
dl0418@itadmin:~$ ./a.out
Enter the number of the elements in array:5
Enter the elements of the array: 3
9
4
8
1
The sorted array is:
dl0418@itadmin:~$
```