Experiment 8

```
#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("\n Enter the number of elements in the array: ");
scanf("%d", &n);
printf("\n Enter the elements of the array:\n");
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;
}
}
```

```
dl0411@itadmin:~$ gcc raj8.c
dl0411@itadmin:~$ ./a.out

 Enter the number of elements in the array: 5

 Enter the elements of the array:
32
35
29
42
43

 The sorted array is:
 29      32      35      42      43     dl0411@itadmin:~$
```