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;
}
}
```

```
itl4@22DL407:~$ gedit yug8.c
itl4@22DL407:~$ gcc yug8.c
itl4@22DL407:~$ ./a.out

 Enter the number of elements in the array: 6

 Enter the elements of the array: 33
4
78
82
17
95

 The sorted array is:
 4       17      33      78      82      95      itl4@22DL407:~$
```