Experiment No.:08

Aim: Implementation of any one Sorting Technique considering a real-world application.

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("\n Enter the number of elements in the 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:

```
 Enter the number of elements in the array: 5

 Enter the elements of the array: 2
3
4
5
6

 The sorted array is:
 2       3       4       5       6       dl404@itadmin:~/Desktop$
```