

Experiment No.:08

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

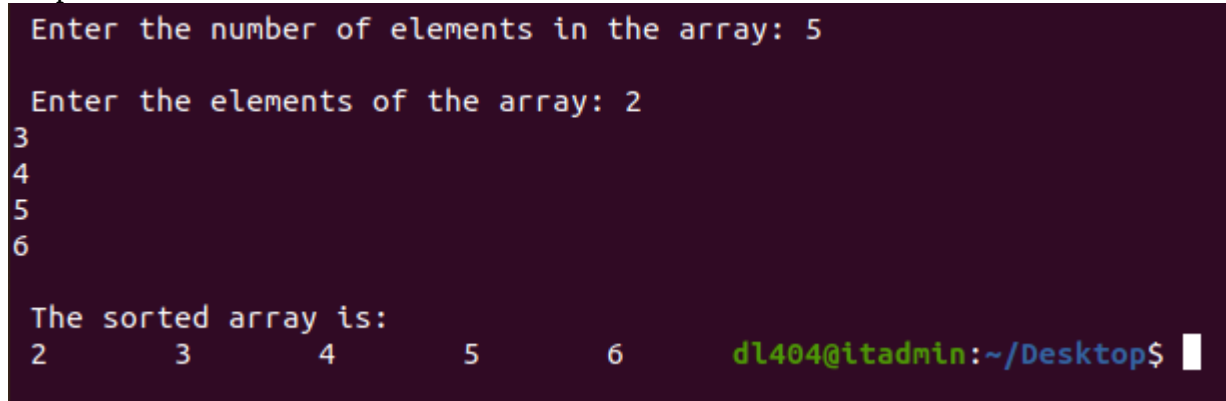
Program:

```
#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$
```