```c
#include<stdio.h>
int n;
void quicksort(int a[],int low,int high);
int partition(int a[],int low,int high);
void input(int a[],int n);
void display(int a[],int n);
int main(){
    int low=0;
    printf("Enter the number of elements");
    scanf("%d",&n);
    int a[n],high=n-1;
    printf("Enter the Numbers");
    input(a,n);
    quicksort(a,low,high);
    display(a,n);
    return 0;
}
void input(int a[],int n){
    for(int i=0;i<n;i++){
        scanf("%d",&a[i]);
    }
}
void display(int a[],int n){
    for(int i=0;i<n;i++){
        printf("%d\t",a[i]);
    }
}
void quicksort(int a[],int low,int high){
    int mid;
    if(low<high){
        mid=partition(a,low,high);
        quicksort(a,low,mid-1);
        quicksort(a,mid+1,high);
    }
}
int partition(int a[],int low,int high){
    int i,j,temp;
    i=low;
    j=high;
    int x=a[low];
    while(i<=j){
        while(a[i]<=x&&i<n){
            i++;
        }
```

```
        while(a[j]>x&&j>=0){
            j--;
        }
        if(i<j){
            temp = a[j];
            a[j]=a[i];
            a[i]=temp;
        }else{
            temp = a[low];
            a[low]=a[j];
            a[j]=temp;
        }
}return j;
}
```