```c
/*
  TITLE: IMPLEMENTATION OF QUICK SORT.
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  SUBJECT: DS
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  DISCRIPTION: In this Program quick sort operation is carried out.
*/
#include<stdio.h>
#include<stdlib.h>
int partition(int a[],int low,int high)
{
    int pivot,i,j,k;
    pivot=a[low];
    i=low;
    j=high;
    while(i<j)
    {
        while(a[i]<=pivot && i<high)
        i++;
        while(a[j]>=pivot && j>low)
        j--;
        if(i<j)
        {
            k=a[i];
            a[i]=a[j];
            a[j]=k;
        }
    }
    a[low]=a[j];
    a[i]=pivot;
    return j;
}

void quicksort(int a[],int low,int high)
{
    int p,i;
    if(low<high)
    {
        printf("\n\nLow=%d\nHigh=%d",low,high);
        for(i=low;i<=high;i++)
        printf("\t%d",a[i]);
        p=partition(a,low,high);
        quicksort(a,low,p-1);
        quicksort(a,p+1,high);
    }
}

int main()
{
    int a[20],n,i;
    printf("Enter total Number of element:");
    scanf("%d",&n);
    for(i=0;i<n;i++)
    {
        printf("\nEnter the Elements:");
        scanf("%d",&a[i]);
    }
    quicksort(a,0,n-1);
```

```
61      printf("\n\nSorted List contents is: \n");
62      for(i=0;i<n;i++)
63      {
64          printf("%d\n",a[i]);
65      }
66      return 0;
67  }
68
69
```