

```
#include<stdio.h>
void display(int arr[],int n)
{
    printf("[ ");
    for(int i=0;i<n;i++)
    {
        printf("%d ",arr[i]);
    }
    printf(" ]\n");
}

void quick_sort(int arr[],int L,int H,int n)
{
    int low,high,pivot,temp;
    pivot = arr[L];
    low = L+1;
    high = H;
    while(low <=high)
    {

        while(arr[low]<pivot)
        {
            low++;
        }
        while(arr[high]>pivot)
        {
            high--;
        }
        if(low<high)
        {
            temp = arr[high];
            arr[high] = arr[low];
            arr[low] = temp;
            low++;
            high--;
        }
    }

    temp = arr[L];
    arr[L] = arr[high];
    arr[high] = temp;

    if(L < high)
    {
        quick_sort(arr,L,high-1,n);
        // display(arr,n);
    }
    if(low < H)
    {
        quick_sort(arr,high+1,H,n);
    }
}

void main()
{
    int arr[10],n;
    printf("Enter total number of elements:= ");
    scanf("%d",&n);
    printf("Enter array elements\n");
    for(int i=0;i<n;i++)
    {
        scanf("%d",&arr[i]);
    }
    printf("Unsorted elements => ");
    display(arr,n);
}
```

```
quick_sort(arr,0,n-1,n);  
printf("sorted elements are => ");  
display(arr,n);  
}
```