```c
#include<stdio.h>
#include<conio.h>
#define MAX 100
void merge(int a[],int low,int mid,int high)
{
int i=low;
int j=mid+1;
int k=low;
int c[MAX];
while(i<=mid&&j<=high)
{
if(a[i]<a[j])
{
c[k]=a[i];
i=i+1;
k=k+1;
}
else
{
c[k]=a[j];
j=j+1;
k=k+1;
}
}
while(i<=mid)
{
c[k++]=a[i++];
}
while(j<=high)
{
c[k++]=a[j++];
}
for(i=low;i<=high;i++)
{
a[i]=c[i];
}
}
void merge_sort(int a[],int low,int high)
{
int mid;
if(low<high)
{
mid=(low+high)/2;
merge_sort(a,low,mid);
merge_sort(a,mid+1,high);
merge(a,low,mid,high);
}
}
void main()
{
int a[MAX],i,n;
clrscr();
printf("Enter the number of elements to sort\n");
scanf("%d",&n);
```

```c
printf("Enter the elements to sort\n");
for(i=0;i<n;i++)
scanf("%d",&a[i]);
merge_sort(a,0,n-1);
printf("The sorted list is\n");
for(i=0;i<n;i++)
printf("%d\n",a[i]);
getch();
}
```