```
#include<stdio.h>
#include<conio.h>

void merge_split(int a[],int first,int last);
void merge(int a[],int f1,int l1,int f2,int l2);
int a[25],b[25];

void main()
{
 int i,n;
 clrscr();
 printf("\n\nMERGE SORT");
 printf("\n\n**********");
 printf("\n\nEnter the limit : ");
 scanf("%d",&n);
 printf("\nEnter the elements\n");
 for(i=0;i<n;i++)
  scanf("%d",&a[i]);
 merge_split(a,0,n-1);
 printf("\n\nSorted list : ");
 for(i=0;i<n;i++)
  printf("\n %d",a[i]);
 getch();
}

void merge_split(int a[],int first,int last)
{
 int mid;
 if(first<last)
 {
  mid=(first+last)/2;
  merge_split(a,first,mid);
  merge_split(a,mid+1,last);
  merge(a,first,mid,mid+1,last);
 }
}

void merge(int a[],int f1,int l1,int f2,int l2)
{
 int i,j,k=0;
 i=f1;
 j=f2;
```

```
 while(i<=l1 && j<=l2)
 {
  if(a[i]<a[j])
   b[k]=a[i++];
  else
   b[k]=a[j++];
  k++;
 }
 while(i<=l1)
  b[k++]=a[i++];
 while(j<=l2)
  b[k++]=a[j++];
 i=f1;
 j=0;
 while(i<=l2 && j<k)
  a[i++]=b[j++];
}
```

-->>SAMPLE INPUT AND OUTPUT:

```
  Enter the limit : 5
Enter the elements
5
4
3
2
1

Sorted list:
1
2
3
4
5
```