* Merge sort algorithm

#include<stdio.h>

void merge(int a[],int low,int mid,int high)

{ int i,j,k,b[50];

i=low;

j=mid+1;

k=low;

while(i<=mid&&j<=high)

{

if(a[i]<a[j])

{

b[k]=a[i];

i++,k++;

}

else

{

b[k]=a[j];

j++,k++;

}

}

while(i<=mid)

{

b[k]=a[i];

i++,k++;

}

while(j<=high)

{

b[k]=a[j];

j++,k++;

}

for(int i=low;i<=high;i++)

{

a[i]=b[i];

}

}

void ms(int a[],int low,int high)

{

if(low<high)

{

int mid=(high+low)/2;

ms(a,low,mid);

ms(a,mid+1,high);

merge(a,low,mid,high);

}

}

void display(int a[],int n)

{

for(int i=0;i<=n;i++)

{

printf("%d\n",a[i]);

}

}

void main()

{

int a[6]={11,52,42,63,54};

int n=4;

ms(a,0,4);

display(a,4);

}