

```

1 #include<stdio.h>
2
3
4 void Merge(int * Array,int low,int mid,int high){
5     int i=low;int j=mid+1;int k=0;
6     int TempArray[25];
7
8     while( (i<=mid) && (j<=high) ){
9         if(Array[i]<Array[j]){
10             TempArray[k]=Array[i];
11             i++;k++;
12         }
13         else if(Array[i]>Array[j]){
14             TempArray[k]=Array[j];
15             j++;k++;
16         }
17
18         else {
19             TempArray[k]=Array[i];
20             i++;j++;k++;
21         }
22     }
23
24     while(i<=mid){
25         TempArray[k]=Array[i];
26         i++;k++;
27     }
28
29     while(j<=high){
30         TempArray[k]=Array[j];
31         j++;k++;
32     }
33
34     /* Copy Back */
35     k=0;
36     for(int i=low;i<=high;i++,k++){
37         Array[i]=TempArray[k];
38     }
39
40 }
41 void MergeSort(int* Array,int low,int high){
42     if(low<high){
43         int mid = (low+high)/2;
44         MergeSort(Array,low,mid);
45         MergeSort(Array,mid+1,high);
46         Merge(Array,low,mid,high);
47     }
48 }
49
50 int main(){
51     int trial[]={50,30,40,10,20,0};
52     MergeSort(trial,0,5);
53
54     for(int i=0;i<6;i++){
55         printf(" %d ",trial[i]);
56     }
57 }

```