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#include<stdio.h>
#include<stdlib.h>
using namespace std;

void merge(int A[],int l,int mid,int h)
{
    int i=l,j=mid+1,k=l;
    int B[100];
    while(i<=mid && j<=h)
    {
        if(A[i]<A[j])
            B[k++]=A[i++];
        else
            B[k++]=A[j++];
    }
    for(;i<=mid;i++)
        B[k++]=A[i];
    for(;j<=h;j++)
        B[k++]=A[j];
    for(i=l;i<=h;i++)
        A[i]=B[i];
}

```

```

void IMergeSort(int A[],int n)
{
    int p,l,h,mid,i;
    for(p=2;p<=n;p=p*2)
    {
        for(i=0;i+p-1<n;i=i+p)
        {
            l=i;
            h=i+p-1;
            mid=(l+h)/2;

```

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        merge(A, l, mid, h);
    }
    if(n-i>p/2)
    {
        l = i;
        h = i+p-1;
        mid = (l+h)/2;
        merge(A, l, mid, n-1);
    }
}
if(p/2<n)
{
    merge(A, 0, p/2-1, n-1);
}
}
int main()
{
    int A[]={11,5,14,2,6,3,1},n=7,i;
    IMergeSort(A, n);
    for(i=0;i<n;i++)
        printf("%d ",A[i]);
    printf("\n");
    return 0;
}

```