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import java.util.*;
public class testdsa {

    private static int size;

    public static void sort(int elements[])
    {
        buildheap(elements);
        for(int i=size;i>0;i--)
        {
            swap(elements,0,i);
            size=size-1;
            heap(elements,0);
        }
    }
    public static void buildheap(int elements[])
    {
        size=elements.length-1;
        for(int i=size/2;i>=0;i--)
            heap(elements,i);
    }
    public static void heap(int elements[],int i)
    {
        int left=2*i;
        int right=2*i+1;
        int max=i;
        if(left<=size&&elements[left]>elements[i])
            max=left;
        if(right<=size&&elements[right]>elements[max])
            max=right;
        if(max!=i)
        {
            swap(elements,i,max);
            heap(elements,max);
        }
    }
    public static void swap(int elements[],int i,int j)
    {
        int tmp=elements[i];
        elements[i]=elements[j];
        elements[j]=tmp;
    }

    public static void main(String[] args) {
        Scanner in=new Scanner(System.in);
        int n;
        System.out.println("enter size ");
        n=in.nextInt();
        int elements[]=new int[n];
        System.out.println("Enter "+n+" integer elements ");
        for(int i=0;i<n;i++)
            elements[i]=in.nextInt();
        sort(elements);
        System.out.println("Elements after sorting ");
        for(int i=0;i<n;i++)
    }
}

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        }  
        System.out.println(elements[i]+" ");  
    }  
}
```