import java.util.\*;

import java.io.\*;

class pract

{

public static void main(String[] args) throws IOException

{

int i,r;

String names[];

BufferedReader k=new BufferedReader(new InputStreamReader(System.in));

Scanner l=new Scanner(System.in);

System.out.print("Enter n:");

int n=l.nextInt();

names=new String[n];

System.out.println("Enter the States of India:");

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

{

names[i]=k.readLine();

}

System.out.println("States in Descending order:");

for(i=0;i<names.length;i++)

{

for(int j=0;j<names.length;j++)

{

r=names[i].compareTo(names[j]);

if(r>0)

{

String t=names[i];

names[i]=names[j];

names[j]=t;

}

}

}

for(String m:names)

System.out.println(m);

System.out.println("States in Ascending order:");

for(i=0;i<names.length;i++)

{

for(int j=0;j<names.length;j++)

{

r=names[i].compareTo(names[j]);

if(r<0)

{

String t=names[i];

names[i]=names[j];

names[j]=t;

}

}

}

for(String m:names)

System.out.println(m);

}

}