```
import java.util.*;

class Node
{
   int emer_id;
   Node next;
   Node(int emer_id)
   {
      this.emer_id = emer_id;
      this.next = null;
   }
}

class Node1
{
   int out_id;
   Node1 next;
   Node1(int out_id)
   {
      this.out_id = out_id;
      this.next = null;
   }
}

public class Solution
{
   Node head;
   Node1 head1;



   public void insertAtNode(int emer_id)
```

```
{

    Node newNode = new Node(emer_id);
    if (head == null)
    {
        head = newNode;
        return;
    }
    Node temp = head;
    while (temp.next != null)
    {
        temp = temp.next;
    }
    temp.next = newNode;
}

public void insertAtNode1(int out_id)
{
    Node1 newNode = new Node1(out_id);
    if (head1 == null)
    {
        head1 = newNode;
        return;
    }
    Node1 temp = head1;
    while (temp.next != null)
    {
        temp = temp.next;
    }
    temp.next = newNode;
}
```

```
public static Node mergeLists(Node head, Node1 head1)
{
    Node dummy = new Node(0);
    Node tail = dummy;

    while (head != null && head1 != null)
    {
        if (head.emer_id <= head1.out_id)
        {



            tail.next = new Node(head.emer_id);
            head = head.next;
        }
        else
        {
            tail.next = new Node(head1.out_id);
            head1 = head1.next;
        }
        tail = tail.next;
    }

    while (head != null)
    {
        tail.next = new Node(head.emer_id);
        head = head.next;
        tail = tail.next;
    }
    while (head1 != null)
    {
        tail.next = new Node(head1.out_id);
        head1 = head1.next;
        tail = tail.next;
    }

    return dummy.next;
}


public static void print(Node head) {
    Node temp = head;
    while (temp != null)
    {
        System.out.print(temp.emer_id + " ");
        temp = temp.next;
    }
}

public static void main(String[] args)
{
    Scanner sc = new Scanner(System.in);
    Solution sol = new Solution();


    int n = sc.nextInt();
    for (int i = 0; i < n; i++)
    {
        sol.insertAtNode(sc.nextInt());
    }
```

```
        int m = sc.nextInt();
        for (int i = 0; i < m; i++)
        {
            sol.insertAtNode1(sc.nextInt());
        }


        Node mergedHead = mergeLists(sol.head, sol.head1);
        print(mergedHead);
    }
}
```