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#include<bits/stdc++.h>
using namespace std;
class node{
public:
int info;
node *next;
node *prev;
};
void creation(node **head,int data)
{
node *ptr=new node();
ptr->info=data;
ptr->next=NULL;
ptr->prev=NULL;
if(( *head)==NULL)
{
*head=ptr;
}
else{
node *temp=*head;
while(temp->next!=NULL)
{
temp=temp->next;
}
temp->next=ptr;
ptr->prev=temp;
}
}
void sorted(node**head1,node**head2,node**head3)
{
node*temp1=*head1;node*temp2=*head2;
while(temp1!=NULL || temp2!=NULL)
{
if(temp1!=NULL&&temp2!=NULL)
{
if(temp1->info<temp2->info)
{
creation(head3,temp1->info);
temp1=temp1->next;
}
else {
creation(head3,temp2->info);
temp2=temp2->next;
}
}
else if(temp1==NULL)
{
while(temp2!=NULL)
{
creation(head3,temp2->info);
temp2=temp2->next;
}
}
else{
while(temp1!=NULL)
{
creation(head3,temp1->info);
temp1=temp1->next;
}
}
}
}
void print(node **head)
{
node *temp=*head;

```

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while(temp!=NULL)
{
    cout<<temp->info<<" ";
    temp=temp->next;
}
cout<<endl;
}
int main()
{
    node *head1=new node();
    head1=NULL;
    int data,i,n,val,pos;
    cin>>n;
    for(i=0;i<n;i++)
    {
        cin>>data;
        creation(&head1,data);
    }
    print(&head1);
    node *head2=new node();
    head2=NULL;

    cin>>n;
    for(i=0;i<n;i++)
    {
        cin>>data;
        creation(&head2,data);
    }
    print(&head2);
    cout<<endl;
    node *head3=new node();
    head3=NULL;
    sorted(&head1,&head2,&head3);
    print(&head3);
}

```