

```

//8
#include<iostream>
using namespace std;
class student
{
    int first_heap[20],second_heap[20],x,n1,i;
public:
    student()
    {
        first_heap[0]=0,second_heap[0]=0;
    }

    void getdata();
    void insert1(int first_heap[],int);
    void upadjust1(int first_heap[],int);
    void insert2(int second_heap[],int);
    void upadjust2(int second_heap[],int);
    void minmax();
};

void student::getdata()
{
    cout<<"\nEnter the no. of students: ";
    cin>>n1;
    cout<<"\nEnter the marks: ";
    for(i=0;i<n1;i++)
    {
        cin>>x;
        insert1(first_heap,x);
        insert2(second_heap,x);
    }
}

void student::insert1(int first_heap[20],int x)
{
    int n;
    n=first_heap[0];
    first_heap[n+1]=x;
    first_heap[0]=n+1;
    upadjust1(first_heap,n+1);
}

void student::upadjust1(int first_heap[20],int i)
{
    int temp;
    while(i>1&&first_heap[i]>first_heap[i/2])
    {
        temp=first_heap[i];
        first_heap[i]=first_heap[i/2];
        first_heap[i/2]=temp;
        i=i/2;
    }
}

void student::insert2(int second_heap[20],int x)
{

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int n;
n=second_heap[0];
second_heap[n+1]=x;
second_heap[0]=n+1;
upadjust2(second_heap,n+1);
}
void student::upadjust2(int second_heap[20],int i)
{
int temp1;
while(i>1&&second_heap[i]<second_heap[i/2])
{
temp1=second_heap[i];
second_heap[i]=second_heap[i/2];
second_heap[i/2]=temp1;
i=i/2;
}
}
void student::minmax()
{
cout<<"\n Maximum Marks :"<<first_heap[1];
cout<<"\nFirst Heap:";
for(i=0;i<=n1;i++)
{
cout<<"\n"<<first_heap[i];
}
cout<<"\n Minimum Marks:"<<second_heap[1];
for(i=0;i<=n1;i++)
{
cout<<"\n"<<second_heap[i];
}
}
int main()
{
student h;
h.getdata();
h.minmax();
return 0;
}

```