

```
#include<iostream>

using namespace std;

void heapify(int arr[],int n,int i)
{
    int largest=i;
    int l=2*i+1;
    int r=2*i+2;

    if(l<n && arr[l]>arr[largest])
        largest=l;

    if(r<n && arr[r]>arr[largest])
        largest=r;

    if(largest!=i)
    {
        swap(arr[i],arr[largest]);
        heapify(arr,n, largest);
    }
}

void heapSort(int arr[], int n)
```

```
{  
    for(int i=n/2-1;i>=0;i--)  
        heapify(arr,n,i);  
  
    for(int i=n-1;i>=0;i--)  
    {  
        swap(arr[0],arr[i]);  
        heapify(arr,i,0);  
    }  
}
```

```
void printArray(int arr[],int n)  
{  
    for(int i=0;i<n;++i)  
        cout<<arr[i]<<" ";  
    cout<<"\n";  
}
```

```
int main()  
{  
    int arr[]={12,11,13,5,6,7};  
    int n=sizeof(arr)/sizeof(arr[0]);
```

```
heapSort(arr,n);  
cout<<"SORTED ARRAY IS:\n";  
printArray(arr,n);  
}
```

OUTPUT:

vcoe@vcoe-HP-Pro-3330-SFF:~\$ g++ heapsort.cpp

vcoe@vcoe-HP-Pro-3330-SFF:~\$ ./a.out

SORTED ARRAY IS:

5 6 7 11 12 13