**[\\Heap](\\\\Heap) Sort**

#include<iostream>

using namespace std;

void heapify(int arr[], int n, int j)

{

int temp;

int largest = j;

int left = 2 \* j + 1;

int right = 2 \* j + 2;

if (left < n && arr[left] > arr[largest])

largest = left;

if (right < n && arr[right] > arr[largest])

largest = right;

if (largest != j) {

temp = arr[j];

arr[j] = arr[largest];

arr[largest] = temp;

heapify(arr, n, largest);

}

}

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

int temp;

for (int i = n / 2 - 1; i >= 0; i--)

heapify(arr, n, i);

for (int k = n - 1; k >= 0; k--)

{

temp = arr[0];

arr[0] = arr[k];

arr[k] = temp;

heapify(arr, k, 0);

}

}

int main() {

int arr[] = { 20, 7, 1, 54, 10, 15, 90, 23, 77, 25};

int n = 10;

int i;

cout<<"Given array is: "<<endl;

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

cout<<arr[i]<<" ";

cout<<endl;

heapSort(arr, n);

cout<<"\nSorted array is: \n";

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

cout<<arr[i]<<" ";

}